Amendment No. 1
to
Contract No. PA150000048
for
Underwriters/Investment Banking Services
between
Citigroup Global Markets Inc.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: 4/29/19

Printed Name: MARIO CARRASCO
Authorized Representative

Citigroup Global Markets Inc.
300 Crescent Ct., Suite 940
Dallas, TX 75201
mario.r.carrasco@citi.com
210-857-8517

Sign/Date: 5-22-19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Goldman, Sachs & Co.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: _____

Printed Name: TERRY THORNTON
Authorized Representative

Goldman, Sachs & Co.
200 West Street, 32nd Floor
New York, NY 10282
terry.thornton@gs.com
713-276-3545

Sign/Date: 4/29/19 [illegible] 5.22.19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
J.P. Morgan Securities LLC
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: Rhett Bredy

Printed Name: Rhett Bredy
Authorized Representative
J.P. Morgan Securities LLC
383 Madison Avenue
New York, NY 10179
rhett.m.bredy@jpmorgan.com
214-965-4407

Sign/Date: 5·22·19

Erin D'Vincent
Procurement Supervisor
City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Morgan Stanley & Co., LLC.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: Blaine Brunson 4/29/19

Printed Name: Blaine Brunson
Authorized Representative

Morgan Stanley & Co., LLC.
106 East Sixth Street, Suite 836
Austin, TX 78701
Blaine.Brunson@morganstanley.com
512-322-5766

Sign/Date: [illegible] 5.22.19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
RBC Capital Markets, LLC
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: Richard F. Acosta Jr. 05/10/2019

Printed Name: Richard F. Acosta Jr.
Authorized Representative

RBC Capital Markets, LLC.
303 Pearl Parkway, Suite 220
San Antonio, TX 78215
richard.acosta@rbccm.com
210-805-1148

Sign/Date: 5-22-19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Wells Fargo Securities, LLC
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: 4/29/19

Printed Name: John M.P. Young
Authorized Representative
Wells Fargo Securities, LLC.
~~4801 Southwest Parkway Bldg. 1, Suite 175~~
~~Austin, TX 78735~~
~~andrew.deskins@wellsfargo.com~~
~~512-899-2121~~
1000 Louisiana St, Ste 600
Houston, Texas 77002
john.m.young@wellsfargo.com
713-319-1641

Sign/Date: 5-22-19

Erin D'Vincent
Procurement Supervisor
City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Jefferies LLC
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: 5/10/19

Printed Name: TILLMAN E. NAYLOR
Authorized Representative

Jefferies LLC.
300 Crescent Court, Suite 500
Dallas, TX 75201
Tnaylor@jefferies.com
972-701-3038

Sign/Date: 5.22.19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Piper Jaffray & Co.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: Kimberly K Edwards

Printed Name: Kimberly K. Edwards
Authorized Representative

Piper Jaffray & Co.
7000 N. Mopac Expressway, Suite 2102
Austin, TX 78731
kimberly.k.edwards@pjc.com
512-514-6430

Sign/Date: 5.22.19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Raymond James & Associates, Inc.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: 5/9/19

Printed Name: Deborah Jones
Authorized Representative

Raymond James & Associates, Inc.
5847 San Felipe Suite 4125
Houston, TX 77057
debi.jones@raymondjames.com
713-840-3602

Sign/Date: 5.22.19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Robert W. Baird & Co. Incorporated
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: Brian M. Nkelso 4/30/19

Printed Name: Brian M. Kelso
Authorized Representative

Robert W. Baird & Co. Incorporated
210 University Blvd., Suite 460
Denver, CO 80206
bkelso@rwbaird.com
303-270-6337

Sign/Date: 5.22.19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Estrada Hinojosa & Company, Inc.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: RAEstrada 5-20-2019

Printed Name: Robert A. Estrada
Authorized Representative

Estrada Hinojosa & Company, Inc.
~~823 Congress Avenue, Suite 1550~~
~~Austin, TX 78701~~
rae@ehmuni.com
214-658-1670

3103 Bee Caves Rd., Suite 133
Austin, Tx. 78746

Sign/Date: [illegible] 5-22-19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Estrada Hinojosa & Company, Inc.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: R. M 05/17/19

Printed Name: RUDY MEJIA
Authorized Representative

Estrada Hinojosa & Company, Inc.
823 Congress Avenue, Suite 1550
Austin, TX 78701
214-658-1670

Sign/Date: 5-22-19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Loop Capital Markets
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: 5/16/19

Printed Name: Curtis Flowers, Managing Director
Authorized Representative

Loop Capital Markets
440 Louisiana Street, Suite 900
Houston, TX 77002
curtis.flowers@loopcapital.com
713-652-4979

Sign/Date: 5-22-19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Hilltop Securities Inc.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: April 30, 2019

Printed Name: Chris W. Allen
Authorized Representative

Hilltop Securities Inc.
1201 Elm Street, Suite 3500
Dallas, TX 75270
Chris.Allen@hilltopsecurities.com
512-481-2013

Sign/Date: 5·22·19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Ramirez & Co., Inc.
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: 4/30/19

Printed Name: Robin Redford
Authorized Representative

Ramirez & Co., Inc.
100 Congress Avenue, Suite 2000
Austin, TX 78701
robin.redford@ramirezco.com
512-469-3504

Sign/Date: 5.22.19

Erin D'Vincent
Procurement Supervisor

City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

Amendment No. 1
to
Contract No. PA160000048
for
Underwriters/Investment Banking Services
between
Siebert Brandford Shank & Co., LLC
and the
City of Austin

1.0 The City hereby exercises this extension option for the subject contract. This extension option will be effective June 1, 2019, through May 31, 2020. One option will remain.

2.0 The total contract amount is increased by $0.00 by this extension period. The total contract authorization is recapped below:

Action	Action Amount	Total Contract Amount
Initial Term: 06/01/2016 – 05/31/2019	$0.00	$0.00
Amendment No. 1: Extension 1 06/01/2019 – 05/31/2020	$0.00	$0.00

3.0 MBE/WBE goals do not apply to this contract.

4.0 By signing this Amendment, the Contractor certifies that the vendor and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the GSA List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

5.0 All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this amendment is hereby incorporated into and made a part of the above-referenced contract.

Sign/Date: _____

Printed Name: Keith Richard
Authorized Representative
Siebert Brandford Shank & Co., LLC
6800 Park Ten Blvd. #193W
San Antonio, TX 78213
210-798-2663

Sign/Date: _____ 5·22·19

Erin D'Vincent
Procurement Supervisor
City of Austin
Purchasing Office
124 W. 8th Street, Ste. 310
Austin, Texas 78701

CITY OF AUSTIN
PURCHASING OFFICE
STANDARD PURCHASE TERMS AND CONDITIONS

By submitting an Offer in response to the Solicitation, the Contractor agrees that the Contract shall be governed by the following terms and conditions. Unless otherwise specified in the Contract, Sections 3, 4, 5, 6, 7, 8, 20, 21, and 36 shall apply only to a Solicitation to purchase Goods, and Sections 9, 10, 11 and 22 shall apply only to a Solicitation to purchase Services to be performed principally at the City's premises or on public rights-of-way.

1. **CONTRACTOR'S OBLIGATIONS**. The Contractor shall fully and timely provide all Deliverables described in the Solicitation and in the Contractor's Offer in strict accordance with the terms, covenants, and conditions of the Contract and all applicable Federal, State, and local laws, rules, and regulations.

2. **EFFECTIVE DATE/TERM**. Unless otherwise specified in the Solicitation, this Contract shall be effective as of the date the contract is signed by the City, and shall continue in effect until all obligations are performed in accordance with the Contract.

3. **CONTRACTOR TO PACKAGE DELIVERABLES**: The Contractor will package Deliverables in accordance with good commercial practice and shall include a packing list showing the description of each item, the quantity and unit price Unless otherwise provided in the Specifications or Supplemental Terms and Conditions, each shipping container shall be clearly and permanently marked as follows: (a) The Contractor's name and address, (b) the City's name, address and purchase order or purchase release number and the price agreement number if applicable, (c) Container number and total number of containers, e.g. box 1 of 4 boxes, and (d) the number of the container bearing the packing list. The Contractor shall bear cost of packaging. Deliverables shall be suitably packed to secure lowest transportation costs and to conform with requirements of common carriers and any applicable specifications. The City's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

4. **SHIPMENT UNDER RESERVATION PROHIBITED**: The Contractor is not authorized to ship the Deliverables under reservation and no tender of a bill of lading will operate as a tender of Deliverables.

5. **TITLE & RISK OF LOSS**: Title to and risk of loss of the Deliverables shall pass to the City only when the City actually receives and accepts the Deliverables.

6. **DELIVERY TERMS AND TRANSPORTATION CHARGES**: Deliverables shall be shipped F.O.B. point of delivery unless otherwise specified in the Supplemental Terms and Conditions. Unless otherwise stated in the Offer, the Contractor's price shall be deemed to include all delivery and transportation charges. The City shall have the right to designate what method of transportation shall be used to ship the Deliverables. The place of delivery shall be that set forth in the block of the purchase order or purchase release entitled "Receiving Agency".

7. **RIGHT OF INSPECTION AND REJECTION**: The City expressly reserves all rights under law, including, but not limited to the Uniform Commercial Code, to inspect the Deliverables at delivery before accepting them, and to reject defective or non-conforming Deliverables. If the City has the right to inspect the Contractor's, or the Contractor's Subcontractor's, facilities, or the Deliverables at the Contractor's, or the Contractor's Subcontractor's, premises, the Contractor shall furnish, or cause to be furnished, without additional charge, all reasonable facilities and assistance to the City to facilitate such inspection.

8. **NO REPLACEMENT OF DEFECTIVE TENDER**: Every tender or delivery of Deliverables must fully comply with all provisions of the Contract as to time of delivery, quality, and quantity. Any non-complying tender shall constitute a breach and the Contractor shall not have the right to substitute a conforming tender; provided, where the time for performance has not yet expired, the Contractor may notify the City of the intention to cure and may then make a conforming tender within the time allotted in the contract.

9. **PLACE AND CONDITION OF WORK**: The City shall provide the Contractor access to the sites where the Contractor is to perform the services as required in order for the Contractor to perform the services in a timely and efficient manner, in accordance with and subject to the applicable security laws, rules, and regulations. The Contractor acknowledges that it has satisfied itself as to the nature of the City's service requirements and specifications, the location and essential characteristics of the work sites, the quality and quantity of materials, equipment, labor and facilities necessary to perform the services, and any other condition or state of fact which could in any way affect performance of the Contractor's obligations under the contract. The Contractor hereby

releases and holds the City harmless from and against any liability or claim for damages of any kind or nature if the actual site or service conditions differ from expected conditions.

10. **WORKFORCE**

A. The Contractor shall employ only orderly and competent workers, skilled in the performance of the services which they will perform under the Contract.

B. The Contractor, its employees, subcontractors, and subcontractor's employees may not while engaged in participating or responding to a solicitation or while in the course and scope of delivering goods or services under a City of Austin contract or on the City's property .

i. use or possess a firearm, including a concealed handgun that is licensed under state law, except as required by the terms of the contract; or
ii. use or possess alcoholic or other intoxicating beverages, illegal drugs or controlled substances, nor may such workers be intoxicated, or under the influence of alcohol or drugs, on the job.

C. If the City or the City's representative notifies the Contractor that any worker is incompetent, disorderly or disobedient, has knowingly or repeatedly violated safety regulations, has possessed any firearms, or has possessed or was under the influence of alcohol or drugs on the job, the Contractor shall immediately remove such worker from Contract services, and may not employ such worker again on Contract services without the City's prior written consent.

11. **COMPLIANCE WITH HEALTH, SAFETY, AND ENVIRONMENTAL REGULATIONS**: The Contractor, its Subcontractors, and their respective employees, shall comply fully with all applicable federal, state, and local health, safety, and environmental laws, ordinances, rules and regulations in the performance of the services, including but not limited to those promulgated by the City and by the Occupational Safety and Health Administration (OSHA). In case of conflict, the most stringent safety requirement shall govern. The Contractor shall indemnify and hold the City harmless from and against all claims, demands, suits, actions, judgments, fines, penalties and liability of every kind arising from the breach of the Contractor's obligations under this paragraph.

12. **INVOICES**:

A. The Contractor shall submit separate invoices in duplicate on each purchase order or purchase release after each delivery. If partial shipments or deliveries are authorized by the City, a separate invoice must be sent for each shipment or delivery made.

B. **Proper Invoices must include a unique invoice number, the purchase order or delivery order number and the master agreement number if applicable, the Department's Name, and the name of the point of contact for the Department**. Invoices shall be itemized and transportation charges, if any, shall be listed separately. A copy of the bill of lading and the freight waybill, when applicable, shall be attached to the invoice. The Contractor's name and, if applicable, the tax identification number on the invoice must exactly match the information in the Vendor's registration with the City. Unless otherwise instructed in writing, the City may rely on the remittance address specified on the Contractor's invoice.

C. Invoices for labor shall include a copy of all time-sheets with trade labor rate and Deliverables order number clearly identified. Invoices shall also include a tabulation of work-hours at the appropriate rates and grouped by work order number. Time billed for labor shall be limited to hours actually worked at the work site.

D. Unless otherwise expressly authorized in the Contract, the Contractor shall pass through all Subcontract and other authorized expenses at actual cost without markup.

E. Federal excise taxes, State taxes, or City sales taxes must not be included in the invoiced amount. The City will furnish a tax exemption certificate upon request.

13. **PAYMENT**:

A. All proper invoices received by the City will be paid within thirty (30) calendar days of the City's receipt of the Deliverables or of the invoice, whichever is later.

B. **If payment is not timely made, (per paragraph A), interest shall accrue on the unpaid balance at the lesser of the rate specified in Texas Government Code Section 2251.025 or the maximum lawful rate; except, if payment is not timely made for a reason for which the City may withhold payment hereunder, interest shall not accrue until ten (10) calendar days after the grounds for withholding payment have been resolved.**

C. If partial shipments or deliveries are authorized by the City, the Contractor will be paid for the partial shipment or delivery, as stated above, provided that the invoice matches the shipment or delivery.

D. The City may withhold or set off the entire payment or part of any payment otherwise due the Contractor to such extent as may be necessary on account of:

i. delivery of defective or non-conforming Deliverables by the Contractor;
ii. third party claims, which are not covered by the insurance which the Contractor is required to provide, are filed or reasonable evidence indicating probable filing of such claims;
iii. failure of the Contractor to pay Subcontractors, or for labor, materials or equipment;
iv. damage to the property of the City or the City's agents, employees or contractors, which is not covered by insurance required to be provided by the Contractor;
v. reasonable evidence that the Contractor's obligations will not be completed within the time specified in the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
vi. failure of the Contractor to submit proper invoices with all required attachments and supporting documentation; or
vii. failure of the Contractor to comply with any material provision of the Contract Documents.

E. Notice is hereby given of Article VIII, Section 1 of the Austin City Charter which prohibits the payment of any money to any person, firm or corporation who is in arrears to the City for taxes, and of §2-8-3 of the Austin City Code concerning the right of the City to offset indebtedness owed the City.

F. Payment will be made by check unless the parties mutually agree to payment by credit card or electronic transfer of funds. The Contractor agrees that there shall be no additional charges, surcharges, or penalties to the City for payments made by credit card or electronic funds transfer.

G. The awarding or continuation of this contract is dependent upon the availability of funding. The City's payment obligations are payable only and solely from funds Appropriated and available for this contract. The absence of Appropriated or other lawfully available funds shall render the Contract null and void to the extent funds are not Appropriated or available and any Deliverables delivered but unpaid shall be returned to the Contractor. The City shall provide the Contractor written notice of the failure of the City to make an adequate Appropriation for any fiscal year to pay the amounts due under the Contract, or the reduction of any Appropriation to an amount insufficient to permit the City to pay its obligations under the Contract. In the event of non or inadequate appropriation of funds, there will be no penalty nor removal fees charged to the City.

14. **TRAVEL EXPENSES**: All travel, lodging and per diem expenses in connection with the Contract for which reimbursement may be claimed by the Contractor under the terms of the Solicitation will be reviewed against the City's Travel Policy as published and maintained by the City's Controller's Office and the Current United States General Services Administration Domestic Per Diem Rates (the "Rates") as published and maintained on the Internet at:

http://www.gsa.gov/portal/category/21287

No amounts in excess of the Travel Policy or Rates shall be paid. All invoices must be accompanied by copies of detailed itemized receipts (e.g. hotel bills, airline tickets). No reimbursement will be made for expenses not actually incurred. Airline fares in excess of coach or economy will not be reimbursed. Mileage charges may not exceed the amount permitted as a deduction in any year under the Internal Revenue Code or Regulations.

15. **FINAL PAYMENT AND CLOSE-OUT**:

A. If an MBE/WBE Program Compliance Plan is required by the Solicitation, and the Contractor has identified Subcontractors, the Contractor is required to submit a Contract Close-Out MBE/WBE Compliance Report to the Project manager or Contract manager no later than the 15th calendar day after completion of all work under the contract. Final payment, retainage, or both may be withheld if the Contractor is not in compliance with the requirements of the Compliance Plan as accepted by the City.

B. The making and acceptance of final payment will constitute:

i. a waiver of all claims by the City against the Contractor, except claims (1) which have been previously asserted in writing and not yet settled, (2) arising from defective work appearing after final inspection, (3) arising from failure of the Contractor to comply with the Contract or the terms of any warranty specified herein, (4) arising from the Contractor's continuing obligations under the Contract, including but not limited to indemnity and warranty obligations, or (5) arising under the City's right to audit; and

ii. a waiver of all claims by the Contractor against the City other than those previously asserted in writing and not yet settled.

16. **SPECIAL TOOLS & TEST EQUIPMENT**: If the price stated on the Offer includes the cost of any special tooling or special test equipment fabricated or required by the Contractor for the purpose of filling this order, such special tooling equipment and any process sheets related thereto shall become the property of the City and shall be identified by the Contractor as such.

17. **RIGHT TO AUDIT**:

A. The Contractor agrees that the representatives of the Office of the City Auditor or other authorized representatives of the City shall have access to, and the right to audit, examine, or reproduce, any and all records of the Contractor related to the performance under this Contract. The Contractor shall retain all such records for a period of three (3) years after final payment on this Contract or until all audit and litigation matters that the City has brought to the attention of the Contractor are resolved, whichever is longer. The Contractor agrees to refund to the City any overpayments disclosed by any such audit.

B. The Contractor shall include section a. above in all subcontractor agreements entered into in connection with this Contract.

18. **SUBCONTRACTORS**:

A. If the Contractor identified Subcontractors in an MBE/WBE Program Compliance Plan or a No Goals Utilization Plan the Contractor shall comply with the provisions of Chapters 2-9A, 2-9B, 2-9C, and 2-9D, as applicable, of the Austin City Code and the terms of the Compliance Plan or Utilization Plan as approved by the City (the "Plan"). The Contractor shall not initially employ any Subcontractor except as provided in the Contractor's Plan. The Contractor shall not substitute any Subcontractor identified in the Plan, unless the substitute has been accepted by the City in writing in accordance with the provisions of Chapters 2-9A, 2-9B, 2-9C and 2-9D, as applicable. No acceptance by the City of any Subcontractor shall constitute a waiver of any rights or remedies of the City with respect to defective Deliverables provided by a Subcontractor. If a Plan has been approved, the Contractor is additionally required to submit a monthly Subcontract Awards and Expenditures Report to the Contract Manager and the Purchasing Office Contract Compliance Manager no later than the tenth calendar day of each month.

B. Work performed for the Contractor by a Subcontractor shall be pursuant to a written contract between the Contractor and Subcontractor. The terms of the subcontract may not conflict with the terms of the Contract, and shall contain provisions that:

i. require that all Deliverables to be provided by the Subcontractor be provided in strict accordance with the provisions, specifications and terms of the Contract;
ii. prohibit the Subcontractor from further subcontracting any portion of the Contract without the prior written consent of the City and the Contractor. The City may require, as a condition to such further subcontracting, that the Subcontractor post a payment bond in form, substance and amount acceptable to the City;
iii. require Subcontractors to submit all invoices and applications for payments, including any claims for additional payments, damages or otherwise, to the Contractor in sufficient time to enable the Contractor to include same with its invoice or application for payment to the City in accordance with the terms of the Contract;
iv. require that all Subcontractors obtain and maintain, throughout the term of their contract, insurance in the type and amounts specified for the Contractor, with the City being a named insured as its interest shall appear; and
v. require that the Subcontractor indemnify and hold the City harmless to the same extent as the Contractor is required to indemnify the City.

C. The Contractor shall be fully responsible to the City for all acts and omissions of the Subcontractors just as the Contractor is responsible for the Contractor's own acts and omissions. Nothing in the Contract shall create for the benefit of any such Subcontractor any contractual relationship between the City and any such Subcontractor, nor shall it create any obligation on the part of the City to pay or to see to the payment of any moneys due any such Subcontractor except as may otherwise be required by law.

D. The Contractor shall pay each Subcontractor its appropriate share of payments made to the Contractor not later than ten (10) calendar days after receipt of payment from the City.

19. **WARRANTY-PRICE**:

A. The Contractor warrants the prices quoted in the Offer are no higher than the Contractor's current prices on orders by others for like Deliverables under similar terms of purchase.

B. The Contractor certifies that the prices in the Offer have been arrived at independently without consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such fees with any other firm or with any competitor.

C. In addition to any other remedy available, the City may deduct from any amounts owed to the Contractor, or otherwise recover, any amounts paid for items in excess of the Contractor's current prices on orders by others for like Deliverables under similar terms of purchase.

20. **WARRANTY – TITLE**: The Contractor warrants that it has good and indefeasible title to all Deliverables furnished under the Contract, and that the Deliverables are free and clear of all liens, claims, security interests and encumbrances. The Contractor shall indemnify and hold the City harmless from and against all adverse title claims to the Deliverables.

21. **WARRANTY – DELIVERABLES**: The Contractor warrants and represents that all Deliverables sold the City under the Contract shall be free from defects in design, workmanship or manufacture, and conform in all material respects to the specifications, drawings, and descriptions in the Solicitation, to any samples furnished by the Contractor, to the terms, covenants and conditions of the Contract, and to all applicable State, Federal or local laws, rules, and regulations, and industry codes and standards. Unless otherwise stated in the Solicitation, the Deliverables shall be new or recycled merchandise, and not used or reconditioned.

A. Recycled Deliverables shall be clearly identified as such.

B. The Contractor may not limit, exclude or disclaim the foregoing warranty or any warranty implied by law; and any attempt to do so shall be without force or effect.

C. Unless otherwise specified in the Contract, the warranty period shall be at least one year from the date of acceptance of the Deliverables or from the date of acceptance of any replacement Deliverables. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand either repair the non-conforming Deliverables, or replace the non-conforming Deliverables with fully conforming Deliverables, at the City's option and at no additional cost to the City. All costs incidental to such repair or replacement, including but not limited to, any packaging and shipping costs, shall be borne exclusively by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach of warranty, but failure to give timely notice shall not impair the City's rights under this section.

D. If the Contractor is unable or unwilling to repair or replace defective or non-conforming Deliverables as required by the City, then in addition to any other available remedy, the City may reduce the quantity of Deliverables it may be required to purchase under the Contract from the Contractor, and purchase conforming Deliverables from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such Deliverables from another source.

E. If the Contractor is not the manufacturer, and the Deliverables are covered by a separate manufacturer's warranty, the Contractor shall transfer and assign such manufacturer's warranty to the City. If for any reason the manufacturer's warranty cannot be fully transferred to the City, the Contractor shall assist and cooperate with the City to the fullest extent to enforce such manufacturer's warranty for the benefit of the City.

22. **WARRANTY – SERVICES**: The Contractor warrants and represents that all services to be provided the City under the Contract will be fully and timely performed in a good and workmanlike manner in accordance with generally accepted industry standards and practices, the terms, conditions, and covenants of the Contract, and all applicable Federal, State and local laws, rules or regulations.

A. The Contractor may not limit, exclude or disclaim the foregoing warranty or any warranty implied by law, and any attempt to do so shall be without force or effect.

B. Unless otherwise specified in the Contract, the warranty period shall be at least one year from the Acceptance Date. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand perform the services again in accordance with above standard at no additional cost to the City. All costs incidental to such additional performance shall be borne by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach warranty, but failure to give timely notice shall not impair the City's rights under this section.

C. If the Contractor is unable or unwilling to perform its services in accordance with the above standard as required by the City, then in addition to any other available remedy, the City may reduce the amount of services it may be required to purchase under the Contract from the Contractor, and purchase conforming services from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such services from another source.

23. **ACCEPTANCE OF INCOMPLETE OR NON-CONFORMING DELIVERABLES**: If, instead of requiring immediate correction or removal and replacement of defective or non-conforming Deliverables, the City prefers to accept it, the City may do so. The Contractor shall pay all claims, costs, losses and damages attributable to the City's evaluation of and determination to accept such defective or non-conforming Deliverables. If any such acceptance occurs prior to final payment, the City may deduct such amounts as are necessary to compensate the City for the diminished value of the defective or non-conforming Deliverables. If the acceptance occurs after final payment, such amount will be refunded to the City by the Contractor.

24. **RIGHT TO ASSURANCE**: Whenever one party to the Contract in good faith has reason to question the other party's intent to perform, demand may be made to the other party for written assurance of the intent to perform. In the event

that no assurance is given within the time specified after demand is made, the demanding party may treat this failure as an anticipatory repudiation of the Contract.

25. **STOP WORK NOTICE**: The City may issue an immediate Stop Work Notice in the event the Contractor is observed performing in a manner that is in violation of Federal, State, or local guidelines, or in a manner that is determined by the City to be unsafe to either life or property. Upon notification, the Contractor will cease all work until notified by the City that the violation or unsafe condition has been corrected. The Contractor shall be liable for all costs incurred by the City as a result of the issuance of such Stop Work Notice.

26. **DEFAULT**: The Contractor shall be in default under the Contract if the Contractor (a) fails to fully, timely and faithfully perform any of its material obligations under the Contract, (b) fails to provide adequate assurance of performance under Paragraph 24, (c) becomes insolvent or seeks relief under the bankruptcy laws of the United States or (d) makes a material misrepresentation in Contractor's Offer, or in any report or deliverable required to be submitted by the Contractor to the City.

27. **TERMINATION FOR CAUSE:**. In the event of a default by the Contractor, the City shall have the right to terminate the Contract for cause, by written notice effective ten (10) calendar days, unless otherwise specified, after the date of such notice, unless the Contractor, within such ten (10) day period, cures such default, or provides evidence sufficient to prove to the City's reasonable satisfaction that such default does not, in fact, exist. The City may place Contractor on probation for a specified period of time within which the Contractor must correct any non-compliance issues. Probation shall not normally be for a period of more than nine (9) months, however, it may be for a longer period, not to exceed one (1) year depending on the circumstances. If the City determines the Contractor has failed to perform satisfactorily during the probation period, the City may proceed with suspension. In the event of a default by the Contractor, the City may suspend or debar the Contractor in accordance with the "City of Austin Purchasing Office Probation, Suspension and Debarment Rules for Vendors" and remove the Contractor from the City's vendor list for up to five (5) years and any Offer submitted by the Contractor may be disqualified for up to five (5) years. In addition to any other remedy available under law or in equity, the City shall be entitled to recover all actual damages, costs, losses and expenses, incurred by the City as a result of the Contractor's default, including, without limitation, cost of cover, reasonable attorneys' fees, court costs, and prejudgment and post-judgment interest at the maximum lawful rate. All rights and remedies under the Contract are cumulative and are not exclusive of any other right or remedy provided by law.

28. **TERMINATION WITHOUT CAUSE**: The City shall have the right to terminate the Contract, in whole or in part, without cause any time upon thirty (30) calendar days' prior written notice. Upon receipt of a notice of termination, the Contractor shall promptly cease all further work pursuant to the Contract, with such exceptions, if any, specified in the notice of termination. The City shall pay the Contractor, to the extent of funds Appropriated or otherwise legally available for such purposes, for all goods delivered and services performed and obligations incurred prior to the date of termination in accordance with the terms hereof.

29. **FRAUD**: Fraudulent statements by the Contractor on any Offer or in any report or deliverable required to be submitted by the Contractor to the City shall be grounds for the termination of the Contract for cause by the City and may result in legal action.

30. **DELAYS**:

    A. The City may delay scheduled delivery or other due dates by written notice to the Contractor if the City deems it is in its best interest. If such delay causes an increase in the cost of the work under the Contract, the City and the Contractor shall negotiate an equitable adjustment for costs incurred by the Contractor in the Contract price and execute an amendment to the Contract. The Contractor must assert its right to an adjustment within thirty (30) calendar days from the date of receipt of the notice of delay. Failure to agree on any adjusted price shall be handled under the Dispute Resolution process specified in paragraph 49. However, nothing in this provision shall excuse the Contractor from delaying the delivery as notified.

    B. Neither party shall be liable for any default or delay in the performance of its obligations under this Contract if, while and to the extent such default or delay is caused by acts of God, fire, riots, civil commotion, labor disruptions, sabotage, sovereign conduct, or any other cause beyond the reasonable control of such Party. In

the event of default or delay in contract performance due to any of the foregoing causes, then the time for completion of the services will be extended; provided, however, in such an event, a conference will be held within three (3) business days to establish a mutually agreeable period of time reasonably necessary to overcome the effect of such failure to perform.

31. **INDEMNITY**:

A. Definitions:

i. "Indemnified Claims" shall include any and all claims, demands, suits, causes of action, judgments and liability of every character, type or description, including all reasonable costs and expenses of litigation, mediation or other alternate dispute resolution mechanism, including attorney and other professional fees for:

(1) damage to or loss of the property of any person (including, but not limited to the City, the Contractor, their respective agents, officers, employees and subcontractors; the officers, agents, and employees of such subcontractors; and third parties); and/or

(2) death, bodily injury, illness, disease, worker's compensation, loss of services, or loss of income or wages to any person (including but not limited to the agents, officers and employees of the City, the Contractor, the Contractor's subcontractors, and third parties),

ii. "Fault" shall include the sale of defective or non-conforming Deliverables, negligence, willful misconduct, or a breach of any legally imposed strict liability standard.

B. **THE CONTRACTOR SHALL DEFEND (AT THE OPTION OF THE CITY), INDEMNIFY, AND HOLD THE CITY, ITS SUCCESSORS, ASSIGNS, OFFICERS, EMPLOYEES AND ELECTED OFFICIALS HARMLESS FROM AND AGAINST ALL INDEMNIFIED CLAIMS DIRECTLY ARISING OUT OF, INCIDENT TO, CONCERNING OR RESULTING FROM THE FAULT OF THE CONTRACTOR, OR THE CONTRACTOR'S AGENTS, EMPLOYEES OR SUBCONTRACTORS, IN THE PERFORMANCE OF THE CONTRACTOR'S OBLIGATIONS UNDER THE CONTRACT. NOTHING HEREIN SHALL BE DEEMED TO LIMIT THE RIGHTS OF THE CITY OR THE CONTRACTOR (INCLUDING, BUT NOT LIMITED TO, THE RIGHT TO SEEK CONTRIBUTION) AGAINST ANY THIRD PARTY WHO MAY BE LIABLE FOR AN INDEMNIFIED CLAIM.**

32. **INSURANCE**: (reference Section 0400 for specific coverage requirements). The following insurance requirement applies. (Revised March 2013).

A. General Requirements.

i. The Contractor shall at a minimum carry insurance in the types and amounts indicated in Section 0400, Supplemental Purchase Provisions, for the duration of the Contract, including extension options and hold over periods, and during any warranty period.

ii. The Contractor shall provide Certificates of Insurance with the coverages and endorsements required in Section 0400, Supplemental Purchase Provisions, to the City as verification of coverage prior to contract execution and within fourteen (14) calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award. The Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or hold over period is exercised, as verification of continuing coverage.

iii. The Contractor shall not commence work until the required insurance is obtained and until such insurance has been reviewed by the City. Approval of insurance by the City shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.

iv. The City may request that the Contractor submit certificates of insurance to the City for all subcontractors prior to the subcontractors commencing work on the project.

v. The Contractor's and all subcontractors' insurance coverage shall be written by companies licensed to do business in the State of Texas at the time the policies are issued and shall be written by companies with A.M. Best ratings of B+VII or better.

vi. The "other" insurance clause shall not apply to the City where the City is an additional insured shown on any policy. It is intended that policies required in the Contract, covering both the City and the Contractor, shall be considered primary coverage as applicable.

vii. If insurance policies are not written for amounts specified in Section 0400, Supplemental Purchase Provisions, the Contractor shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of the primary coverage.

viii. The City shall be entitled, upon request, at an agreed upon location, and without expense, to review certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.

ix. The City reserves the right to review the insurance requirements set forth during the effective period of the Contract and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by the City based upon changes in statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as the Contractor.

x. The Contractor shall not cause any insurance to be canceled nor permit any insurance to lapse during the term of the Contract or as required in the Contract.

xi. The Contractor shall be responsible for premiums, deductibles and self-insured retentions, if any, stated in policies. Self-insured retentions shall be disclosed on the Certificate of Insurance.

xii. The Contractor shall provide the City thirty (30) calendar days' written notice of erosion of the aggregate limits below occurrence limits for all applicable coverages indicated within the Contract.

xiii. The insurance coverages specified in Section 0400, Supplemental Purchase Provisions, are required minimums and are not intended to limit the responsibility or liability of the Contractor.

B. Specific Coverage Requirements: Specific insurance requirements are contained in Section 0400, Supplemental Purchase Provisions

33. **CLAIMS**: If any claim, demand, suit, or other action is asserted against the Contractor which arises under or concerns the Contract, or which could have a material adverse affect on the Contractor's ability to perform thereunder, the Contractor shall give written notice thereof to the City within ten (10) calendar days after receipt of notice by the Contractor. Such notice to the City shall state the date of notification of any such claim, demand, suit, or other action; the names and addresses of the claimant(s); the basis thereof; and the name of each person against whom such claim is being asserted. Such notice shall be delivered personally or by mail and shall be sent to the City and to the Austin City Attorney. Personal delivery to the City Attorney shall be to City Hall, 301 West 2nd Street, 4th Floor, Austin, Texas 78701, and mail delivery shall be to P.O. Box 1088, Austin, Texas 78767.

34. **NOTICES**: Unless otherwise specified, all notices, requests, or other communications required or appropriate to be given under the Contract shall be in writing and shall be deemed delivered three (3) business days after postmarked if sent by U.S. Postal Service Certified or Registered Mail, Return Receipt Requested. Notices delivered by other means shall be deemed delivered upon receipt by the addressee. Routine communications may be made by first class mail, telefax, or other commercially accepted means. Notices to the Contractor shall be sent to the address specified in the Contractor's Offer, or at such other address as a party may notify the other in writing. Notices to the

City shall be addressed to the City at P.O. Box 1088, Austin, Texas 78767 and marked to the attention of the Contract Administrator.

35. **RIGHTS TO BID, PROPOSAL AND CONTRACTUAL MATERIAL**: All material submitted by the Contractor to the City shall become property of the City upon receipt. Any portions of such material claimed by the Contractor to be proprietary must be clearly marked as such. Determination of the public nature of the material is subject to the Texas Public Information Act, Chapter 552, Texas Government Code.

36. **NO WARRANTY BY CITY AGAINST INFRINGEMENTS**: The Contractor represents and warrants to the City that: (i) the Contractor shall provide the City good and indefeasible title to the Deliverables and (ii) the Deliverables supplied by the Contractor in accordance with the specifications in the Contract will not infringe, directly or contributorily, any patent, trademark, copyright, trade secret, or any other intellectual property right of any kind of any third party; that no claims have been made by any person or entity with respect to the ownership or operation of the Deliverables and the Contractor does not know of any valid basis for any such claims. The Contractor shall, at its sole expense, defend, indemnify, and hold the City harmless from and against all liability, damages, and costs (including court costs and reasonable fees of attorneys and other professionals) arising out of or resulting from: (i) any claim that the City's exercise anywhere in the world of the rights associated with the City's' ownership, and if applicable, license rights, and its use of the Deliverables infringes the intellectual property rights of any third party; or (ii) the Contractor's breach of any of Contractor's representations or warranties stated in this Contract. In the event of any such claim, the City shall have the right to monitor such claim or at its option engage its own separate counsel to act as co-counsel on the City's behalf. Further, Contractor agrees that the City's specifications regarding the Deliverables shall in no way diminish Contractor's warranties or obligations under this paragraph and the City makes no warranty that the production, development, or delivery of such Deliverables will not impact such warranties of Contractor.

37. **CONFIDENTIALITY**: In order to provide the Deliverables to the City, Contractor may require access to certain of the City's and/or its licensors' confidential information (including inventions, employee information, trade secrets, confidential know-how, confidential business information, and other information which the City or its licensors consider confidential) (collectively, "Confidential Information"). Contractor acknowledges and agrees that the Confidential Information is the valuable property of the City and/or its licensors and any unauthorized use, disclosure, dissemination, or other release of the Confidential Information will substantially injure the City and/or its licensors. The Contractor (including its employees, subcontractors, agents, or representatives) agrees that it will maintain the Confidential Information in strict confidence and shall not disclose, disseminate, copy, divulge, recreate, or otherwise use the Confidential Information without the prior written consent of the City or in a manner not expressly permitted under this Agreement, unless the Confidential Information is required to be disclosed by law or an order of any court or other governmental authority with proper jurisdiction, provided the Contractor promptly notifies the City before disclosing such information so as to permit the City reasonable time to seek an appropriate protective order. The Contractor agrees to use protective measures no less stringent than the Contractor uses within its own business to protect its own most valuable information, which protective measures shall under all circumstances be at least reasonable measures to ensure the continued confidentiality of the Confidential Information.

38. **PUBLICATIONS**: All published material and written reports submitted under the Contract must be originally developed material unless otherwise specifically provided in the Contract. When material not originally developed is included in a report in any form, the source shall be identified.

39. **ADVERTISING**: The Contractor shall not advertise or publish, without the City's prior consent, the fact that the City has entered into the Contract, except to the extent required by law.

40. **NO CONTINGENT FEES**: The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure the Contract upon any agreement or understanding for commission, percentage, brokerage, or contingent fee, excepting bona fide employees of bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the City shall have the right, in addition to any other remedy available, to cancel the Contract without liability and to deduct from any amounts owed to the Contractor, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

41. **GRATUITIES**: The City may, by written notice to the Contractor, cancel the Contract without liability if it is determined by the City that gratuities were offered or given by the Contractor or any agent or representative of the Contractor to any officer or employee of the City of Austin with a view toward securing the Contract or securing favorable treatment with respect to the awarding or amending or the making of any determinations with respect to the performing of such contract. In the event the Contract is canceled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by the Contractor in providing such gratuities.

42. **PROHIBITION AGAINST PERSONAL INTEREST IN CONTRACTS**: No officer, employee, independent consultant, or elected official of the City who is involved in the development, evaluation, or decision-making process of the performance of any solicitation shall have a financial interest, direct or indirect, in the Contract resulting from that solicitation. Any willful violation of this section shall constitute impropriety in office, and any officer or employee guilty thereof shall be subject to disciplinary action up to and including dismissal. Any violation of this provision, with the knowledge, expressed or implied, of the Contractor shall render the Contract voidable by the City.

43. **INDEPENDENT CONTRACTOR**: The Contract shall not be construed as creating an employer/employee relationship, a partnership, or a joint venture. The Contractor's services shall be those of an independent contractor. The Contractor agrees and understands that the Contract does not grant any rights or privileges established for employees of the City.

44. **ASSIGNMENT-DELEGATION**: The Contract shall be binding upon and enure to the benefit of the City and the Contractor and their respective successors and assigns, provided however, that no right or interest in the Contract shall be assigned and no obligation shall be delegated by the Contractor without the prior written consent of the City. Any attempted assignment or delegation by the Contractor shall be void unless made in conformity with this paragraph. The Contract is not intended to confer rights or benefits on any person, firm or entity not a party hereto; it being the intention of the parties that there be no third party beneficiaries to the Contract.

45. **WAIVER**: No claim or right arising out of a breach of the Contract can be discharged in whole or in part by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party. No waiver by either the Contractor or the City of any one or more events of default by the other party shall operate as, or be construed to be, a permanent waiver of any rights or obligations under the Contract, or an express or implied acceptance of any other existing or future default or defaults, whether of a similar or different character.

46. **MODIFICATIONS**: The Contract can be modified or amended only by a writing signed by both parties. No pre-printed or similar terms on any the Contractor invoice, order or other document shall have any force or effect to change the terms, covenants, and conditions of the Contract.

47. **INTERPRETATION**: The Contract is intended by the parties as a final, complete and exclusive statement of the terms of their agreement. No course of prior dealing between the parties or course of performance or usage of the trade shall be relevant to supplement or explain any term used in the Contract. Although the Contract may have been substantially drafted by one party, it is the intent of the parties that all provisions be construed in a manner to be fair to both parties, reading no provisions more strictly against one party or the other. Whenever a term defined by the Uniform Commercial Code, as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

48. **DISPUTE RESOLUTION**:

    A. If a dispute arises out of or relates to the Contract, or the breach thereof, the parties agree to negotiate prior to prosecuting a suit for damages. However, this section does not prohibit the filing of a lawsuit to toll the running of a statute of limitations or to seek injunctive relief. Either party may make a written request for a meeting between representatives of each party within fourteen (14) calendar days after receipt of the request or such later period as agreed by the parties. Each party shall include, at a minimum, one (1) senior level individual with decision-making authority regarding the dispute. The purpose of this and any subsequent meeting is to attempt in good faith to negotiate a resolution of the dispute. If, within thirty (30) calendar days after such

meeting, the parties have not succeeded in negotiating a resolution of the dispute, they will proceed directly to mediation as described below. Negotiation may be waived by a written agreement signed by both parties, in which event the parties may proceed directly to mediation as described below.

B. If the efforts to resolve the dispute through negotiation fail, or the parties waive the negotiation process, the parties may select, within thirty (30) calendar days, a mediator trained in mediation skills to assist with resolution of the dispute. Should they choose this option, the City and the Contractor agree to act in good faith in the selection of the mediator and to give consideration to qualified individuals nominated to act as mediator. Nothing in the Contract prevents the parties from relying on the skills of a person who is trained in the subject matter of the dispute or a contract interpretation expert. If the parties fail to agree on a mediator within thirty (30) calendar days of initiation of the mediation process, the mediator shall be selected by the Travis County Dispute Resolution Center (DRC). The parties agree to participate in mediation in good faith for up to thirty (30) calendar days from the date of the first mediation session. The City and the Contractor will share the mediator's fees equally and the parties will bear their own costs of participation such as fees for any consultants or attorneys they may utilize to represent them or otherwise assist them in the mediation.

49. **JURISDICTION AND VENUE**: The Contract is made under and shall be governed by the laws of the State of Texas, including, when applicable, the Uniform Commercial Code as adopted in Texas, V.T.C.A., Bus. & Comm. Code, Chapter 1, excluding any rule or principle that would refer to and apply the substantive law of another state or jurisdiction. All issues arising from this Contract shall be resolved in the courts of Travis County, Texas and the parties agree to submit to the exclusive personal jurisdiction of such courts. The foregoing, however, shall not be construed or interpreted to limit or restrict the right or ability of the City to seek and secure injunctive relief from any competent authority as contemplated herein.

50. **INVALIDITY**: The invalidity, illegality, or unenforceability of any provision of the Contract shall in no way affect the validity or enforceability of any other portion or provision of the Contract. Any void provision shall be deemed severed from the Contract and the balance of the Contract shall be construed and enforced as if the Contract did not contain the particular portion or provision held to be void. The parties further agree to reform the Contract to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this section shall not prevent this entire Contract from being void should a provision which is the essence of the Contract be determined to be void.

51. **HOLIDAYS:** The following holidays are observed by the City:

Holiday	Date Observed
New Year's Day	January 1
Martin Luther King, Jr.'s Birthday	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	First Monday in September
Veteran's Day	November 11
Thanksgiving Day	Fourth Thursday in November
Friday after Thanksgiving	Friday after Thanksgiving
Christmas Eve	December 24
Christmas Day	December 25

If a Legal Holiday falls on Saturday, it will be observed on the preceding Friday. If a Legal Holiday falls on Sunday, it will be observed on the following Monday.

52. **SURVIVABILITY OF OBLIGATIONS:** All provisions of the Contract that impose continuing obligations on the parties, including but not limited to the warranty, indemnity, and confidentiality obligations of the parties, shall survive the expiration or termination of the Contract.

53. **NON-SUSPENSION OR DEBARMENT CERTIFICATION:**

The City of Austin is prohibited from contracting with or making prime or sub-awards to parties that are suspended or debarred or whose principals are suspended or debarred from Federal, State, or City of Austin Contracts. By accepting a Contract with the City, the Vendor certifies that its firm and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the General Services Administration List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

54. **EQUAL OPPORTUNITY**

A. **Equal Employment Opportunity:** No Offeror, or Offeror's agent, shall engage in any discriminatory employment practice as defined in Chapter 5-4 of the City Code. No Offer submitted to the City shall be considered, nor any Purchase Order issued, or any Contract awarded by the City unless the Offeror has executed and filed with the City Purchasing Office a current Non-Discrimination Certification. Non-compliance with Chapter 5-4 of the City Code may result in sanctions, including termination of the contract and the Contractor's suspension or debarment from participation on future City contracts until deemed compliant with Chapter 5-4.

B. **Americans with Disabilities Act (ADA) Compliance:** No Offeror, or Offeror's agent, shall engage in any discriminatory employment practice against individuals with disabilities as defined in the ADA.

55. **INTERESTED PARTIES DISCLOSURE**: As a condition to entering into the Contract, the Business Entity constituting the Offeror must provide the following disclosure of Interested Parties to the City prior to contract award by the City on Form 1295 "Certificate of Interested Parties" as prescribed by the Texas Ethics Commission for any contract award requiring council authorization. The Certificate of Interested Parties Form must be signed by the authorized agent of the Business Entity with acknowledgment that disclosure is made under oath and under penalty of perjury. The City will submit a copy of the "Certificate of Interested Parties" to the Texas Ethics Commission within 30 days of receipt from the successful Offeror. The Offeror is reminded that the provisions of Local Government Code 176, regarding conflicts of interest between the bidders and local officials remains in place. Link to Form 1295:

https://assets.austintexas.gov/purchase/certificate_of_interested_parties.pdf

56. **BUY AMERICAN ACT-SUPPLIES (Applicable to certain Federally funded requirements)**

A. Definitions. As used in this paragraph –

i. "Component" means an article, material, or supply incorporated directly into an end product.

ii. "Cost of components" means -

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus

allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

iii. "Domestic end product" means-

(1) An unmanufactured end product mined or produced in the United States; or

(2) An end product manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as those that the agency determines are not mined, produced, or manufactured in sufficient and reasonably available commercial quantities of a satisfactory quality are treated as domestic. Scrap generated, collected, and prepared for processing in the United States is considered domestic.

iv. "End product" means those articles, materials, and supplies to be acquired under the contract for public use.

v. "Foreign end product" means an end product other than a domestic end product.

vi. "United States" means the 50 States, the District of Columbia, and outlying areas.

B. The Buy American Act (41 U.S.C. 10a - 10d) provides a preference for domestic end products for supplies acquired for use in the United States.

C. The City does not maintain a list of foreign articles that will be treated as domestic for this Contract; but will consider for approval foreign articles as domestic for this product if the articles are on a list approved by another Governmental Agency. The Offeror shall submit documentation with their Offer demonstrating that the article is on an approved Governmental list.

D. The Contractor shall deliver only domestic end products except to the extent that it specified delivery of foreign end products in the provision of the Solicitation entitled "Buy American Act Certificate".

CITY OF AUSTIN
PURCHASING OFFICE
SUPPLEMENTAL PURCHASE PROVISIONS
SOLICITAION NO. RFQS TVN0103REBID

The following Supplemental Purchasing Provisions apply to this solicitation:

1. **EXPLANATIONS OR CLARIFICATIONS:** (reference paragraph 5 in Section 0200)

   All requests for explanations or clarifications must be submitted in writing to the Purchasing Office no later than seven (7) calendar days prior to closing. Submissions may be made via email to Terry.Nicholson@austintexas.gov, or via fax at (512)974-2388.

2. **INSURANCE:** Insurance is required for this solicitation.

   A. **General Requirements:** See Section 0300, Standard Purchase Terms and Conditions, paragraph 32, entitled Insurance, for general insurance requirements.

      i. The Contractor shall provide a Certificate of Insurance as verification of coverages required below to the City at the below address prior to contract execution and within 14 calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award.

      ii. The Contractor shall not commence work until the required insurance is obtained and until such insurance has been reviewed by the City. Approval of insurance by the City shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.

      iii. The Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or holdover period is exercised, as verification of continuing coverage.

      iv. The Certificate of Insurance, and updates, shall be mailed to the following address:

      City of Austin Purchasing Office
      P. O. Box 1088
      Austin, Texas 78767

   B. **Specific Coverage Requirements:** The Contractor shall at a minimum carry insurance in the types and amounts indicated below for the duration of the Contract, including extension options and hold over periods, and during any warranty period. These insurance coverages are required minimums and are not intended to limit the responsibility or liability of the Contractor.

      i. **Worker's Compensation and Employers' Liability Insurance:** Coverage shall be consistent with statutory benefits outlined in the Texas Worker's Compensation Act (Section 401). The minimum policy limits for Employer's Liability are $100,000 bodily injury each accident, $500,000 bodily injury by disease policy limit and $100,000 bodily injury by disease each employee.

         (1) The Contractor's policy shall apply to the State of Texas and include these endorsements in favor of the City of Austin:

            (a) Waiver of Subrogation, Form WC420304, or equivalent coverage

            (b) Thirty (30) days Notice of Cancellation, Form WC420601, or equivalent coverage

      ii. **Commercial General Liability Insurance:** The minimum bodily injury and property damage per occurrence are $500,000 for coverages A (Bodily Injury and Property Damage) and B (Personal and Advertising Injury).

         (1) The policy shall contain the following provisions:

            (a) Contractual liability coverage for liability assumed under the Contract and all other Contracts related to the project.

(b) Contractor/Subcontracted Work.

(c) Products/Completed Operations Liability for the duration of the warranty period.

(d) If the project involves digging or drilling provisions must be included that provide Explosion, Collapse, and/or Underground Coverage.

(2) The policy shall also include these endorsements in favor of the City of Austin:

(a) Waiver of Subrogation, Endorsement CG 2404, or equivalent coverage

(b) Thirty (30) days Notice of Cancellation, Endorsement CG 0205, or equivalent coverage

(c) The City of Austin listed as an additional insured, Endorsement CG 2010, or equivalent coverage

iii. **Business Automobile Liability Insurance:** The Contractor shall provide coverage for all owned, non-owned and hired vehicles with a minimum combined single limit of $500,000 per occurrence for bodily injury and property damage. Alternate acceptable limits are $250,000 bodily injury per person, $500,000 bodily injury per occurrence and at least $100,000 property damage liability per accident.

(1) The policy shall include these endorsements in favor of the City of Austin:

(a) Waiver of Subrogation, Endorsement CA0444, or equivalent coverage

(b) Thirty (30) days Notice of Cancellation, Endorsement CA0244, or equivalent coverage

(c) The City of Austin listed as an additional insured, Endorsement CA2048, or equivalent coverage.

iv. **Professional Liability Insurance**: The Contractor shall provide coverage, at a minimum limit of $1,000,000 per claim, to pay on behalf of the assured all sums which the assured shall become legally obligated to pay as damages by reason of any negligent act, error, or omission arising out of the performance of professional services under this Agreement.

If coverage is written on a claims-made basis, the retroactive date shall be prior to or coincident with the date of the Contract and the certificate of insurance shall state that the coverage is claims-made and indicate the retroactive date. This coverage shall be continuous and will be provided for 24 months following the completion of the contract.

C. **Endorsements:** The specific insurance coverage endorsements specified above, or their equivalents must be provided. In the event that endorsements, which are the equivalent of the required coverage, are proposed to be substituted for the required coverage, copies of the equivalent endorsements must be provided for the City's review and approval.

3. **TERM OF CONTRACT**

A. The Contract shall be in effect for an initial term of 36 months and may be extended thereafter for up to 2 additional 12 month periods, subject to the approval of the Contractor and the City Purchasing Officer or his designee.

B. Upon expiration of the initial term or period of extension, the Contractor agrees to hold over under the terms and conditions of this agreement for such a period of time as is reasonably necessary to re-solicit and/or complete the project (not to exceed 120 days unless mutually agreed on in writing).

C. Upon written notice to the Contractor from the City's Purchasing Officer or his designee and acceptance of the Contractor, the term of this contract shall be extended on the same terms and conditions for an additional period as indicated in paragraph A above. A price increase, subject to the provisions of this Contract, may be requested by the Contractor (for each period of extension) for approval by the City's Purchasing Officer or his designee.

THIS IS A 36 MONTH CONTRACT

4. **NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING:**

A. On November 10, 2011, the Austin City Council adopted Ordinance No. 20111110-052 amending Chapter 2.7, Article 6 of the City Code relating to Anti-Lobbying and Procurement. The policy defined in this Code applies to Solicitations for goods and/or services requiring City Council approval under City Charter Article VII, Section 15 (Purchase Procedures). During the No-Contact Period, Offerors or potential Offerors are prohibited from making a representation to anyone other than the Authorized Contact Person in the Solicitation as the contact for questions and comments regarding the Solicitation.

B. If during the No-Contact Period an Offeror makes a representation to anyone other than the Authorized Contact Person for the Solicitation, the Offeror's Offer is disqualified from further consideration except as permitted in the Ordinance.

C. If an Offeror has been disqualified under this article more than two times in a sixty (60) month period, the Purchasing Officer shall debar the Offeror from doing business with the City for a period not to exceed three (3) years, provided the Offeror is given written notice and a hearing in advance of the debarment.

D. The City requires Offerors submitting Offers on this Solicitation to certify that the Offeror has not in any way directly or indirectly made representations to anyone other than the Authorized Contact Person during the No-Contact Period as defined in the Ordinance. The text of the City Ordinance is posted on the Internet at: http://www.ci.austin.tx.us/edims/document.cfm?id=161145

5. **INTERLOCAL PURCHASING AGREEMENTS:** (applicable to competitively procured goods/services contracts).

A. The City has entered into Interlocal Purchasing Agreements with other governmental entities, pursuant to the Interlocal Cooperation Act, Chapter 791 of the Texas Government Code. The Contractor agrees to offer the same prices and terms and conditions to other eligible governmental agencies that have an interlocal agreement with the City.

B. The City does not accept any responsibility or liability for the purchases by other governmental agencies through an interlocal cooperative agreement.

6. **CONTRACT MANAGER:** The following person is designated as Contract Manager, and will act as the contact point between the City and the Contractor during the term of the Contract:

Georgia Sanchez

Phone: 512-974-7886

Email: Georgia.Sanchez@austintexas.gov

*Note: The above listed Contract Manager is not the authorized Contact Person for purposes of the **NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING Provision** of this Section; and therefore, contact with the Contract Manager is prohibited during the no contact period.

CITY OF AUSTIN
PURCHASING OFFICE
REQUEST FOR QUALIFICATIONS NO. RFQS TVN0103REBID
UNDERWRITING SERVICES

Scope of Work

A. PURPOSE

The City of Austin, Texas, hereinafter referred to as the "City," through the Financial and Administrative Services Department is requesting statements of qualifications from municipal bond underwriters to assist the City in marketing future refunding, new money, and/or other financing transactions.

Please note that joint responses will not be considered.

B. BACKGROUND

Currently, Public Financial Management, Inc. (Dennis Waley in Austin) serves as Financial Advisor to the City. Public Financial Management and the City Treasurer's Office will assume responsibility for obtaining bond ratings, preparing the offering documents, performing quantitative analysis and structuring future bond issues.

The City intends to contract with no more than fifteen (15) firms in total, spanning the three following categories:

1. "National" - typically bulge bracket investment banks that represent the largest of multinational firms.
2. "Regional" - firms with a national presence who typically focus on middle markets and mid-range deals.
3. "Other" - firms who are minority or women owned, or Texas headquartered, or firms who do not necessarily meet the national or regional descriptions above due to their market focus.

Respondents are required to identify the category for which they would like to be considered. All responses will be evaluated along with other Respondents in the same category based upon the evaluation criteria detailed in Section 0600 (Proposal Preparation Instructions and Evaluation Criteria) of this solicitation.

The selected firms must be in compliance with applicable City ordinances and satisfactorily complete all related forms and certificates as described herein.

C. CONTRACTOR REQUIREMENTS

The responsibilities of the Contractor will include, but not be limited to the following:

1. Preparation of marketing plans, bond market condition assessment, and strategies for local, regional and national markets. This information will include identification of tasks to be completed and the individuals responsible, as well as critical events and deadlines.

2. Assist with the preparation of preliminary and final official statements as applicable to fully comply with all disclosure rules and requirements.

3. Assist City staff, its financial advisor and bond counsel in evaluation and preparation of the bond indenture and other agreements and in presentations before debt rating agencies, bond insurers, or as otherwise needed to secure optimum market advantage.

4. Management of co-managing underwriters to include maintenance of records of the account, negotiation of sale of bonds, preliminary and final pricing, taking orders and other services associated with book-running senior managing underwriters.

5. Coordinate the final allotment of bonds with the City of Austin. The City of Austin is committed to the equitable treatment of all members of its underwriting team.

6. Preparation by the Senior Manager of pricing information prior to sale of bonds to include spread components, estimated price scale for the City's bonds, current and expected market conditions, details of recent sales, proposed bond allocations (subject to approval by City) to co-managing underwriters and distribution of underwriting fees.

7. Preparation by the Senior Manager of a "Post-Sale Analysis" Report that includes the following:

   i. a debt schedule for the issue that includes principal and interest requirements, as well as the true interest cost;

   ii. a comparison of orders and allotments by year and by firm;

   iii. a comparison of the coupon rates and reoffering yields with issues of similar term and credit quality marketed at or about the same time;

   iv. a written discussion of any circumstances relating to the market or the City's offering that may have impacted the sale results.

8. Coordinate closing arrangements with the City of Austin staff, bond counsel, financial advisor, trustee bank, and other appropriate officials.

D. CONTRACTOR ASSIGNMENTS

Contractors will be assigned transactions on modified rotational basis. Typical the assignments will include a team (Team) of five firms made up of a mix of the three categories identified in Section 2 above (Contractor Pool), and will include one senior manager and four co-managers. While the City will make every effort to assign transactions in an equitable manner, other factors including those listed below may ultimately determine the Team membership.

1. Formal presentation of financing ideas by firms.
2. Complexity and size of transaction (which could result in more or fewer firms being assigned).
3. Type of industry or sector specific expertise required.
4. Previous performance on city transactions and financial advisor's feedback.

Detailed assignment records will be maintained throughout the contract period to aid in the assignment process to ensure transactions are distributed fairly across the Contractor Pool.

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Citigroup Global Markets Inc. ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Citigroup Global Markets Inc. having offices at 300 Crescent Ct., Suite 940, Dallas, TX 75201 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Citigroup Global Markets Inc. Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

CITIGROUP GLOBAL MARKETS INC.	CITY OF AUSTIN
MARIO CARRASCO	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Mario Carrasco	
Signature	Signature
DIRECTOR	Senior Buyer Supervisor
Title:	Title:
6/23/16	6/23/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Citigroup Global Markets Inc.

Company Address: 300 Crescent Ct, Suite 940

City, State, Zip: Dallas, TX 75201

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Mario Carrasco

Title: Director

Signature of Officer or Authorized Representative: Mario Carrasco

Date: 3/7/2016

Email Address: mario.r.carrasco@citi.com

Phone Number: 210-857-8517

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. **Questions:**

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16

Terry V. Nicholson, Sr. Buyer Specialist — Date

Purchasing Office, 512-974-2995

ACKNOWLEDGED BY:

Mario Carrasco	Mario Carrasco	3/7/16
Name	Authorized Signature	Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-101349

Date Filed:
08/18/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Citigroup Global Markets Inc.
New York, NY United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Bond Underwriting Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Citigroup Financial Products Inc.	New York, NY United States	X	
McGuire, Raymond J.	New York, NY United States	X	
Mills, William J.	New York, NY United States	X	
Forese, James	New York, NY United States	X	

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

NOTARY PUBLIC STATE OF TEXAS
TRACI PRICE
My Commission Expires
September 14, 2019

AFFIX NOTARY STAMP / SEAL ABOVE

Signature of authorized agent of contracting business entity

Sworn to and subscribed before me, by the said DEVIN PHILLIPS, this the 18 day of August, 20 16, to certify which, witness my hand and seal of office.

Traci Price	TRACI PRICE	ADMINISTRATOR
Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

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Citigroup Global Markets Inc.
New York, NY United States

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City of Austin, Texas

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MA 7400 PA160000048
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Forese, James	New York, NY United States	X	

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NOTARY PUBLIC STATE OF TEXAS
TRACI PRICE
My Commission Expires
September 14, 2019

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Signature of authorized agent of contracting business entity

Sworn to and subscribed before me, by the said DEVIN PHILLIPS, this the 18 day of August, 20 16, to certify which, witness my hand and seal of office.

Traci Price	TRACI PRICE	ADMINISTRATOR
Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Goldman, Sachs & Co. ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Goldman, Sachs & Co. having offices at 200 West Street, New York, NY 10282 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Goldman, Sachs & Co. Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

GOLDMAN, SACHS & CO.	**CITY OF AUSTIN**
Terry Thornton	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
TERRY THORNTON	
Signature	Signature
Vice President	Senior Buyer Supervisor
Title:	Title:
July 1, 2016	7/5/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Goldman, Sachs & Co.

Company Address: 200 West Street

City, State, Zip: New York, NY 10282

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Collin Teague

Title: Vice President

Signature of Officer or Authorized Representative:

Date: March 7, 2016

Email Address: Collin.Teague@gs.com

Phone Number: 212-902-9315

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

As noted herein, nothing in Goldman Sachs' Response is a commitment to act in any role in connection with the services contemplated by the RFP. Any such commitment to perform services contemplated by the RFP shall only be set forth in a separate agreement appropriate for the type of transaction involved. If selected by the City to perform the services set forth in our Response, Goldman Sachs reserves the right to negotiate the terms of the resulting agreement, which would contain customary terms and conditions mutually agreed upon by Goldman Sachs and the City.

Goldman Sachs

INVESTMENT BANKING
DIVISION

City of Austin

RFQ No: TVN0103REBID

Goldman, Sachs & Co.
March 8, 2016

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Appendix B. Audited Financials
Appendix C. Non-Discrimination Certificate
Appendix D. Additional Disclosures
Appendix E. Relevant Experience
Appendix F. Maturity by Maturity Swap Termination Results ($000s)
Appendix G. Cash Optimization Strategy – Defeasance Candidate Breakdown

Disclosure

Please note the exclusion for underwriters from the definition of municipal advisor (as defined in Section 15B of the Securities Exchange Act of 1934 (the "SEC MA Rules")) is limited to activities that are within the scope of an underwriting of a particular issuance of municipal securities. As such (absent another exemption or exclusion), if Goldman Sachs is selected and agrees to be a member of the City of Austin's pool of underwriters, any underwriting services provided by Goldman Sachs would be limited to (i) situations where the City has engaged Goldman Sachs to act as underwriter for a specific issuance of the City's securities and (ii) those services deemed to be within the scope of the underwriter exclusion of the SEC MA Rules (see pgs. 165-166 of SEC Release No. 34-70462). In order to be able to provide services outside the scope of the underwriting exclusion, Goldman Sachs must be able to rely on the exemption to the MA Rules (the "IRMA exemption") for entities that are represented by an independent registered municipal advisor with respect to the same aspects upon which Goldman Sachs provides any advice with respect to municipal financial products or the issuance of municipal securities; provided, that, any such services performed in reliance on the IRMA exemption would not alter the role of Goldman Sachs as an underwriter or the arm's length nature of the relationship between the City and Goldman Sachs. Further, the City, its counsel and other advisors shall be responsible for the disclosure documents and other legal documents; provided, that, as an underwriter, Goldman Sachs will review the disclosure documents in accordance with, and as part of, its responsibilities to investors under the federal securities laws. The primary role of Goldman Sachs, as an underwriter, would be to purchase securities, for resale to investors, in an arm's-length commercial transaction between the City and Goldman Sachs and Goldman Sachs has financial and other interests that differ from those of the City. Goldman Sachs would not be acting as a municipal advisor, financial advisor or fiduciary to the City or any other person or entity in connection with the role and matters contemplated by the RFP. As noted in our proposal, nothing in Goldman Sachs's response to this RFP is an expressed nor an implied commitment by Goldman Sachs to purchase or place any securities, provide credit or liquidity or to act in any capacity contemplated by this RFP. Any such commitment to perform the services contemplated by this RFP shall only be set forth in a separate agreement. For information regarding the role of an underwriter, please see our conflict of interest and additional disclosure.

Executive Summary

Goldman, Sachs & Co ("Goldman Sachs") is pleased to respond to the City of Austin's ("the City") Request for Qualifications for Investment Banking Services ("RFQ"). Goldman Sachs considers the City to be one of our most important municipal clients and has worked consistently over the years to help the City achieve its financing goals, develop solutions to the City's financing challenges, and identify and capture market-based economic value available to the City. We hope to continue our decades-long relationship by providing the City with the necessary resources and innovative ideas and look forward to the opportunity to work with the City, its advisors and stakeholders to help it meet its future financing goals.

EXPERIENCE AND SUITABILITY

We are confident Goldman Sachs has the expertise, experience, and capabilities necessary to provide value added investment banking services to the City. Our qualifications which we detail more in our proposal include, but are not limited to:

- ***Significant Underwriting Experience with the City and Texas Bonds:*** Goldman Sachs has extensive experience serving as underwriter for not only the City of Austin, but for issuers in the Austin area and in Texas broadly. Since January 1, 2010, we have served as lead or co-manager on 101 transactions totaling more than $26 million in principal for 33 different issuers in Texas. **Terry Thornton**, *Vice President* and City team leader, and **Collin Teague**, *Vice President* and co-team leader, have significant experience in Texas having worked on many of the City of Austin's' credits including as lead bankers on transactions for the City (General Obligation, Water and Wastewater System and Austin Energy), City of Houston (G.O., Combined Utility System, Houston Airport System ("HAS"), and Conventions and Entertainment), City of Dallas (Airport, G.O., Water and Wastewater System, and Convention Center Hotel), City of El Paso (G.O. and new downtown AAA baseball park), City of San Antonio G.O., Williamson County, Harris County (G.O., Flood Control District and Toll Road Authority), DFW Airport, Dallas Love Field (Southwest modernization program and General Airport Revenue Bonds), CPS Energy, Brownsville Utility System, Texas Department of Transportation (State Highway Fund, Mobility Fund, Grand Parkway System), Texas Public Finance Authority, and Texas Water Development Board. Our track record of successfully executing a wide array of transactions within the State and for the City specifically is testament to our ability to continue to execute and serve as lead underwriter for the City's transactions.
- ***Commitment to the City:*** In addition to transaction-related activity, members of the Goldman Sachs team are in frequent contact with City staff and advisors and continually work with the City to provide insight and financing innovation, assess the latest market trends, and assist in questioning existing frameworks. Within the past year we have brought out specialists in capital markets, the head of our syndicate desk to discuss specific investor targeting ideas and market outlook; and our in-house credit professional who came from Moody's to look at ways to better position credits for an upgrade. Goldman Sachs will continue to deliver the full army of resources of the firm to the City.
- ***Leading Airport Finance Franchise:*** Goldman Sachs is one of the leading underwriters for airport municipal bonds, having served as lead manager on over 125 deals totaling $18 billion in principal over the last 15 years. Notable airport issuing clients during that period include but are not limited to HAS, DFW Airport, Dallas Love Field, Hartsfield-Jackson Atlanta International Airport, Metropolitan Washington Airports Authority, and Miami-Dade International Airport. The City team is covered by **Zach Effron**, *Vice President* and Texas Airport Finance Specialist, who will be supported by **Paul Bloom**, *Vice President* and Head of US Airport Finance.
- ***Leading Public Power and Gas Prepay Franchise:*** Goldman Sachs continues to be a premier public power banking franchise and is a long-time leader in the public power space, ranked #1 in public power underwriting since 1990. Additionally, since gas prepay regulations were strengthened by federal legislation adopted into law in 2005, Goldman Sachs has completed $6.4 billion of natural gas prepayments, including the most recent deal on behalf of the Lower Alabama Gas District on March 1, 2016. **Joey Natoli**, *Vice President,* and **Yamini Kalidindi**, *Associate*, serve as the Goldman Sachs public power specialists for the City and bring extensive experience having served as lead bankers on transactions for Austin Energy, CPS Energy, Brownsville Utility System, Northern California Power Agency, the Lower Alabama Gas District, and New York Power Authority.
- ***Commitment to Municipal Finance and Strong Capital Position***: Goldman Sachs has served its municipal issuing clients since the 1950s. The municipal bond business remains a core business of Goldman Sachs and we are committed to the municipal bond market. In the dynamic municipal market, it is important for the City to partner with an experienced underwriter with a solid credit profile and strong capital reserves. Goldman Sachs is one of the nation's largest, most diversified, and strongly capitalized financial services institutions with an excess net capital position of over $12 billion as of December 2015 and a Global Core Excess of approximately $199 billion.

Goldman, Sachs & Co. Capital Position ($mm)

As of	Total Capital	Equity	Net Capital	Excess Net Capital
12/31/2015	$28,404	$9,904	$14,752	$12,365

- ***Ability and Willingness to Commit Capital:*** The result of our ongoing financial strength and commitment to our municipal franchise is the ability to commit capital to support our clients' transactions in the market. Goldman is willing to and frequently uses its strong balance sheet as appropriate to help clients complete their financings successfully. Goldman Sachs has committed over $4 billion to unsold balances for our issuing clients transactions since 2012.

HISTORY OF GOLDMAN SACHS

Goldman Sachs was originally founded in 1869 as a commercial paper business and quickly expanded from its New York office to cover clients across the U.S. Goldman Sachs entered the municipal finance business during the 1950s when our securities business and trading franchise began to flourish. After more than a century as a private partnership, Goldman Sachs became a publicly-traded company in 1999. In 2008, Goldman Sachs became a bank holding company. Today, Goldman Sachs has over 34,000 employees worldwide and provides a leading platform of investment banking, securities, and asset management services. Our clients include governments, corporations, financial institutions, and individuals.

The public finance business has been an integral part of Goldman Sachs since the 1950s and the firm strongly believes in the franchise value of serving such an important set of clients. The firm's comprehensive municipal bond business is comprised of Public Sector and Infrastructure ("PSI") within the firm's Investment Banking Division ("IBD"), and the municipal sales and trading team within the Securities Division.

OVERVIEW OF THE GOLDMAN SACHS ORGANIZATION

The Goldman Sachs Group, Inc., the parent company of Goldman Sachs, is a bank holding company that provides a leading platform of investment banking and securities services, as well as a full range of investing, advisory, and financing services to individuals, corporations, governments, and financial institutions worldwide.

Goldman Sachs is headquartered in New York and maintains over 60 offices worldwide, including 17 offices across the United States. Six of these offices are staffed with PSI personnel, most notably our Houston office where **Terry Thornton**, *Vice President*, Goldman Sachs City team leader and authorized negotiator, is located. Goldman Sachs maintains its core public finance underwriting and sales and trading operations in its headquarters location in New York.

PRIMARY PSI BRANCH OFFICE AND TEAM LEADER CONTACT INFORMATION

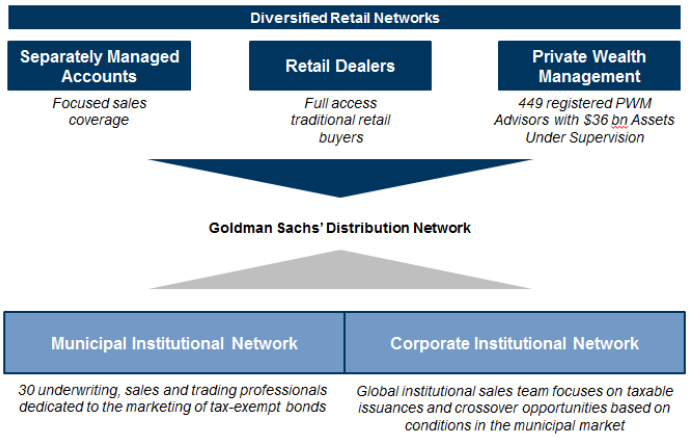
Terry Thornton
Vice President
Goldman, Sachs & Co.
1000 Louisiana Street, 11th Floor
Houston, Texas 77002
Telephone: (713) 276-3545
Email: terry.thornton@gs.com

PSI HEADQUARTERS AND SYNDICATE OFFICE

Goldman, Sachs & Co.
200 West Street, 32nd Floor
New York, NY 10282

MUNICIPAL SALES

One of the characteristics that distinguishes our ability to price and market the City's debt is our broad and multi-faceted sales effort. Our retail and institutional sales efforts stretch across the country, including 24 sales personnel focused on institutional tax-exempt accounts, 449 individuals covering our retail clients, and a global fixed income institutional sales force providing broader coverage of all investment grade credits (municipal and corporate).The following provides a visual display of our Goldman Sachs' municipal distribution network.



Goldman Sachs' institutional sales and trading presence is nationwide, with coverage in New York, Chicago, and San Francisco. Additionally, Goldman Sachs has PWM professionals located in our Houston and Dallas offices.

As can be seen in the following table, the Goldman Sachs comprehensive municipal bond business includes over 100 banking, underwriting, sales and trading professionals.

Goldman Sachs Municipal Workforce

	Underwriting Desk	Institutional Sales	Trading	Investment Banking
National Professionals	3	12	3	84
Texas Professionals	-	-	-	1

INNOVATIVE FINANCING TECHNIQUES

We take great pride in continually proposing innovative ideas to our clients. Below, we summarize three potentially relevant concepts to the City: 1) Gas Prepayment, 2) Swap Termination, and 3) Cash Optimization.

Gas Prepay

In the past, Goldman Sachs has spoken with the City regarding the opportunities around natural gas prepayments. Goldman Sachs was able to successfully close the first natural gas prepayment since November 2012 obtaining significant savings for the participating municipalities in Southwest Alabama. As the City analyzes opportunities to add combined cycle capacity and potentially reduce coal usage, a natural gas prepayment may offer a way to further reduce costs.

For the City, such a transaction could meet the City's baseload natural gas needs obtaining potentially in excess of $2mm a year in savings. Further detail is provided within our proposal.

Maturity-by-Maturity Swap Termination

The maturity-by-maturity strategy calls for an individual analysis of each maturity of the bonds/swap instead of a refinancing of the entire synthetic swap structure. This way, if there are specific maturities that are "in the money" today, the City can issue long-term bonds to: (1) fix out the specific underlying VRDBs, and (2) fund the termination payment associated with that individual maturity only. The City would be left with a portion of the synthetic fixed structure outstanding; however, its total exposure would be reduced at little or no cost, or at times, while potentially providing for cash flow savings.

We analyzed the City's ability to refund/terminate all or portions of its two swaps outstanding with respect to the Water and Wastewater System and Austin Airport. Our refunding methodology includes: (1) refunding the underlying VRDBs; (2) terminating the portion(s) of the fixed payer swap associated with individual maturity or maturities in the money; and (3) issuing fixed rate bonds to fund (a) the fix-out in a matched maturity fashion and (b) the associated termination of the portion of the swap.

With respect to the Austin Airport Series 2005 synthetic fixed structure, at this time in the market only one maturity (2018) provides for zero or greater savings ($1,000). All other maturities (i.e., 2016-2017, 2019-2025) do not currently provides savings.

With respect to the Water and Wastewater System Series 2008 synthetic fixed rate structure, there are no maturities which provide for zero or positive savings. ***However, the City should note several maturities are quite close and could flip into zero or positive territory quickly.*** To be specific, there are seven maturities totaling $17 million which each have less than $20k of negative savings.

We will continue to monitor both of these synthetic fixed structures for the City and provide updates when possible. The City should consider executing a maturity by maturity swap termination when it brings its next respective Water and Wastewater System and Austin Airport transactions to market. We provide a maturity by maturity breakdown in Appendix F.

Cash Optimization Strategy

A cash optimization strategy is a two-step process that can allow the City to lock-in savings on a "synthetic" refunding of non-advance refundable bonds before the call date of those bonds. The City would: (1) issue new money bonds for capital requirements it expected to pay with cash (i.e., "paygo" capital); and (2) deposit the cash that would otherwise been used for capital improvements to fund an escrow to defease non-advance refundable debt that would provide for savings that meet the City's refunding criteria. In the current market, the City can execute this strategy on a total of $68 million in cash optimization defeasance candidates for $ 4.3 million in PV savings, or 6.4% of defeased principal.

Cash Optimization Candidates and Results ($mm)

	Defeasance Candidates	PV Savings	% Savings
Austin Energy	$48.2	$2.9	6.0%
GO/PIB	19.9	1.4	7.2%
Total	$68.0	$4.3	6.4%

REFERENCES

City of Houston	City of Dallas	Harris County
Charisse Page Mosely *Deputy City Controller* 901 Bagby St. Houston, TX 77002 Telephone: (832) 393-3529 Email: charisse.mosely@houstontx.gov	**Jeanne Chipperfield** *Chief Financial Officer* 1500 Marilla Street, Room 4DN Dallas, TX 75201 Telephone: (214) 671-9070 Email: jeanne.chipperfield@dallascityhall.com	**Linnea Horn** *Debt Manager* 1001 Preston Street, Suite 630 Houston, TX 77002 Telephone: (713) 755-6574 Email: linnea.horn@bmd.hctx.net

Part I – Business Organization

OVERVIEW OF GOLDMAN SACHS

Goldman, Sachs and Co. ("Goldman Sachs" or "the firm") is a financial services firm that provides a leading platform of investment banking and securities services, as well as a full range of investing, advisory, and financing services to individuals, corporations, governments, and financial institutions worldwide. Goldman Sachs is a broker-dealer structured as a New York limited partnership owned by the Goldman Sachs Group, Inc. ("Group"). Goldman, Sachs & Co. L.L.C. is the sole general partner of Goldman Sachs and The Goldman Sachs Group, Inc. is the sole limited partner. Goldman, Sachs & Co. L.L.C. holds 0.2% of GS&Co. and the Group holds 99.8%.

Goldman Sachs serves its municipal and non-profit clients out of its Public Sector and Infrastructure Group ("PSI") within the Investment Banking Division.

Goldman Sachs is headquartered in New York and maintains over 60 offices worldwide, including 17 offices across the United States. Seven of these offices are staffed with PSI personnel, most notably our Houston office where Terry Thornton, Vice President and Goldman Sachs City of Austin ("City") team leader is located. Goldman Sachs maintains its core public finance underwriting and sales and trading operations in its headquarters location in New York.

PRIMARY PSI BRANCH OFFICE

Goldman, Sachs & Co.
1000 Louisiana Street, 11th Floor
Houston, Texas 77002

PSI HEADQUARTERS AND SYNDICATE OFFICE

Goldman, Sachs & Co.
200 West Street, 32nd Floor
New York, NY 10282

I. MANAGEMENT/OWNERSHIP

To the knowledge of the PSI Deal Team (as defined below), there have not been any material changes within the firm's management or ownership that would inhibit our ability to perform the services contemplated by this RFP. The "PSI Deal Team" comprises Terry Thornton, Collin Teague, Jeffrey Scruggs, Russel Viegas, and Irwin Tejeda.

II. NON-DISCRIMINATION CERTIFICATE

We have completed the non-discrimination certificate and it is attached to this proposal as part of Appendix C, which includes executed supplementary forms and attachments.

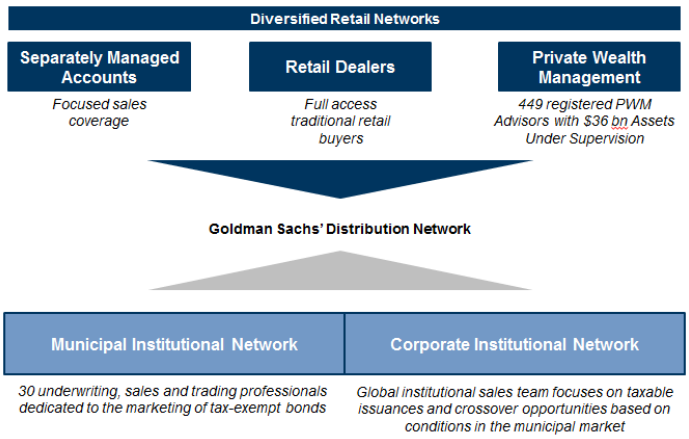
III. CONFIRMATION OF NOT LOBBYING

Goldman Sachs confirms our officers, employees, and agents will not attempt to lobby or influence a vote or recommendation related to our proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.

The firm is committed to seeking and retaining business on the basis of merit, not through collusion. To the best of our knowledge, no member of the PSI Deal Team has colluded with any party during the No-Contact period as defined in Ordinance No. 20111110-052, for the purpose of receiving an unfair competitive advantage in connection with the procurement process associated with this RFP.

IV/V. MUNICIPAL SALES OFFICE

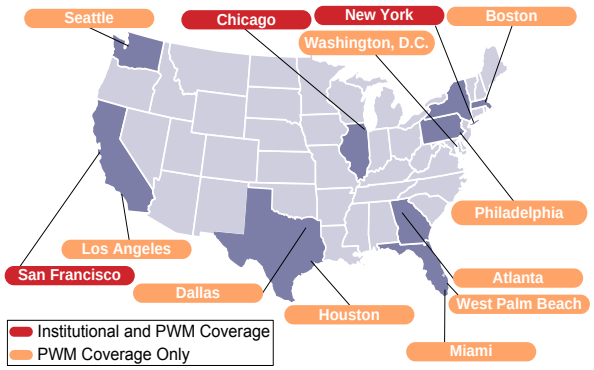
One of the main characteristics which distinguishes our ability to price and market the City's debt is our broad and multi-faceted sales and distribution effort. Our retail and institutional sales efforts stretch across the country, including 24 sales personnel focused on institutional tax-exempt accounts, 449 Account Executives covering our high net worth retail clients through our Private Wealth Management ("PWM"), and a global fixed income institutional sales force providing broader coverage of all investment grade credits (municipal and corporate).The following provides a visual display of our Goldman Sachs' municipal distribution network.



Goldman Sachs' institutional sales and trading presence is nationwide, with coverage in New York, Chicago, and San Francisco. Additionally, Goldman Sachs has PWM professionals located in our Houston and Dallas offices.

The following map highlights the offices across the U.S. where our institutional and retail distribution channels are located.

Goldman Sachs' National Distribution Network



VI. TEXAS OFFICE LOCATIONS

Goldman Sachs maintains three offices in Texas in Houston, Dallas and Irving with a total of over 900 employees. Terry Thornton, Vice President and City team leader is based in our Houston office. While Goldman Sachs cannot disclose specific Account Executive headcount in any particular office, as previously mentioned, we do maintain 449 PWM Account Executives who are authorized to sell municipal bonds across the US.

Goldman Sachs Texas Employment

Office	Location	Number of Employees
Irving	6011 Connection Drive Irving, TX 75039	697
Houston	1000 Louisiana Street, Suite 550 Houston, Texas 77002	109
Dallas	100 Crescent Court, Suite 1000 Dallas, TX 75201	95

Part II – Authorized Negotiator

AUTHORIZED NEGOTIATOR

Terry Thornton, Vice President, Goldman Sachs team leader, serves as the firm's designated authorized negotiator for City-related contracts/matters. His contact information is as follows.

Goldman Sachs Contact

Terry Thornton
Vice President
Goldman, Sachs & Co.
1000 Louisiana Street, 11th Floor
Houston, Texas 77002

Telephone: (713) 276-3545
Email: terry.thornton@gs.com

Part III – Background and Prior Experience

GOLDMAN SACHS HISTORY

Goldman Sachs was originally founded in 1869 as a commercial paper business and quickly expanded from its New York office to cover clients across the U.S. Goldman Sachs entered the municipal finance business during the 1950s when our securities business and trading franchise began to flourish. After more than a century as a private partnership, Goldman Sachs became a publicly-traded company in 1999. In 2008, Goldman Sachs became a bank holding company.

Today, Goldman Sachs has over 34,000 employees worldwide and provides a leading platform of investment banking, securities, and asset management services. Our clients include governments, corporations, financial institutions, and individuals.

The public finance business has been an integral part of Goldman Sachs since the 1950s and the firm strongly believes in the franchise value of serving such an important set of clients. The firm's comprehensive municipal bond business comprises PSI within IBD and the municipal sales and trading team within the Securities Division. Within IBD, PSI is part of the Americas Financing Group ("AFG"), thus providing opportunities for coordination with other market and product areas to provide tailored solutions for our clients. The underwriting syndicate team, also part of AFG, is at the intersection of our banking and public-side sales and trading efforts, and maintains strong relationships with the top municipal investors. We leverage our large credit trading and sales force from other sectors to reach all investor classes. Our municipal syndicate would work closely with our investment grade taxable syndicate to ensure that non-traditional municipal buyers are targeted.

Goldman Sachs' focus on municipal issuers remains strong as we continually work to develop innovative financing ideas and commit the firm's capital to support our municipal clients' transactions.

HEADQUARTERS AND TRADING DESK

As discussed in our response to Question II, Goldman Sachs maintains its public finance underwriting and trading desk in its headquarters location in New York.

SELECTED TRANSACTIONS AND RELEVANT EXPERIENCE

Goldman Sachs has extensive experience serving as underwriter for not only the City of Austin, but for issuers in the Austin area and in Texas broadly. Since January 1st, 2010, we have served as lead or co-manager on 101 transactions totaling more than $26 million in principal for 33 different issuers in Texas, or 33 different issuers.

Terry Thornton, Vice President and team leader, and Collin Teague, Vice President and co-team leader, have significant experience in Texas having worked on many of the City of Austin's' credits including as lead bankers on transactions for the City (General Obligation, Water and Wastewater System and Austin Energy), City of Houston (G.O., Combined Utility System, Houston Airport System , and Conventions and Entertainment), City of Dallas (Airport, G.O., Water and Wastewater System, and Convention Center Hotel), City of El Paso (G.O. and new downtown AAA baseball park), City of San Antonio G.O., Williamson County, Harris County (G.O., Flood Control District and Toll Road Authority), DFW Airport, Dallas Love Field (Southwest modernization program and General Airport Revenue Bonds), CPS Energy, Brownsville Utility System, Texas Department of Transportation (State Highway Fund, Mobility Fund, Grand Parkway System), Texas Public Finance Authority, and Texas Water Development Board.

Additionally, Zach Effron, Vice President and airport finance specialist who covers Austin Airport, has experience with multiple airports across the US including but not limited to HAS, DFW Airport, Metropolitan Washington Airports Authority and Philadelphia Airport. Joey Natoli, Vice President and Yamini Kalidindi, Associate, our public power specialists who cover Austin Energy, have significant public power experience across the US including but not limited to Austin Energy, CPS Energy, Brownsville Utility System, Northern California Power Agency, the Lower Alabama Gas District, and the New York Power Authority.

A detailed list of additional selected relevant transactions with assigned members of the banking team and references is listed in Appendix E to further showcase our experience.

Part IV – Personnel

Goldman Sachs' top priority is to provide exceptional service to our issuing clients including the City. To that end, we have assembled a well-rounded finance team combining in-depth knowledge of the City, the Water and Wastewater System, Austin Airport and Austin Energy, with quantitative, tax, capital markets, and execution expertise necessary to help address the City's specific financing needs.

CORE INVESTMENT BANKING PROFESSIONALS

Leading the team on a day-to-day basis will be ***Terry Thornton*** *and* ***Collin Teague,*** both Vice Presidents, who have significant experience working with multiple issuers in the State including the City. ***Jeffrey Scruggs,*** Managing Director and Co-Head of PSI, will provide team oversight, ensuring Goldman Sachs resources are available to the City. ***Russel Viegas*** and ***Irwin Tejeda,*** both Analysts, will provide analytical expertise and deal execution.

AIRPORT AND PUBLIC POWER FINANCE SPECIALISTS

The City further benefits from various sector specialists with significant experience in both airport and public power financing. ***Paul Bloom***, Vice President, is our airport finance specialist who is specialty oversight and additional support to Austin Airport, ***Zach Effron***, Vice President, is our primary airport finance specialist who helps cover Austin Airport. ***Joseph Natoli***, Vice President, and ***Yamini Kalidindi***, Associate, focus on energy-related financings and help cover Austin Energy.

QUANTITATIVE AND TAX-RELATED STRUCTURING EXPERTISE

Additional quantitative and modeling expertise will be provided by ***Michael Borys***, Vice President and Head of PSI Quantitative Strategies. ***Arthur Miller***, Managing Director, Goldman Sachs' in-house dedicated tax-related structuring expert, will be available to help analyze the tax-related structuring implications of any financing.

CREDIT AND RATING EXPERTISE

Goldman Sachs also brings the knowledge and expertise of a dedicated municipal credit analyst to the banking team. ***Stacy Lingamfelter***, Vice President, Head of our Municipal Credit Group and former Moody's analyst, will be available to support on credit matters and strategies related to the rating agencies. Stacy has provided valuable insight to the City with respect to Austin Airport and will continue to provide value-adding credit and rating analysis going forward.

UNDERWRITING

Bervan Yeh, Managing Director and Co-Head of Municipal Underwriting and Syndication, has extensive experience serving as lead underwriter for a wide array of Texas credits and issuers including the City's G.O. and Water and Wastewater System credits over the years. Mr. Yeh oversee the underwriting and pricing of any long-term debt. ***Sam Denton-Schneider***, Vice President, will assist Mr. Yeh and also manage the underwriting of any short-term debt.

Detailed resumes can be found in Appendix A.

Please see below a table with additional detail on role and areas of expertise. Please note that the percentages of time devoted assume normal day-to-day coverage and responsibilities. Percentages can increase up to 100% for each and every individual as needed and appropriate.

City of Austin's Banking Personnel

Name and Title	Role on Austin Team	Office Location	Exp. (Yrs)	Area(s) of Expertise	% of Time Devoted
Core Investment Banking Professionals					
Terry Thornton Vice President	Team Leader and Coverage Banker	Houston	22	Primary Texas Coverage (State and Local Government, Infrastructure, Transportation, Specialty Credits)	40%
Collin Teague Vice President	Co-Team Leader and Coverage Banker	New York	10	Primary Texas Coverage (State and Local Government, Infrastructure, Transportation, Specialty Credits)	25%
Jeffrey Scruggs Managing Director, Co-Head of PSI	Team Oversight	New York	28	State and Local Government, Infrastructure, Transportation, Specialty Credits	5%
Russel Viegas Analyst	Day-To-Day Support, Execution and Analysis	New York	4	Primary Texas Coverage (State and Local Government, Infrastructure, Transportation, Specialty Credits)	20%
Irwin Tejeda Analyst	Day-To-Day Support, Execution and Analysis	New York	1	Primary Texas Coverage (State and Local Government, Infrastructure, Transportation, Specialty Credits)	20%
Transportation and Energy Specialists					
Paul Bloom Vice President	Coverage Banker	Seattle	21	Airport / Transportation / Project Finance	10%
Zach Effron Vice President	Coverage Banker	New York	13	Airport / Transportation / Project Finance	10%
Joseph Natoli Vice President	Coverage Banker	San Francisco	11	Public Power / Utility / Project Finance	10%
Yamini Kalidindi Associate	Day-To-Day Support, Execution and Analysis	New York	6	Public Power / Utility / Project Finance	10%
Quantitative and Tax-Related Structuring Expertise					
Arthur Miller Managing Director	Tax Analysis	New York	36	Tax-Related Structuring / Complex Structures	5%
Michael Borys Vice President	Quantitative Analysis	New York	36	Quantitative Modeling / Complex Structures	5%
Credit and Rating Expertise					
Stacy Lingamfelter Vice President	Credit Expertise	New York	11	Rating and Credit Analysis	10%
Underwriting Professionals					
Bervan Yeh Managing Director, Co-Head of PSI Syndicate	Underwriting	New York	19	Primary Texas Tax-Exempt and Taxable Underwriter – Long-Term	5%
Sam Denton-Schneider Vice President	Underwriting	New York	7	Tax-Exempt and Taxable Underwriting – Long-Term and Short-Term	5%

Part V – Innovative Financing Techniques

We take great pride in continually proposing innovative ideas to our clients including the City. In the following sections, we describe three innovative financing techniques which may be applicable to the City: 1) cash optimization, 2) maturity-by-maturity swap termination analysis, and 3) gas prepayment.

GAS PREPAY

In the past, Goldman Sachs has spoken with the City regarding the opportunities around natural gas prepayments. While the market for this particular product has been fickle, on March 1, Goldman Sachs was able to successfully close the first natural gas prepayment since November 2012 obtaining significant savings for the participating municipalities in Southwest Alabama.

As the City analyzes opportunities to add combined cycle capacity and potentially reduce coal usage, a natural gas prepayment may offer a way to further reduce costs. As the City knows, tax-exempt financed natural gas prepayments were first formally approved by the IRS in regulations published in 2003, with the IRS making three key requirements:

- ***Qualified Prepayment:*** The transaction must be structured so the payment is treated as a prepayment under the tax regulations, rather than a deposit (such

as to an escrow) for the purchase of electricity/gas or as a loan to the commodity provider.

- ***Variable-based pricing:*** The IRS regulations recognize the ability to obtain variable pricing through a commodity swap (a derivative contract that exchanges a fixed payment for a variable payment), ***provided*** that the swap is with a counterparty independent from the supplier of the commodity.
- ***Electricity/gas must be used by municipal utilities:*** Substantially all of the commodity purchased through a prepayment must be used by a municipal gas or electric utility.

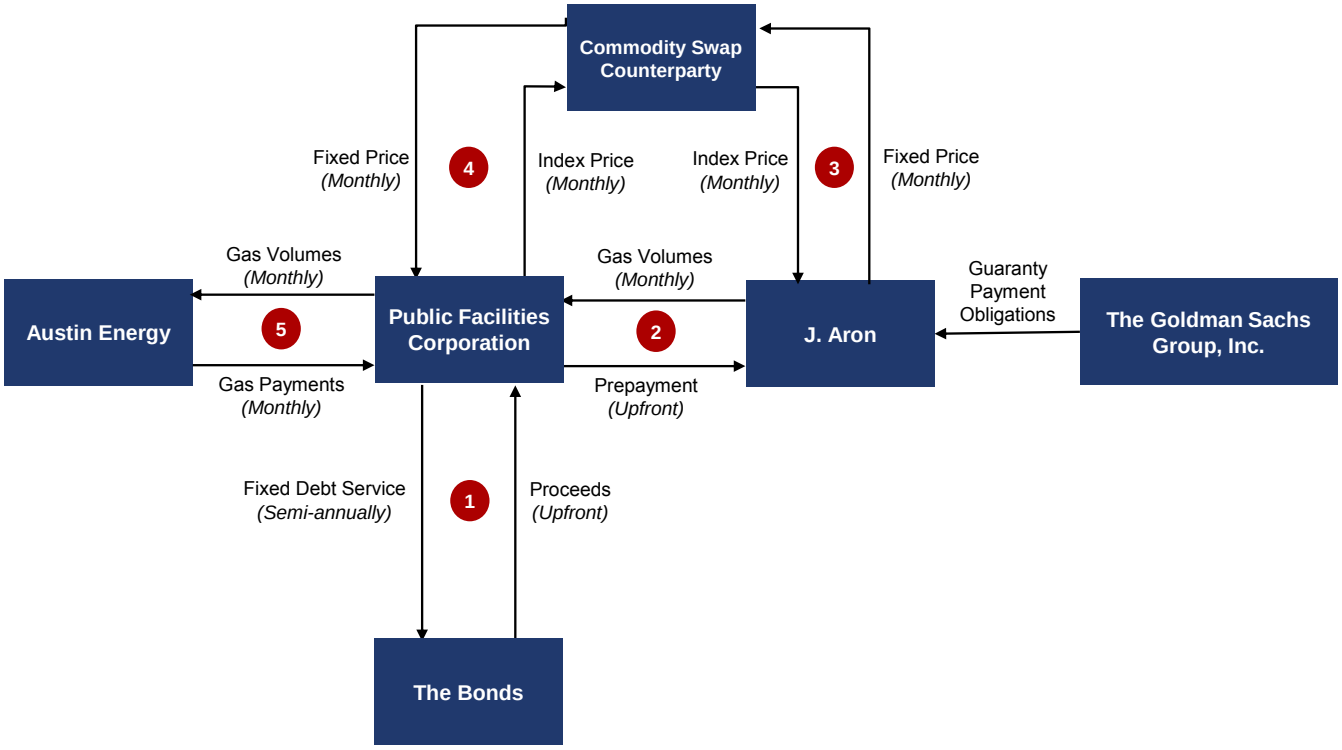
In 2005 the regulations were further strengthened by federal legislation and adopted into law.

Since that time, Goldman Sachs has completed $6.4bn of natural gas prepayments, including the most recent deal completed (on behalf of The Lower Alabama Gas District on March 1, 2016) and two of the last three transactions. In addition, we have completed a gas prepayment for CPS Energy, so very much understand the Texas law interworkings. Our transactions have been particularly successful because of the: (i) conservative tax position we take ensuring the deals meet both the IRS regulations as well as the 2005 law; (ii) transaction's ability to insulate municipalities from unnecessary risk, and (iii) ability to obtain high savings levels.

For the City such a transaction could meet the City's baseload natural gas needs obtaining potentially in excess of $2mm a year in savings.

Below we provide a short summary of the transaction workings:

Illustration of a Sample Gas Prepay Transaction



1. **Bond Issuance**: The Public Facilities Corporation ("PFC") issues fixed rate bonds to fund the prepayment for natural gas, pay capitalized interest and pay costs of issuance.
2. **Prepayment:** The PFC will apply bond proceeds to prepay J. Aron for 30 years of natural gas deliveries. Under the Gas Purchase Agreement, J. Aron will be obligated to: (a) deliver specified daily quantities of gas each month to the PFC for 30 years; (b) make payments for any gas not delivered based on replacement cost or the monthly market index price, whichever is higher; and (c) make a termination payment upon any early termination of the Gas Purchase Agreement.
3. **J. Aron Commodity Swap**: J. Aron enters into a Commodity Swap with a third party financial institution to facilitate J. Aron's ability to purchase at market prices the specified gas volumes required to be delivered each month throughout the term of the Gas Purchase Agreement.
4. **The PFC Commodity Swap**: The PFC enters into a Commodity Swap with the third party financial institution to facilitate its ability to sell specified gas volumes required to be delivered to Austin Energy at market-referenced prices, creating the economic effect of fixing the discount below the market price at which gas is sold to Austin Energy under the Gas Supply Contract. The PFC Commodity Swap enables the PFC to sell prepaid volumes to Austin

Energy at discounted "First of the Month" prices while ensuring that the net funds from Austin Energy payments and the PFC Commodity Swap always equal or exceed debt service regardless of the market price of natural gas at the time. Volumes, term, pipelines and delivery points for the PFC Commodity Swap mirror those of the J. Aron Commodity Swap.

5. **Austin Energy**: Under the Gas Supply Contract, the PFC has agreed to sell to Austin Energy 100% of the gas delivered by J. Aron on a pay-as-you-go basis at a price equal to the applicable monthly market index less a discount determined to ensure that the month's net proceeds under the Gas Supply Contract (net of swap payments and receipts and investment income from the Debt Service Account) will enable the PFC to make scheduled deposits to the Debt Service Account.

The payment obligations of J. Aron will be guaranteed by The Goldman Sachs Group, Inc. The cumulative effect of the Gas Purchase Agreement, the PFC Commodity Swap, the Gas Supply Contract, and related documents enable the PFC to receive dependable natural gas supplies at a discount below current market prices for sale to Austin Energy.

Lower Alabama Gas District Case Study and Reference

On March 1, 2016, Goldman Sachs successfully closed a $599 mm tax-exempt fixed rate natural gas prepayment transaction for The Lower Alabama Gas District (the "District"). The transaction, the only new fixed rate prepayment offering to successfully close since 2012, was executed by the District to secure a long-term supply of natural gas and realize a discount to spot natural gas prices. Proceeds from the transaction will be used to prepay J. Aron (Goldman Sachs' wholly owned commodity subsidiary), as gas supplier, in exchange for their commitment to supply 269 million MMBtus of natural gas to the District over ~30 years.

Goldman Sachs and a subset of the District's management team have been working closely since as early as 2012 to execute a prepayment transaction. Given the narrow window of opportunity for gas prepayments to work, Goldman Sachs closely monitored the markets and provided the team periodic updates over the past two years. In order to take advantage of the favorable market conditions, Goldman Sachs approached the District in January 2016 and worked quickly to bring the transaction to market. Less than 6 weeks later, the bonds were priced.

Goldman Sachs developed and executed a carefully planned marketing effort given a fixed rate prepay transaction had not come to market in nearly four years. Ultimately the marketing included an internet slides-only roadshow viewed by over 50 investors, one-on-one telephonic discussions, and an order book that included over 50 investors. The marketing effort generated a significant order book allowing the District to tighten yields 1-3bps. Overall, the transaction generated meaningful savings to gas customers in the Southeastern US.

Reference Contact Information

Al Bean
President
Lower Alabama Gas District
Phone Number: (334) 303-7966
Email: abean@cmcgas.com

MATURITY-BY-MATURITY SWAP TERMINATION ANALYSIS

We understand the City desires to reduce its exposure to synthetic fixed rate debt (i.e., variable rate demand bonds with a fixed payer swap overlay) as long as it is at little or no cost to the City. To accomplish this goal, the City can consider a maturity-by-maturity swap termination strategy.

Overview of Strategy and Analysis

The maturity-by-maturity strategy calls for an individual analysis of each maturity of the bonds/swap instead of a refinancing of the entire synthetic swap structure. This way, if there are specific maturities that are "in the money" today, the City can issue long-term bonds to: (1) fix out the specific underlying VRDBs, and (2) fund the termination payment associated with that individual maturity only. The City would be left with a portion of the synthetic fixed structure outstanding; however, its total exposure would be reduced at little or no cost, or at times, while potentially providing for cash flow savings.

We analyzed the City's ability to refund/terminate all or portions of its two swaps outstanding:

- Water and Wastewater Series 2008 fixed payer swap (City pays 3.60% and receives SIFMA)
- Airport Series 2005 fixed payer swap (City pays 4.051% and receives 71% of 1-month LIBOR).

Our refunding methodology includes:

1. Refunding the underlying VRDBs;
2. Terminating the portion(s) of the fixed payer swap associated with individual maturity or maturities in the money; and
3. Issuing fixed rate bonds to fund (1) the fix-out in a matched maturity fashion, and (2) the associated termination of the portion of the swap.

Results in the Current Market

With respect to the Austin Airport Series 2005 synthetic fixed structure, at this time in the market only one maturity (2018) provides for zero or greater savings. For this maturity, the fixed rate refunding of the bonds provides for $1.78 million of PV savings (assuming all-in rate of refunded bonds of 4.701% = swap rate of 4.051% + assumed 60 bps liquidity cost + assumed 5 bps remarketing fee). Meanwhile, the termination fee associated with that particular maturity is $1.779 million. ***This creates net savings of $1,000 for the 2018***

maturity. All other maturities (i.e., 2016-2017, 2019-2025) do not currently provides savings.

With respect to the Water and Wastewater System Series 2008 synthetic fixed rate structure, there are no maturities which provide for zero or positive savings. ***However, the City should note several maturities are quite close and could flip into zero or positive territory quickly.*** To be specific, there are seven maturities totaling $17 million which each have less than $20k of negative savings.

We will continue to monitor both of these synthetic fixed structures for the City and provide updates when possible. The City should consider executing a maturity by maturity swap termination when it brings its next respective Water and Wastewater System and Austin Airport transactions to market. We provide a maturity by maturity breakdown in Appendix F.

City of Lakeland Case Study and Reference

On January 21, 2016, Goldman Sachs served as senior manager for $139 mm Energy System Revenue and Refunding Bonds, Series 2016 for the City of Lakeland, Florida ("Lakeland"). The Bonds were rated Aa3/AA/AA- and are secured by Pledged Revenues of the Lakeland Utility System.

Goldman Sachs worked with Lakeland and its municipal advisor to develop a structure to fit within the desired parameters. Savings from the Series 2006 advance refunding was used to absorb the swap unwind costs for overall neutral savings. The Series 2014 FRN swap unwind was evaluated on a maturity-by-maturity basis and closely monitored for six months leading up to pricing. Maturities from tenors 11-15 were issued as discount bonds, which lowered the overall TIC of the issue. The coupons were lower than the typical 5% seen in the municipal market and the discount structure allowed the Lakeland to avoid a yield kick on those respective maturities.

In the weeks leading up to pricing, Goldman Sachs monitored the market to gauge investor sentiment and test different structural characteristics. After $9.6 billion of issuance the prior week, Lakeland entered the market during a holiday shortened week that saw $6.8 billion of issuance. Another $530 million of fund inflows ensured the new issue volume was placed in an orderly fashion, though MMD underperformed relative to Treasuries, especially on the long end. Goldman Sachs was able to build a strong initial book and was later able to tighten from a sound position. After initial price talks at +43 on the long end and tightening to +40 for preliminary pricing, we were able to achieve healthy subscription levels and tighten to +36 at re-pricing. The deal finished with 129 orders and was multiple times oversubscribed.

Reference Contact Information

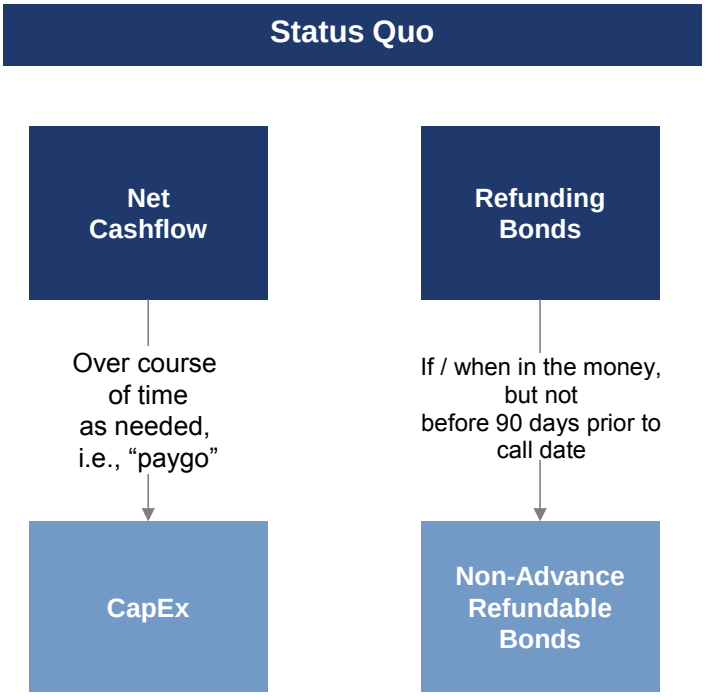
Jeffrey Stearns
Treasury Manager
City of Lakeland, Florida
Phone Number: (863) 834-6292
Email: jeffrey.stearns@lakelandgov.net

CASH OPTIMIZATION STRATEGY

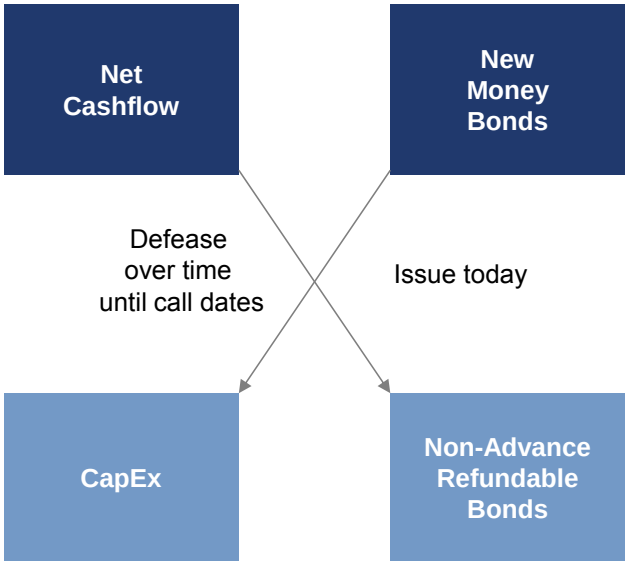
A cash optimization strategy is a two-step process that can allow the City to lock-in savings on a "synthetic" refunding of non-advance refundable bonds before the call date of those bonds. The City would:

- (1) issue new money bonds for capital requirements it expected to pay with cash (i.e., "paygo" capital); and
- (2) deposit the cash which would otherwise been used for capital improvements to fund an escrow to defease non-advance refundable debt which would provide for savings that meet the City's refunding criteria.

In the following chart, we illustrate how the strategy would be implemented.



Cash Optimization Strategy



While this strategy does not change the ultimate outcome for the City, benefits include:

- Allows the City to lock-in savings before the call date of non-advance refundable bonds; and
- The new money bonds are advance refundable providing the City with additional flexibility

The below tables provide a summary of the potential results of implementing the strategy. Please find potential cash optimization candidates in Appendix G.

Cash Optimization Defeasance Summary Statistics

Austin Energy	
Refunding Par	$ 46,870.0
Refunded Par	48,155.0
PV Savings	$ 2,894.1
% Savings	6.0%
Refunding Efficiency[1]	71.1%
All-in TIC	2.03%
Average Life	6.4 years

City of Austin G.O.	
Refunding Par	$ 18,805.0
Refunded Par	19,885.0
PV Savings	$ 1,432.2
% Savings	7.2%
Refunding Efficiency[1]	96.0%
All-in TIC	1.13%
Average Life	3.4 years

We believe this is a strategy that the City can execute at any point in time when it believes it will have cash to use towards capital improvements. Also note this strategy requires the issuance of new money bonds, as it is not technically a refunding transaction. This would likely require additional bonding authorization and we would be happy to work with the City, its financial advisors, and bond counsel to navigate specific concerns.

Part VI – Financial Viability

Provide the most recent audited annual Audit Report and most recent interim financial report as an attachment or appendix item. Hard copies must be included in the original submittal.

i. Provide the current equity capital positions (total equity capital, net equity capital and excess net equity capital) in accordance with GAAP, or corresponding equity information if a bank. **Do not refer to the annual audit as a response to this question.**

The success of any issue will require a seasoned senior manager to provide leadership in today's evolving markets, and it is important the underwriter have a strong capital position. Our willingness and ability to commit capital are two of the cornerstones upon which our reputation and business model are based. The Firm continues to assist our municipal clients by underwriting bonds and providing support to the secondary market. Goldman, Sachs & Co. has elected to compute net capital in accordance with the "Alternative Net Capital Requirement," as permitted by the Securities and Exchange Commission ("SEC") Rule 15c3-1. Our most recently published capital position is below:

Goldman, Sachs & Co. Capital Position ($Mn)

As of	Total Capital	Equity	Net Capital	Excess Net Capital
2015	$28,404	$9,904	$14,752	$12,365

The above capital measures are of our regulated broker-dealer which will be the legal entity serving as underwriter for the City. There are additional capital measurements that highlight the financial strength of the Goldman Sachs Group of which Goldman, Sachs & Co. is part. As of December 2015, the Goldman Sachs Group reported total shareholders' equity of $86 billion. The Firm has long had in place a set of liquidity and funding policies intended to maintain significant flexibility to address Goldman Sachs-specific and broader industry and market liquidity events. These liquidity measures are what the Firm calls its

"Global Core Liquid Assets." Our most important liquidity policy is to pre-fund what we estimate will be our likely cash needs during a liquidity crisis and hold such excess liquidity in the form of unencumbered, highly liquid securities that may be sold or pledged to provide same-day liquidity. As of December 2015, the total Global Core Liquid Assets of the Goldman Sachs Group averaged $199 billion.

Please find audited financials in Appendix B.

Part VII – Austin Bond Experience

In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

Goldman, Sachs & Co considers the City of Austin one of its most important clients and has always supported both competitive and negotiated issuances of the City and will continue to do so either solely or as a member of a syndicate.

Part VIII – References

Provide exactly three (3) government client references, at least two of which are covered by individuals listed in Part IV above. For each reference, provide a name, title, and organization, address and telephone number. In addition to the list provided, the City may independently solicit other references.

City of Houston	City of Dallas	Harris County
Charisse Page Mosely *Deputy City Controller* 901 Bagby St. Houston, TX 77002 Telephone: (832) 393-3529 Email: charisse.mosely@houstontx.gov	**Jeanne Chipperfield** *Chief Financial Officer* 1500 Marilla Street Room 4DN Dallas, TX 75201 Telephone: (214) 671-9070 Email: jeanne.chipperfield@dallascityhall.com	**Linnea Horn** *Debt Manager* 1001 Preston Street, Suite 630 Houston, TX 77002 Telephone: (713) 755-6574 Email: linnea.horn@bmd.hctx.net

Appendix A. Team Resumes

CORE INVESTMENT BANKING PROFESSIONALS

Terry Thornton, Vice President

Mr. Thornton brings 23 years of public finance experience and has led the Goldman/Austin relationship since 2003. Based in Houston, Mr. Thornton runs our Texas coverage. During his career, he has helped oversee the issuance of $28 billion in bonds, notes and commercial paper.

His senior management experience includes airports, energy related projects, convention centers, water and wastewater projects, toll road and other surface transportation, ports, ISD and higher education, health care and stadium financings.

Mr. Thornton received a BA in Managerial Studies from Rice University and an MBA from the University of Houston.

Collin Teague, Vice President

Mr. Teague has been a member of Goldman Sachs PSI since 2005. Although based in New York, Mr. Teague spends almost 100% of his time focusing on clients in Texas. During his career, he has helped oversee the issuance of over $20 billion in bonds, notes and commercial paper.

His senior management experience includes toll road and other surface transportation financings, airports, school financings, revenue financings, G.O., certificates of obligation/participation, water/waste water financings and energy-related projects.

Mr. Teague received a BBA in Finance and Honors from the University of Texas at Austin.

Jeffrey Scruggs, Managing Director and Co-Head of PSI Banking

Mr. Scruggs joined Goldman Sachs in July 2008. He currently is the Co-Head of PSI within the firm's Investment Banking Division, as well as Co-Head of the Operating Committee within PSI. Prior to July 2008, he was Managing Director and Director of the Municipal Investment Banking department at UBS Securities, where he had been for over 20 years. In the municipal banking sector, he has been lead banker on over $32 billion of lead managed offerings for municipal clients. He has served as lead banker for a variety of sectors and issuers, including toll road and other surfact transportation, airports, utility systems, convention centers, sports stadiums, and general obligation offerings.

Mr. Scruggs graduated with a BA in Economics from Harvard College and received his MBA from the Harvard Business School.

Russel Viegas, Analyst

Mr. Viegas is a member of our Texas coverage group and has been a member of Goldman Sachs PSI since 2015. Based in New York, Mr. Viegas covers multiple clients in Texas and the southern part of the United States. Russel joined PSI following three years in the industry and covers our infrastructure sector. A graduated from the University of Central Arkansas with a BBA in Finance, Russel is also a candidate in the Chartered Financial Analyst program.

Irwin Tejeda, Analyst

Mr. Tejeda is the newest member of our Texas coverage group. He joined Goldman Sachs PSI in July 2015 and covers multiple clients in Texas, the Northeast, and the Midwest part of the United States. Prior to joining as an Analyst, he was a Summer Analyst for the group.

Irwin graduated from the University of Michigan Ann Arbor with a Bachelors of Business

TRANSPORTATION AND ENERGY SPECIALISTS

Paul Bloom, Vice President

Before joining Goldman Sachs in 1994, Mr. Bloom worked for the Portland Development Commission, the City of New York and the Port of Seattle, where he managed all aspects of the Port's capital planning and financing program and the Port's investment banking relationships. Since his investment banking career began in 1994, Mr. Bloom has focused on the west region and the transportation and energy sectors and has served as lead banker to a wide variety of clients, including the States of Alaska, Washington and Oregon, the cities of Anchorage, Portland and Seattle, the Alaska Energy Authority, the University of Washington, the Washington State Convention Center and Sound Transit and Tri-Met (the Seattle and Portland Transit Agencies). Since 2009, Mr. Bloom has led the Firm's Public Sector Airport and Ports focus group, driving our strategy in this sector, serving as a resource to regional bankers across the US and leading or being integrally involved in our coverage of key clients. Mr. Bloom has led deals for airports in Denver, Portland, Seattle, Houston, St. Louis, Los Angeles, and Sacramento, among others. Mr. Bloom has also been involved in a number of Airport and Port sector P3's and project financings including the Seagirt Marine Terminal, Terminal 18 at the Port of Seattle and participating in the Goldman bidding team for the LGA P3 redevelopment.

Mr. Bloom received a BS from Willamette University and an MBA from Columbia University.

Zach Effron, Vice President

Mr. Effron has 13 years of investment banking experience. Before joining the firm in 2005, Mr. Effron spent time in public finance banking, municipal bond underwriting and municipal derivatives. Mr. Effron has spent the last 10 years of his career at Goldman Sachs working with infrastructure clients with a focus on complex project finance and transportation transactions. These transactions range from revenue bond credits for turnpike systems and airports to stand alone project financings for large toll roads and sports facilities.

His relevant client experience includes Metropolitan Washington Airports Authority (DCA & IAD), Philadelphia International Airport (PHL), Grand Parkway Transportation Corporation and Texas Department of Transportation State Highway and Mobility Fund credits. Mr. Effron received a B.S. from James Madison University.

Joseph Natoli, Vice President

For the past 11 years, Mr. Natoli has focused almost exclusively on assisting municipal utilities finance, plan, and manage utility systems and commodity resources to deliver stable, low cost energy to their rate payers. During this period of time, Mr. Natoli has served as the lead manager in over $20bn of financings, ranging from straightforward new money financings for retail electric systems to structuring and innovating more tailored solutions for complicated situations.

Over this period of time, Mr. Natoli has worked with utilities throughout the U.S. including: Austin Energy, Central Plans Energy Project, Public Power Generation Agency, NYPA, LADWP, LIPA, Platte River Power Authority, Silicon Valley Power, as well as many others. Furthermore, Mr. Natoli's career has been spent primarily focusing on more nuanced credits, assisting these issuers with their rating agency strategy and ultimately assisting in marketing this credit strategy to investors.

Mr. Natoli earned a BA in Economics from Stanford University.

Yamini Kalidindi, Associate

Ms. Kalidindi joined the Public Sector and Infrastructure Group in July 2014 and has focused on public utilities and energy cooperatives. Her experience includes working with Austin Energy, BPUB, GRU, OUC, NPPD and Great River Energy, among others.

Prior to Goldman Sachs, Ms. Kalidindi worked with a financial advisory firm specializing in single family and multifamily housing finance. There, she worked extensively with housing finance agencies, providing a full range of advisory services from structuring bond issuance to modeling cash flows and managing debt portfolios.

Ms. Kalidindi received a BSBA in Finance and a minor in Economics from Georgetown University.

QUANTITATIVE AND TAX RELATED STRUCTURING EXPERTISE

Arthur Miller, Managing Director

Formerly a tax lawyer at Mudge Rose Guthrie Alexander & Ferdon, Mr. Miller has been with the firm since 1985 and is considered one of the leading specialists in arbitrage, rebate and advance refundings, as well as tax law and tax reform. Mr. Miller has served as Chairman of the American Bar Association's Task Force on Advance Refundings, and on the Bond Market Association's Market and Public Policy Analysis Committee. In addition, he has served on an advisory committee to the US Treasury to help simplify the arbitrage and rebate rules.

Mr. Miller is a graduate of New York University School of Law (LLM Taxation), Duke University School of Law (JD), University of North Carolina (MA History), and Princeton University (AB).

Michael Borys, Vice President

Mr. Borys has more than 30 years of experience in the municipal finance business. He is the PSI Group's specialist in the technically complex aspects of municipal transactions, including securitizations, advance refundings, new product development, modeling of structured financings and debt structuring. With a broad range of experience in the municipal market and having structured billions of dollars in municipal financings, Mr. Borys is an expert in the development of new financing strategies and structures, as well as in the development of financial models.

CREDIT AND RATING EXPERTISE

Stacy Lingamfelter, Vice President

Ms. Lingamfelter joined Goldman Sachs in 2005 from Moody's Investors Service's Public Finance Group. Her experience with Moody's includes working with numerous public entities in the Midwest. Since joining the firm, she has advised the Commonwealth of Kentucky, the Commonwealth of Puerto Rico and Atlanta Hartsfield International Airport, among others, on rating agency strategy.

Ms. Lingamfelter earned a Bachelor of Arts from Tufts University, and both a Master of Public Policy (with Honors) and a Master of International Business Administration from the University of Chicago.

UNDERWRITING PROFESSIONALS

Bervan Yeh, Managing Director and Co-Head of Municipal Syndicate

Mr. Yeh joined Goldman Sachs in 1997 and has over 15 years of experience in municipal finance. As an underwriter, Mr. Yeh works with issuers to achieve the lowest cost of borrowing through the fixed income markets. He manages the entire negotiated issuance process, by leveraging the marketing, sales and capital committing capabilities of the Firm. He has underwritten transactions in the State for the Harris County Toll Authority, Houston Airport, City of Austin and Texas A&M. In addition to Harris County Toll Authority, Mr. Yeh has lead the financings for many transportation clients including Mid-Bay Bridge Authority, the New York MTA/TBTA, Alabama Federal and Highway Finance Authority and the Turnpike Authority of Kentucky.

Prior to being an underwriter, Mr. Yeh was an investment banker and specialized in the development of innovative financing structures for tax-exempt clients. As a banker, he has consolidated credit structures as well as overseen the issuance of over $16 billion of fixed, auction and variable rate financings and over $3.5 billion of BMA, LIBOR and option-based interest rate swaps. Mr. Yeh also worked in the Municipal Capital Markets Group for three years and served in that capacity as a liaison to municipal issuers for both derivative and short-term debt instruments.

Mr. Yeh graduated from the State University of New York at Albany with a BS in Accounting.

Sam Denton-Schneider, *Vice President*

Mr. Denton-Schneider is a Vice President on the Municipal Underwriting Syndicate. Previously, he worked as an Investment Banker in the San Francisco and Los Angeles offices. Mr. Denton-Schneider's recent financing experience includes offerings for the State of California, the California State Public Works Board, California DWR, California Earthquake Authority, Los Angeles Department of Water and Power, Southern California Public Power Authority, State of Utah, State of Idaho, Riverside County Transportation Commission, and Los Angeles International Airport.

Mr. Denton-Schneider earned a B.A. in Economics from Williams College.

Appendix B. Audited Financials

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2015 Commission File Number: 001-14965

The Goldman Sachs Group, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	13-4019460 (I.R.S. Employer Identification No.)
200 West Street New York, N.Y. (Address of principal executive offices)	10282 (Zip Code)

(212) 902-1000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class:	Name of each exchange on which registered:
Common stock, par value $.01 per share	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of Floating Rate Non-Cumulative Preferred Stock, Series A	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of 6.20% Non-Cumulative Preferred Stock, Series B	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of Floating Rate Non-Cumulative Preferred Stock, Series C	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of Floating Rate Non-Cumulative Preferred Stock, Series D	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of Floating Rate Non-Cumulative Preferred Stock, Series I	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of 5.50% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series J	**New York Stock Exchange**
Depositary Shares, Each Representing 1/1,000th Interest in a Share of 6.375% Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K	**New York Stock Exchange**
See Exhibit 99.2 for debt and trust securities registered under Section 12(b) of the Act	

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
☒ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.
☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
☒ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of the Annual Report on Form 10-K or any amendment to the Annual Report on Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

As of June 30, 2015, the aggregate market value of the common stock of the registrant held by non-affiliates of the registrant was approximately $88.6 billion.

As of February 5, 2016, there were 422,349,543 shares of the registrant's common stock outstanding.

Documents incorporated by reference: Portions of The Goldman Sachs Group, Inc.'s Proxy Statement for its 2016 Annual Meeting of Shareholders are incorporated by reference in the Annual Report on Form 10-K in response to Part III, Items 10, 11, 12, 13 and 14.

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PART I

Item 1. Business

Introduction

Goldman Sachs is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and individuals.

When we use the terms "Goldman Sachs," "the firm," "we," "us" and "our," we mean The Goldman Sachs Group, Inc. (Group Inc. or parent company), a Delaware corporation, and its consolidated subsidiaries.

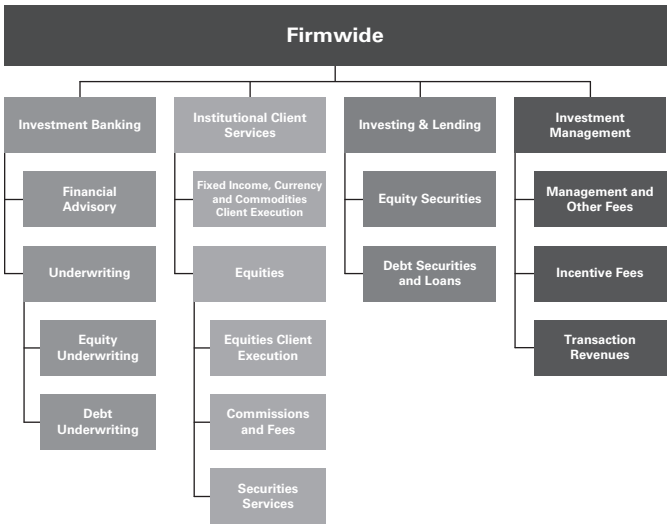
References to "the 2015 Form 10-K" are to our Annual Report on Form 10-K for the year ended December 31, 2015. All references to 2015, 2014 and 2013 refer to our years ended, or the dates, as the context requires, December 31, 2015, December 31, 2014 and December 31, 2013, respectively.

Group Inc. is a bank holding company and a financial holding company regulated by the Board of Governors of the Federal Reserve System (Federal Reserve Board). Our U.S. depository institution subsidiary, Goldman Sachs Bank USA (GS Bank USA), is a New York State-chartered bank.

As of December 2015, we had offices in over 30 countries and 48% of our total staff was based outside the Americas. Our clients are located worldwide, and we are an active participant in financial markets around the world. In 2015, we generated 44% of our net revenues outside the Americas. For more information about our geographic results, see Note 25 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K.

Our Business Segments and Segment Operating Results

We report our activities in four business segments: Investment Banking, Institutional Client Services, Investing & Lending and Investment Management. The chart below presents our four business segments.



The table below presents our segment operating results.

$ in millions	Year Ended December [1] 2015	2014	2013	% of 2015 Net Revenues
Investment Banking				
Net revenues	**$ 7,027**	$ 6,464	$ 6,004	**21%**
Operating expenses	**3,713**	3,688	3,479	
Pre-tax earnings	**$ 3,314**	$ 2,776	$ 2,525	
Institutional Client Services				
Net revenues	**$15,151**	$15,197	$15,721	**45%**
Operating expenses [2]	**13,938**	10,880	11,792	
Pre-tax earnings	**$ 1,213**	$ 4,317	$ 3,929	
Investing & Lending				
Net revenues	**$ 5,436**	$ 6,825	$ 7,018	**16%**
Operating expenses	**2,402**	2,819	2,686	
Pre-tax earnings	**$ 3,034**	$ 4,006	$ 4,332	
Investment Management				
Net revenues	**$ 6,206**	$ 6,042	$ 5,463	**18%**
Operating expenses	**4,841**	4,647	4,357	
Pre-tax earnings	**$ 1,365**	$ 1,395	$ 1,106	
Total net revenues	**$33,820**	$34,528	$34,206	
Total operating expenses [3]	**25,042**	22,171	22,469	
Total pre-tax earnings	**$ 8,778**	$12,357	$11,737	

1. Financial information concerning our business segments for 2015, 2014 and 2013 is included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the "Financial Statements and Supplementary Data," which are in Part II, Items 7 and 8, respectively, of the 2015 Form 10-K. See Note 25 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K for a summary of our total net revenues, pre-tax earnings and net earnings by geographic region.
2. Includes provisions of $3.37 billion recorded during 2015 for the agreement in principle with the Residential Mortgage-Backed Securities Working Group of the U.S. Financial Fraud Enforcement Task Force (RMBS Working Group). See Note 27 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K for further information about this agreement in principle.
3. Includes charitable contributions that have not been allocated to our segments of $148 million for 2015, $137 million for 2014 and $155 million for 2013.

Investment Banking

Investment Banking serves public and private sector clients around the world. We provide financial advisory services and help companies raise capital to strengthen and grow their businesses. We seek to develop and maintain long-term relationships with a diverse global group of institutional clients, including governments, states and municipalities. Our goal is to deliver to our institutional clients the entire resources of the firm in a seamless fashion, with investment banking serving as the main initial point of contact with Goldman Sachs.

Financial Advisory. Financial Advisory includes strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings, spin-offs and risk management. In particular, we help clients execute large, complex transactions for which we provide multiple services, including cross-border structuring expertise. Financial Advisory also includes revenues from derivative transactions directly related to these client advisory assignments.

We also assist our clients in managing their asset and liability exposures and their capital.

Underwriting. The other core activity of Investment Banking is helping companies raise capital to fund their businesses. As a financial intermediary, our job is to match the capital of our investing clients — who aim to grow the savings of millions of people — with the needs of our public and private sector clients — who need financing to generate growth, create jobs and deliver products and services. Our underwriting activities include public offerings and private placements, including local and cross-border transactions and acquisition financing, of a wide range of securities and other financial instruments. Underwriting also includes revenues from derivative transactions entered into with public and private sector clients in connection with our underwriting activities.

Equity Underwriting. We underwrite common and preferred stock and convertible and exchangeable securities. We regularly receive mandates for large, complex transactions and have held a leading position in worldwide public common stock offerings and worldwide initial public offerings for many years.

Debt Underwriting. We underwrite and originate various types of debt instruments, including investment-grade and high-yield debt, bank loans and bridge loans, including in connection with acquisition financing, and emerging- and growth-market debt, which may be issued by, among others, corporate, sovereign, municipal and agency issuers. In addition, we underwrite and originate structured securities, which include mortgage-related securities and other asset-backed securities.

Institutional Client Services

Institutional Client Services serves our clients who come to the firm to buy and sell financial products, raise funding and manage risk. We do this by acting as a market maker and offering market expertise on a global basis. Institutional Client Services makes markets and facilitates client transactions in fixed income, equity, currency and commodity products. In addition, we make markets in and clear client transactions on major stock, options and futures exchanges worldwide. Market makers provide liquidity and play a critical role in price discovery, which contributes to the overall efficiency of the capital markets. Our willingness to make markets, commit capital and take risk in a broad range of products is crucial to our client relationships.

Our clients are primarily institutions that are professional market participants, including investment entities whose ultimate customers include individual investors investing for their retirement, buying insurance or putting aside surplus cash in a deposit account.

Through our global sales force, we maintain relationships with our clients, receiving orders and distributing investment research, trading ideas, market information and analysis. As a market maker, we provide prices to clients globally across thousands of products in all major asset classes and markets. At times we take the other side of transactions ourselves if a buyer or seller is not readily available and at other times we connect our clients to other parties who want to transact. Much of this connectivity between the firm and its clients is maintained on technology platforms and operates globally wherever and whenever markets are open for trading.

Institutional Client Services and our other businesses are supported by our Global Investment Research division, which, as of December 2015, provided fundamental research on more than 3,400 companies worldwide and more than 40 national economies, as well as on industries, currencies and commodities.

Institutional Client Services generates revenues in four ways:

- In large, highly liquid markets (such as markets for U.S. Treasury bills, large capitalization S&P 500 stocks or certain mortgage pass-through securities), we execute a high volume of transactions for our clients;
- In less liquid markets (such as mid-cap corporate bonds, growth market currencies or certain non-agency mortgage-backed securities), we execute transactions for our clients for spreads and fees that are generally somewhat larger than those charged in more liquid markets;
- We also structure and execute transactions involving customized or tailor-made products that address our clients' risk exposures, investment objectives or other complex needs (such as a jet fuel hedge for an airline); and
- We provide financing to our clients for their securities trading activities, as well as securities lending and other prime brokerage services.

Institutional Client Services activities are organized by asset class and include both "cash" and "derivative" instruments. "Cash" refers to trading the underlying instrument (such as a stock, bond or barrel of oil). "Derivative" refers to instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors (such as an option, which is the right or obligation to buy or sell a certain bond or stock index on a specified date in the future at a certain price, or an interest rate swap, which is the agreement to convert a fixed rate of interest into a floating rate or vice versa).

Fixed Income, Currency and Commodities Client Execution. Includes interest rate products, credit products, mortgages, currencies and commodities.

- **Interest Rate Products.** Government bonds, money market instruments, treasury bills, repurchase agreements and other highly liquid securities and instruments, as well as interest rate swaps, options and other derivatives.
- **Credit Products.** Investment-grade corporate securities, high-yield securities, credit derivatives, bank and bridge loans, municipal securities, emerging market and distressed debt, and trade claims.
- **Mortgages.** Commercial mortgage-related securities, loans and derivatives, residential mortgage-related securities, loans and derivatives (including U.S. government agency-issued collateralized mortgage obligations, other prime, subprime and Alt-A securities and loans), and other asset-backed securities, loans and derivatives.
- **Currencies.** Most currencies, including growth-market currencies.
- **Commodities.** Crude oil and petroleum products, natural gas, base, precious and other metals, electricity, coal, agricultural and other commodity products.

Equities. Includes equities client execution, commissions and fees, and securities services.

Equities Client Execution. We make markets in equity securities and equity-related products, including convertible securities, options, futures and over-the-counter (OTC) derivative instruments, on a global basis. As a principal, we facilitate client transactions by providing liquidity to our clients with large blocks of stocks or derivatives, requiring the commitment of our capital.

We also structure and make markets in derivatives on indices, industry groups, financial measures and individual company stocks. We develop strategies and provide information about portfolio hedging and restructuring and asset allocation transactions for our clients. We also work with our clients to create specially tailored instruments to enable sophisticated investors to establish or liquidate investment positions or undertake hedging strategies. We are one of the leading participants in the trading and development of equity derivative instruments.

Our exchange-based market-making activities include making markets in stocks and exchange-traded funds, futures and options on major exchanges worldwide.

Commissions and Fees. We generate commissions and fees from executing and clearing institutional client transactions on major stock, options and futures exchanges worldwide, as well as OTC transactions. We provide our clients with access to a broad spectrum of equity execution services, including electronic "low-touch" access and more complex "high-touch" execution through both traditional and electronic platforms.

Securities Services. Includes financing, securities lending and other prime brokerage services.

- **Financing Services.** We provide financing to our clients for their securities trading activities through margin loans that are collateralized by securities, cash or other acceptable collateral. We earn a spread equal to the difference between the amount we pay for funds and the amount we receive from our client.
- **Securities Lending Services.** We provide services that principally involve borrowing and lending securities to cover institutional clients' short sales and borrowing securities to cover our short sales and otherwise to make deliveries into the market. In addition, we are an active participant in broker-to-broker securities lending and third-party agency lending activities.
- **Other Prime Brokerage Services.** We earn fees by providing clearing, settlement and custody services globally. In addition, we provide our hedge fund and other clients with a technology platform and reporting which enables them to monitor their security portfolios and manage risk exposures.

Investing & Lending

Our investing and lending activities, which are typically longer-term, include the firm's investing and relationship lending activities across various asset classes, primarily debt securities and loans, public and private equity securities, and real estate. These activities include investing directly in publicly and privately traded securities and in loans, and also through certain investment funds and separate accounts that we manage and through funds managed by external parties. We also provide financing to our clients.

Equity Securities. We make corporate, real estate and infrastructure equity-related investments.

Debt Securities and Loans. We make corporate, real estate, infrastructure and other debt investments. In addition, we provide credit to corporate clients through loan facilities and to individuals primarily through secured loans.

Investment Management

Investment Management provides investment and wealth advisory services to help clients preserve and grow their financial assets. Our clients include institutions and high-net-worth individuals, as well as retail investors who primarily access our products through a network of third-party distributors around the world.

We manage client assets across a broad range of asset classes and investment strategies, including equity, fixed income and alternative investments. Alternative investments primarily include hedge funds, credit funds, private equity, real estate, currencies, commodities, and asset allocation strategies. Our investment offerings include those managed on a fiduciary basis by our portfolio managers as well as strategies managed by third-party managers. We offer our investments in a variety of structures, including separately managed accounts, mutual funds, private partnerships, and other commingled vehicles.

We also provide customized investment advisory solutions designed to address our clients' investment needs. These solutions begin with identifying clients' objectives and continue through portfolio construction, ongoing asset allocation and risk management and investment realization. We draw from a variety of third-party managers as well as our proprietary offerings to implement solutions for clients.

We supplement our investment advisory solutions for high-net-worth clients with wealth advisory services that include income and liability management, trust and estate planning, philanthropic giving and tax planning. We also use the firm's global securities and derivatives market-making capabilities to address clients' specific investment needs.

Management and Other Fees. The majority of revenues in management and other fees is comprised of asset-based fees on client assets. The fees that we charge vary by asset class and are affected by investment performance as well as asset inflows and redemptions. Other fees we receive include financial counseling fees generated through our wealth advisory services and fees related to the administration of real estate assets.

Assets under supervision include assets under management and other client assets. Assets under management include client assets where we earn a fee for managing assets on a discretionary basis. This includes net assets in our mutual funds, hedge funds, credit funds and private equity funds (including real estate funds), and separately managed accounts for institutional and individual investors. Other client assets include client assets invested with third-party managers, bank deposits and advisory relationships where we earn a fee for advisory and other services, but do not have investment discretion. Assets under supervision do not include the self-directed brokerage assets of our clients. Long-term assets under supervision represent assets under supervision excluding liquidity products. Liquidity products represent money market and bank deposit assets.

Incentive Fees. In certain circumstances, we are also entitled to receive incentive fees based on a percentage of a fund's or a separately managed account's return, or when the return exceeds a specified benchmark or other performance targets. Such fees include overrides, which consist of the increased share of the income and gains derived primarily from our private equity funds when the return on a fund's investments over the life of the fund exceeds certain threshold returns. Incentive fees are recognized only when all material contingencies are resolved.

Transaction Revenues. We receive commissions and net spreads for facilitating transactional activity in high-net-worth client accounts. In addition, we earn net interest income primarily associated with client deposits and margin lending activity undertaken by such clients.

Business Continuity and Information Security

Business continuity and information security, including cyber security, are high priorities for Goldman Sachs. Their importance has been highlighted by numerous highly publicized cyber attacks against financial institutions and large consumer-based companies in recent years that resulted in the unauthorized disclosure of personal information of clients and customers and the theft and destruction of corporate information, as well as extreme weather events, such as Hurricane Sandy.

Our Business Continuity Program has been developed to provide reasonable assurance of business continuity in the event of disruptions at the firm's critical facilities and to comply with regulatory requirements, including those of FINRA. Because we are a bank holding company, our Business Continuity Program is also subject to review by the Federal Reserve Board. The key elements of the program are crisis planning and management, people recovery, business recovery, systems and data recovery, and process improvement. In the area of information security, we have developed and implemented a framework of principles, policies and technology to protect the information provided to us by our clients and that of the firm from cyber attacks and other misappropriation, corruption or loss. Safeguards are applied to maintain the confidentiality, integrity and availability of information.

Employees

Management believes that a major strength and principal reason for the success of Goldman Sachs is the quality and dedication of our people and the shared sense of being part of a team. We strive to maintain a work environment that fosters professionalism, excellence, diversity, cooperation among our employees worldwide and high standards of business ethics.

Instilling the Goldman Sachs culture in all employees is a continuous process, in which training plays an important part. All employees are offered the opportunity to participate in education and periodic seminars that we sponsor at various locations throughout the world. Another important part of instilling the Goldman Sachs culture is our employee review process. Employees are reviewed by supervisors, co-workers and employees they supervise in a 360-degree review process that is integral to our team approach, and includes an evaluation of an employee's performance with respect to risk management, compliance and diversity. As of December 2015, we had 36,800 total staff.

Competition

The financial services industry — and all of our businesses — are intensely competitive, and we expect them to remain so. Our competitors are other entities that provide investment banking, securities and investment management services, as well as those entities that make investments in securities, commodities, derivatives, real estate, loans and other financial assets. These entities include brokers and dealers, investment banking firms, commercial banks, insurance companies, investment advisers, mutual funds, hedge funds, private equity funds and merchant banks. We compete with some entities globally and with others on a regional, product or niche basis. Our competition is based on a number of factors, including transaction execution, products and services, innovation, reputation and price.

There has been substantial consolidation and convergence among companies in the financial services industry. Moreover, we have faced, and expect to continue to face, pressure to retain market share by committing capital to businesses or transactions on terms that offer returns that may not be commensurate with their risks. In particular, corporate clients seek such commitments (such as agreements to participate in their loan facilities) from financial services firms in connection with investment banking and other assignments.

Consolidation and convergence have significantly increased the capital base and geographic reach of some of our competitors, and have also hastened the globalization of the securities and other financial services markets. As a result, we have had to commit capital to support our international operations and to execute large global transactions. To take advantage of some of our most significant opportunities, we will have to compete successfully with financial institutions that are larger and have more capital and that may have a stronger local presence and longer operating history outside the United States. We also compete with smaller institutions that offer more targeted services, such as independent advisory firms. Some clients may perceive these firms to be less susceptible to potential conflicts of interest than we are, and, as described below, our ability to effectively compete with them could be affected by regulations and limitations on activities that apply to us but may not apply to them.

A number of our businesses are subject to intense price competition. Efforts by our competitors to gain market share have resulted in pricing pressure in our investment banking and client execution businesses and could result in pricing pressure in other of our businesses. For example, the increasing volume of trades executed electronically, through the internet and through alternative trading systems, has increased the pressure on trading commissions, in that commissions for electronic trading are generally lower than for non-electronic trading. It appears that this trend toward low-commission trading will continue. In addition, we believe that we will continue to experience competitive pressures in these and other areas in the future as some of our competitors seek to obtain market share by further reducing prices, and as we enter into or expand our presence in markets that may rely more heavily on electronic trading and execution, such as consumer-oriented deposit-taking activities.

The provisions of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), the requirements promulgated by the Basel Committee on Banking Supervision (Basel Committee) and other financial regulation could affect our competitive position to the extent that limitations on activities, increased fees and compliance costs or other regulatory requirements do not apply, or do not apply equally, to all of our competitors or are not implemented uniformly across different jurisdictions. For example, the provisions of the Dodd-Frank Act that prohibit proprietary trading and restrict investments in certain hedge and private equity funds differentiate between U.S.-based and non-U.S.-based banking organizations and give non-U.S.-based banking organizations greater flexibility to trade outside of the United States and to form and invest in funds outside the United States. Likewise, the obligations with respect to derivative transactions under Title VII of the Dodd-Frank Act depend, in part, on the location of the counterparties to the transaction. The impact of the Dodd-Frank Act and other regulatory developments on our competitive position will depend to a large extent on the manner in which the required rulemaking and regulatory guidance evolve, the extent of international convergence, and the development of market practice and structures under the new regulatory regimes as described further under "Regulation" below.

We also face intense competition in attracting and retaining qualified employees. Our ability to continue to compete effectively will depend upon our ability to attract new employees, retain and motivate our existing employees and to continue to compensate employees competitively amid intense public and regulatory scrutiny on the compensation practices of large financial institutions. Our pay practices and those of certain of our competitors are subject to review by, and the standards of, the Federal Reserve Board and other regulators inside and outside the United States, including the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA) in the United Kingdom. We also compete for employees with institutions whose pay practices are not subject to regulatory oversight. See "Regulation — Compensation Practices" below and "Risk Factors — Our businesses may be adversely affected if we are unable to hire and retain qualified employees" in Part I, Item 1A of the 2015 Form 10-K for more information about the regulation of our compensation practices.

Regulation

As a participant in the financial services industry, we are subject to extensive regulation worldwide. Our businesses have been subject to increasing regulation and supervision in the United States and other countries, and we expect this trend to continue in the future.

In particular, the Dodd-Frank Act, and the rules thereunder, significantly altered the financial regulatory regime within which we operate. The capital, liquidity and leverage ratios based on the Basel Committee's final capital framework for strengthening international capital standards (Basel III), as implemented by the Federal Reserve, the PRA and FCA and other national regulators have also had a significant impact on our businesses. The implications of such regulations for our businesses continue to depend to a large extent on their implementation by the relevant regulators globally, as well as the development of market practices and structures under the regime established by such regulations. Other reforms have been adopted or are being considered by regulators and policy makers worldwide, as described further throughout this section.

Banking Supervision and Regulation

Group Inc. is a bank holding company under the Bank Holding Company Act of 1956 (BHC Act), a financial holding company under amendments to the BHC Act effected by the U.S. Gramm-Leach-Bliley Act of 1999 (GLB Act) and is subject to supervision and examination by the Federal Reserve Board.

Under the system of "functional regulation" established under the BHC Act, the Federal Reserve Board serves as the primary regulator of our consolidated organization. The primary regulators of our U.S. non-bank subsidiaries directly regulate the activities of those subsidiaries, with the Federal Reserve Board exercising a supervisory role. Such "functionally regulated" U.S. non-bank subsidiaries include broker-dealers registered with the SEC, such as our principal U.S. broker-dealer, Goldman, Sachs & Co. (GS&Co.), entities registered with or regulated by the U.S. Commodity Futures Trading Commission (CFTC) with respect to futures-related and swaps-related activities and investment advisers registered with the SEC with respect to their investment advisory activities.

Various of our subsidiaries are regulated by the banking and securities regulatory authorities of the countries in which they operate.

Our principal U.S. bank subsidiary, GS Bank USA, is supervised and regulated by the Federal Reserve Board, the FDIC, the New York State Department of Financial Services and the Consumer Financial Protection Bureau (CFPB). A number of our activities are conducted partially or entirely through GS Bank USA and its subsidiaries, including: origination of bank loans; interest rate, credit, currency and other derivatives; leveraged finance; mortgage origination; structured finance; deposit-taking; and agency lending.

In addition, Group Inc. has two limited purpose trust company subsidiaries that are not permitted to accept deposits or make loans (other than as incidental to their trust activities) and are not insured by the FDIC. The Goldman Sachs Trust Company, N.A., a national banking association that is limited to fiduciary activities, is regulated by the Office of the Comptroller of the Currency and is a member bank of the Federal Reserve System. The Goldman Sachs Trust Company of Delaware, a Delaware limited purpose trust company, is regulated by the Office of the Delaware State Bank Commissioner.

Goldman Sachs International Bank (GSIB), our regulated U.K. bank and principal non-U.S. bank subsidiary, is regulated by the PRA and the FCA. GSIB acts as a primary dealer for European government bonds and is involved in market making in European government bonds, lending (including securities lending) and deposit-taking activities.

In November 2014, a new Single Supervisory Mechanism became effective, under which the European Central Bank and national supervisors both have certain regulatory responsibilities for banks in participating EU member states. While the U.K. does not participate in this new mechanism, it gives new powers to the European Central Bank to take regulatory action with regard to the firm's banks in Germany and France.

Capital, Leverage and Liquidity Requirements. We are subject to consolidated regulatory capital and leverage requirements set forth by the Federal Reserve Board, and GS Bank USA is subject to capital and leverage requirements that are calculated in substantially the same manner as those applicable to Group Inc., also set forth by the Federal Reserve Board.

Under the Federal Reserve Board's capital adequacy requirements, Group Inc. must meet specific regulatory capital requirements that involve quantitative measures of assets, liabilities and certain off-balance-sheet items. The sufficiency of our capital levels is also subject to qualitative judgments by regulators. We are also subject to liquidity requirements established by the U.S. federal bank regulatory agencies.

Capital Ratios. We are subject to the Federal Reserve Board's revised risk-based capital and leverage ratio regulations, inclusive of certain transitional provisions (Revised Capital Framework). These regulations are largely based on Basel III, and also implement certain provisions of the Dodd-Frank Act. Under the Revised Capital Framework, we are an "Advanced approach" banking organization. The Revised Capital Framework provides for capital buffers (including surcharges) that phase in over time, including a capital conservation buffer, and a global systemically important bank (G-SIB) surcharge described below, as well as a counter-cyclical capital buffer.

In July 2015, the Federal Reserve Board approved final rules establishing a capital surcharge for U.S. G-SIBs. For these institutions, the final rules implement the framework developed by the Basel Committee for assessing the global systemic importance of banking institutions and determining the range of additional Common Equity Tier 1 (CET1) that should be maintained by those deemed to be G-SIBs.

The Federal Reserve Board's framework results in surcharges initially ranging from 1% to 4.5%. The final rules treat the Basel Committee's methodology as a floor (Method One) and introduce an alternative calculation to determine the applicable surcharge (Method Two), which includes a significantly higher surcharge for systemic risk and, as part of the calculation of the applicable surcharge, replaces the Basel Committee's indicator for substitutability with a new indicator based on a U.S. G-SIB's use of short-term wholesale funding. Under the Federal Reserve Board's final rules, G-SIBs are required to meet the capital surcharges on a phased-in basis beginning in 2016 through January 1, 2019.

The Revised Capital Framework also provides a counter-cyclical capital buffer of up to 2.5% (and also consisting entirely of CET1), to be imposed in the event that national supervisors deem it necessary in order to counteract excessive credit growth. The Federal Reserve Board has proposed, but not yet finalized, its policy for setting the counter-cyclical capital buffer, and several other national supervisors have started to implement this counter-cyclical buffer. The buffer applicable to us could change in the future and, as a result, the minimum ratios we are subject to could increase.

GS Bank USA computes its capital ratios in accordance with the Revised Capital Framework as an "Advanced approach" banking organization.

The Basel Committee has published final guidelines for calculating incremental capital requirements for domestic systemically important banking institutions (D-SIBs). These guidelines are complementary to the framework outlined above for G-SIBs, but are more principles-based in order to provide an appropriate degree of national discretion. The impact of these guidelines on the regulatory capital requirements of GS Bank USA and other subsidiaries will depend on how they are implemented by the banking and non-banking regulators in the United States and other jurisdictions.

In January 2016, the Basel Committee finalized a revised framework for calculating minimum capital requirements for market risk, which is expected to increase market risk capital requirements for most banking organizations. The revised framework, among other things: modifies the boundary between the trading book and banking book; replaces value at risk (VaR) and stressed VaR measurements in the internal models approach with an expected shortfall measure that is intended to reflect tail and liquidity risks not captured by VaR; revises the model review and approval process; limits the capital-reducing effects of hedging and portfolio diversification in the internal models approach; provides that securitization exposures will be measured using only the Standardized approach; and makes significant revisions to the methodology for capital requirements under the Standardized approach. The effective date for first reporting under the revised framework is December 31, 2019. The U.S. federal bank regulatory agencies have not yet proposed regulations implementing the revised requirements for U.S. banking organizations.

The Basel Committee has issued a series of updates which propose other changes to capital regulations. In particular, it has finalized a revised standard approach for calculating RWAs for counterparty credit risk on derivatives exposures ("Standardized Approach for measuring Counterparty Credit Risk exposures," known as "SA-CCR"). In addition, it has published guidelines for measuring and controlling large exposures ("Supervisory Framework for measuring and controlling Large Exposures"), and issued an updated framework for regulatory capital treatment of banking book securitizations.

The Basel Committee has also issued consultation papers on, among other matters, a "Review of Interest Rate Risk in the Banking Book," a "Review of the Credit Valuation Adjustment Risk Framework," revisions to the Basel Standardized approach for credit risk and operational risk capital, and the design of a capital floor framework based on the revised Standardized approach.

See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Equity Capital Management and Regulatory Capital" in Part II, Item 7 of the 2015 Form 10-K and Note 20 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K for information about CET1, CET1 ratio, Tier 1 capital, Tier 1 capital ratio, Total capital, Total capital ratio, risk-weighted assets (RWAs), and for information about minimum required ratios, as well as applicable capital buffers and surcharges.

Leverage Ratios. Under the Revised Capital Framework, we and GS Bank USA are subject to Tier 1 leverage requirements established by the Federal Reserve Board. The Revised Capital Framework also introduced a supplementary leverage ratio for Advanced approach banking organizations effective January 1, 2018.

See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Equity Capital Management and Regulatory Capital" in Part II, Item 7 of the 2015 Form 10-K and Note 20 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K for information about our Tier 1 leverage ratio and supplementary leverage ratio.

Liquidity Ratios. The Basel Committee's international framework for liquidity risk measurement, standards and monitoring requires banking organizations to measure their liquidity against two specific liquidity tests.

The liquidity coverage ratio (LCR) is designed to ensure that the entity maintains an adequate level of unencumbered high-quality liquid assets based on expected net cash outflows under an acute short-term liquidity stress scenario. The U.S. federal bank regulatory agencies' rules implementing the LCR for Advanced approach banking organizations are generally consistent with the Basel Committee's framework, but include accelerated transitional provisions and more stringent requirements related to both the range of assets that qualify as high-quality liquid assets and cash outflow assumptions for certain types of funding and other liquidity risks.

Under the accelerated transition timeline, the LCR became effective in the United States on January 1, 2015, with a phase-in period whereby firms, including Group Inc. and GS Bank USA, must have an 80% and 90% minimum ratio in 2015 and 2016, respectively, and a 100% minimum ratio commencing in 2017. In November 2015, the Federal Reserve Board proposed a rule that would require bank holding companies to disclose their LCR on a quarterly basis beginning in the quarter ended September 2016. These requirements include LCR averages over the prior quarter, detailed information on certain components of the LCR calculation and projected net cash outflows. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Management — Liquidity Risk Management" in Part II, Item 7 of the 2015 Form 10-K for information about the LCR.

The LCR rule issued by the U.K. regulatory authorities became effective in the United Kingdom on October 1, 2015, with a phase-in period whereby certain financial institutions, including Goldman Sachs International (GSI), our regulated U.K. broker-dealer subsidiary, must have an 80% minimum ratio initially, increasing to 90% on January 1, 2017 and 100% on January 1, 2018.

The net stable funding ratio (NSFR) is designed to promote more medium- and long-term stable funding of the assets and off-balance-sheet activities of banking organizations over a one-year time horizon. Under the Basel Committee framework, the NSFR will be effective on January 1, 2018. The U.S. federal bank regulatory agencies and the U.K. regulatory authorities have not yet proposed rules implementing the NSFR for U.S. banks and bank holding companies, and U.K. financial institutions, respectively.

Since January 1, 2015, the enhanced prudential standards implemented by the Federal Reserve Board under the Dodd-Frank Act have required bank holding companies with $50 billion or more in total consolidated assets to comply with enhanced liquidity and overall risk management standards, including a buffer of highly liquid assets based on projected funding needs for 30 days, and increased involvement by boards of directors in liquidity and overall risk management. Although the liquidity buffer under these rules has some similarities to the LCR (and is described by the agencies as complementary to the LCR), it is a separate requirement that is in addition to the LCR. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Management — Overview and Structure of Risk Management" and "— Liquidity Risk Management" in Part II, Item 7 of the 2015 Form 10-K for information about our risk management practices and liquidity.

Stress Tests. Bank holding companies with total consolidated assets of $50 billion or more are subject to Dodd-Frank Act supervisory stress tests conducted by the Federal Reserve Board and semi-annual company-run stress tests. The stress test rules require increased involvement by boards of directors in stress testing and public disclosure of the results of both the Federal Reserve Board's annual stress tests and a bank holding company's annual supervisory stress tests, and semi-annual internal stress tests.

We publish summaries of our annual and mid-cycle stress tests results on our web site as described under "Available Information" below. Our annual Dodd-Frank Act stress test submission is incorporated into the annual capital plans that we are required to submit to the Federal Reserve Board as part of the Comprehensive Capital Analysis and Review (CCAR). The purpose of CCAR is to ensure that large bank holding companies have robust, forward-looking capital planning processes that account for each institution's unique risks and that permit continued operations during times of economic and financial stress. As part of CCAR, the Federal Reserve Board evaluates an institution's plan to make capital distributions, such as repurchasing or redeeming stock or increasing dividend payments, across a range of macroeconomic and firm-specific assumptions.

Similar to Group Inc., GS Bank USA is required to conduct stress tests on an annual basis, to submit the results to the Federal Reserve Board, and to make a summary of those results public. The rules require that the board of directors of GS Bank USA, among other things, consider the results of the stress tests in the normal course of the bank's business including, but not limited to, its capital planning, assessment of capital adequacy and risk management practices.

Dividends and Stock Repurchases. Federal and state laws impose limitations on the payment of dividends by our U.S. depository institution subsidiaries to Group Inc. In general, the amount of dividends that may be paid by GS Bank USA or our national bank trust company subsidiary is limited to the lesser of the amounts calculated under a "recent earnings" test and an "undivided profits" test. Under the recent earnings test, a dividend may not be paid if the total of all dividends declared by the entity in any calendar year is in excess of the current year's net income combined with the retained net income of the two preceding years, unless the entity obtains prior regulatory approval. Under the undivided profits test, a dividend may not be paid in excess of the entity's "undivided profits" (generally, accumulated net profits that have not been paid out as dividends or transferred to surplus).

The banking regulators have authority to prohibit or limit the payment of dividends if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization. The BHC Act prohibits the Federal Reserve Board from requiring a payment by a holding company subsidiary to a depository institution if the functional regulator of that subsidiary objects to such payment. In such a case, the Federal Reserve Board could instead require the divestiture of the depository institution and impose operating restrictions pending the divestiture.

Dividend payments by Group Inc. to its shareholders and stock repurchases by Group Inc. are subject to the oversight of the Federal Reserve Board. The dividend and share repurchase policies of large bank holding companies, such as Group Inc., are reviewed by the Federal Reserve Board through the CCAR process, based on capital plans and stress tests submitted by the bank holding company, and are assessed against, among other things, the bank holding company's ability to meet and exceed minimum regulatory capital ratios under stressed scenarios, its expected sources and uses of capital over the planning horizon under baseline and stressed scenarios, and any potential impact of changes to its business plan and activities on its capital adequacy and liquidity.

The Federal Reserve Board's capital planning rule includes a limitation on capital distributions to the extent that actual capital issuances are less than the amount indicated in the capital plan submission.

Source of Strength. The Dodd-Frank Act requires bank holding companies to act as a source of strength to their bank subsidiaries and to commit capital and financial resources to support those subsidiaries. This support may be required by the Federal Reserve Board at times when we might otherwise determine not to provide it. Capital loans by a bank holding company to a subsidiary bank are subordinate in right of payment to deposits and to certain other indebtedness of the subsidiary bank. In addition, if a bank holding company commits to a federal bank regulator that it will maintain the capital of its bank subsidiary, whether in response to the Federal Reserve Board's invoking its source-of-strength authority or in response to other regulatory measures, that commitment will be assumed by the bankruptcy trustee for the holding company and the bank will be entitled to priority payment in respect of that commitment, ahead of other creditors of the bank holding company.

Transactions between Affiliates. Transactions between GS Bank USA or its subsidiaries, on the one hand, and Group Inc. or its other subsidiaries and affiliates, on the other hand, are regulated by the Federal Reserve Board. These regulations generally limit the types and amounts of transactions (including credit extensions from GS Bank USA or its subsidiaries to Group Inc. or its other subsidiaries and affiliates) that may take place and generally require those transactions to be on market terms or better to GS Bank USA or its subsidiaries. These regulations generally do not apply to transactions between GS Bank USA and its subsidiaries. The Dodd-Frank Act expanded the coverage and scope of these regulations, including by applying them to the credit exposure arising under derivative transactions, repurchase and reverse repurchase agreements, and securities borrowing and lending transactions.

Total Loss-Absorbing Capacity. In October 2015, the Federal Reserve Board issued a proposed rule that would establish loss-absorbency and related requirements for U.S. G-SIBs. The proposed rule would address U.S. implementation of the Financial Stability Board's total loss-absorbing capacity (TLAC) principles and term sheet described below. The proposed rule would require U.S. G-SIBs, such as Group Inc., to maintain minimum external TLAC, consisting of Tier 1 capital and eligible senior and subordinated long-term debt (i.e., debt that is unsecured, has a maturity greater than one year from issuance and satisfies certain additional criteria), equal to the greater of (i) 16% of risk-weighted assets (RWAs) and (ii) 9.5% of total leverage exposure (the denominator of the supplementary leverage ratio) commencing January 1, 2019. The RWA component would increase to 18% of RWAs on January 1, 2022. The proposed rule would also require a buffer of CET1 in an amount equal to the sum of (i) the capital conservation buffer (2.5% of RWAs), (ii) the G-SIB surcharge calculated in accordance with the Method One calculation and (iii) any applicable counter-cyclical capital buffer.

In addition, beginning in 2019, U.S. G-SIBs would also be required to maintain minimum eligible long-term debt equal to the greater of (i) 6% plus the G-SIB surcharge of RWAs and (ii) 4.5% of total leverage exposure. The proposed rule would disqualify from eligible long-term debt, among other instruments, debt securities that permit acceleration for reasons other than insolvency or payment default, as well as structured notes and debt securities not governed by U.S. law. The senior long-term debt of U.S. G-SIBs, including Group Inc., typically permits acceleration for reasons other than insolvency or payment default, and therefore would not qualify as eligible long-term debt under the proposed rule.

The proposed rule would also prohibit Group Inc., as a U.S. G-SIB, from (i) guaranteeing liabilities of subsidiaries that are subject to early termination provisions if the parent company of a U.S. G-SIB enters into an insolvency or receivership proceeding, (ii) incurring liabilities guaranteed by subsidiaries, (iii) issuing short-term debt, or (iv) entering into derivatives and certain other financial contracts with external counterparties. Additionally, the proposed rule would cap, at 5% of the value of the U.S. G-SIB's eligible TLAC, the amount of a U.S. G-SIB's unsecured non-contingent third-party liabilities that are not eligible long-term debt that could rank equally with or junior to eligible long-term debt. Finally, the proposed rule would require U.S. G-SIBs and other large banking entities to deduct from their own Tier 2 capital certain holdings in unsecured debt of other U.S. G-SIBs, as well as holdings of their own unsecured debt securities. The Federal Reserve Board has also indicated that it is considering imposing subsidiary TLAC requirements on material operating subsidiaries of U.S. G-SIBs.

In November 2015, the Financial Stability Board issued a set of final principles and a final term sheet on a new minimum standard for TLAC of G-SIBs. The Financial Stability Board's final standard also requires certain material subsidiaries of a G-SIB organized outside of the G-SIB's home country, such as GSI, to maintain amounts of TLAC to facilitate the transfer of losses from operating subsidiaries to the parent company.

Also, in November 2015, the Basel Committee issued a proposal to implement internationally the capital deductions for G-SIBs' holdings of the TLAC of other G-SIBs and their own, which will inform how the deductions are implemented by other national regulators.

In December 2015, the Bank of England published a consultation paper on its approach for setting a "minimum requirement for own funds and eligible liabilities" (MREL) under which certain U.K. financial institutions, including GSI, would need to maintain equity and liabilities sufficient to credibly bear losses in resolution. MREL is generally consistent with the Financial Stability Board's TLAC standard.

The proposed MREL is the sum of a loss absorption amount and a recapitalization amount. The loss absorption amount is based on a firm's minimum going-concern capital requirement, which currently consists of Pillar 1 (the minimum capital requirement under the fourth EU Capital Requirements Directive and EU Capital Requirements Regulation, collectively known as CRD IV), plus Pillar 2A (an additional amount to cover risks not adequately captured in Pillar 1). The recapitalization amount is based on a firm's recapitalization needs post-resolution and any additional requirements to be determined by the Bank of England as necessary to maintain market confidence.

Resolution and Recovery. Each bank holding company with over $50 billion in assets and each designated systemically important financial institution is required by the Federal Reserve Board and the FDIC to provide an annual plan for its rapid and orderly resolution in the event of material financial distress or failure (resolution plan). Our resolution plan must, among other things, demonstrate that GS Bank USA is adequately protected from risks arising from our other entities. The regulators' joint rule sets specific standards for the resolution plans, including requiring a detailed resolution strategy and analyses of the company's material entities, organizational structure, interconnections and interdependencies, and management information systems, among other elements. If the regulators jointly determine that an institution has failed to cure identified shortcomings in its resolution plan and that its resolution plan, after any permitted resubmission, is not credible, the regulators may jointly impose more stringent capital, leverage or liquidity requirements or restrictions on growth, activities or operations or may jointly order the institutions to divest assets or operations in order to facilitate orderly resolution in the event of failure.

We are also required by the Federal Reserve Board to submit, on an annual basis, a global recovery plan that outlines the steps that management could take to reduce risk, maintain sufficient liquidity, and conserve capital in times of prolonged stress.

The FDIC has issued a rule requiring each insured depository institution with $50 billion or more in assets, such as GS Bank USA, to provide a resolution plan. Similar to our resolution plan for Group Inc., our resolution plan for GS Bank USA must, among other things, demonstrate that it is adequately protected from risks arising from our other entities.

The EU Bank Recovery and Resolution Directive (the BRRD) required EU member states to grant, by January 1, 2016, "bail-in" powers to EU resolution authorities to recapitalize a failing entity by writing down its unsecured debt or converting its unsecured debt into equity. Financial institutions in the EU (including GSI) must provide that new contracts entered into after January 1, 2016 enable such actions and also amend pre-existing contracts governed by non-EU law to enable such actions, when the financial institutions could incur liabilities under such pre-existing contracts after January 1, 2016.

Separately, under the BRRD, financial contracts not governed by EU law are required to be amended so that the resolution authorities can impose a temporary stay of termination in resolution. These requirements must be implemented over 2016 and 2017, with the timing depending on the category of the counterparty of the financial institution. The BRRD also subjects investment firms to MREL so that they can be resolved without causing financial instability and without recourse to public funds in the event of a failure. In July 2015, the European Banking Authority published final draft Regulatory Technical Standards on MREL, which specify the common criteria under the BRRD. The Bank of England's proposal on MREL is described above under "Total Loss-Absorbing Capacity."

Insolvency of an Insured Depository Institution or a Bank Holding Company. Under the Federal Deposit Insurance Act of 1950, if the FDIC is appointed as conservator or receiver for an insured depository institution such as GS Bank USA, upon its insolvency or in certain other events, the FDIC has broad powers, including the power:

- To transfer any of the depository institution's assets and liabilities to a new obligor, including a newly formed "bridge" bank, without the approval of the depository institution's creditors;
- To enforce the depository institution's contracts pursuant to their terms without regard to any provisions triggered by the appointment of the FDIC in that capacity; or
- To repudiate or disaffirm any contract or lease to which the depository institution is a party, the performance of which is determined by the FDIC to be burdensome and the disaffirmance or repudiation of which is determined by the FDIC to promote the orderly administration of the depository institution.

In addition, under federal law, the claims of holders of domestic deposit liabilities and certain claims for administrative expenses against an insured depository institution would be afforded a priority over other general unsecured claims, including deposits at non-U.S. branches and claims of debt holders of the institution, in the "liquidation or other resolution" of such an institution by any receiver. As a result, whether or not the FDIC ever sought to repudiate any debt obligations of GS Bank USA, the debt holders (other than depositors) would be treated differently from, and could receive, if anything, substantially less than, the depositors of GS Bank USA.

The Dodd-Frank Act created a new resolution regime (known as "orderly liquidation authority") for bank holding companies and their affiliates that are systemically important and certain non-bank financial companies. Under the orderly liquidation authority, the FDIC may be appointed as receiver for the systemically important institution and its failed non-bank subsidiaries if, upon the recommendation of applicable regulators, the Secretary of the Treasury determines, among other things, that the institution is in default or in danger of default, that the institution's failure would have serious adverse effects on the U.S. financial system and that resolution under the orderly liquidation authority would avoid or mitigate those effects.

If the FDIC is appointed as receiver under the orderly liquidation authority, then the powers of the receiver, and the rights and obligations of creditors and other parties who have dealt with the institution, would be determined under the orderly liquidation authority, and not under the bankruptcy or insolvency law that would otherwise apply. The powers of the receiver under the orderly liquidation authority were generally based on the powers of the FDIC as receiver for depository institutions under the Federal Deposit Insurance Act. Substantial differences in the rights of creditors exist between the orderly liquidation authority and the U.S. Bankruptcy Code, including the right of the FDIC under the orderly liquidation authority to disregard the strict priority of creditor claims in some circumstances, the use of an administrative claims procedure to determine creditors' claims (as opposed to the judicial procedure utilized in bankruptcy proceedings), and the right of the FDIC to transfer claims to a "bridge" entity. In addition, the orderly liquidation authority limits the ability of creditors to enforce certain contractual cross-defaults against affiliates of the institution in receivership.

The orderly liquidation authority provisions of the Dodd-Frank Act became effective upon enactment. The FDIC has completed several rulemakings and taken other actions under the orderly liquidation authority, including the issuance of a notice describing some elements of its "single point of entry" or "SPOE" strategy pursuant to the orderly liquidation authority provisions of the Dodd-Frank Act. Under this strategy, the FDIC would, among other things, resolve a failed financial holding company by transferring its assets to a "bridge" holding company.

In November 2015, we, along with a number of other major global banking organizations, adhered to an updated version of the International Swaps and Derivatives Association Resolution Stay Protocol (the ISDA Protocol) that was developed in coordination with the Financial Stability Board. The ISDA Protocol imposes a stay on certain cross-default and early termination rights within standard ISDA derivatives contracts and securities financing transactions between adhering parties in the event that one of them is subject to resolution in its home jurisdiction, including a resolution under the orderly liquidation authority in the United States. The initial version, which addressed ISDA derivatives contracts, took effect in January 2015, and the updated version, which was revised to also cover securities financing transactions, took effect in January 2016. The ISDA Protocol is expected to be adopted more broadly in the future, following the adoption of regulations by banking regulators, and expanded to include instances where a U.S. financial holding company becomes subject to proceedings under the U.S. bankruptcy code.

FDIC Insurance. GS Bank USA accepts deposits, and those deposits have the benefit of FDIC insurance up to the applicable limits. The FDIC's Deposit Insurance Fund is funded by assessments on insured depository institutions, such as GS Bank USA. The amounts of these assessments for larger depository institutions (generally those that have $10 billion in assets or more), such as GS Bank USA, are currently based on the average total consolidated assets less the average tangible equity of the insured depository institution during the assessment period, the supervisory ratings of the insured depository institution and specified forward-looking financial measures used to calculate the assessment rate. The assessment rate is subject to adjustment by the FDIC.

In October 2015, the FDIC issued a proposed rule that would increase the reserve ratio for the Deposit Insurance Fund to 1.35% of total insured deposits. The proposed rule would impose a surcharge on the assessments of larger depository institutions, beginning the quarter after the reserve ratio first reaches or exceeds 1.15% and continuing through the earlier of the quarter that the reserve ratio first reaches or exceeds 1.35% and December 31, 2018. Under the proposed rule, if the reserve ratio does not reach 1.35% by December 31, 2018, the FDIC would impose a shortfall assessment on larger depository institutions, including GS Bank USA.

Prompt Corrective Action. The U.S. Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), among other things, requires the federal bank regulatory agencies to take "prompt corrective action" in respect of depository institutions that do not meet specified capital requirements. FDICIA establishes five capital categories for FDIC-insured banks: well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized.

An institution may be downgraded to, or deemed to be in, a capital category that is lower than is indicated by its capital ratios if it is determined to be in an unsafe or unsound condition or if it receives an unsatisfactory examination rating with respect to certain matters. FDICIA imposes progressively more restrictive constraints on operations, management and capital distributions, as the capital category of an institution declines. Failure to meet the capital requirements could also require a depository institution to raise capital. Ultimately, critically undercapitalized institutions are subject to the appointment of a receiver or conservator, as described under "Resolution and Recovery, and Insolvency — Insolvency of an Insured Depository Institution or a Bank Holding Company" above.

The prompt corrective action regulations apply only to depository institutions and not to bank holding companies such as Group Inc. However, the Federal Reserve Board is authorized to take appropriate action at the holding company level, based upon the undercapitalized status of the holding company's depository institution subsidiaries. In certain instances relating to an undercapitalized depository institution subsidiary, the bank holding company would be required to guarantee the performance of the undercapitalized subsidiary's capital restoration plan and might be liable for civil money damages for failure to fulfill its commitments on that guarantee. Furthermore, in the event of the bankruptcy of the holding company, the guarantee would take priority over the holding company's general unsecured creditors, as described under "Source of Strength" above.

Activities. The Dodd-Frank Act and the BHC Act generally restrict bank holding companies from engaging in business activities other than the business of banking and certain closely related activities.

Volcker Rule. The provisions of the Dodd-Frank Act referred to as the "Volcker Rule" became effective in July 2015. The Volcker Rule prohibits "proprietary trading," but permits activities such as underwriting, market making and risk-mitigation hedging, requires an extensive compliance program and includes additional reporting and record keeping requirements. The reporting requirements include calculating daily quantitative metrics on covered trading activities (as defined in the rule) and providing these metrics to regulators on a monthly basis.

In addition, the Volcker Rule limits the sponsorship of, and investment in, "covered funds" (as defined in the rule) by banking entities, including Group Inc. and its subsidiaries. It also limits certain types of transactions between us and our sponsored funds, similar to the limitations on transactions between depository institutions and their affiliates. Covered funds include our private equity funds, certain of our credit and real estate funds, our hedge funds and certain other investment structures. The limitation on investments in covered funds requires us to reduce our investment in each such fund to 3% or less of the fund's net asset value, and to reduce our aggregate investment in all such funds to 3% or less of our Tier 1 capital.

In December 2014, the Federal Reserve Board extended the conformance period through July 2016 for investments in, and relationships with, covered funds that were in place prior to December 31, 2013, and indicated that it intends to further extend the conformance period through July 2017.

See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Regulatory Developments — Volcker Rule" in Part II, Item 7 of the 2015 Form 10-K for information about our investments in covered funds.

Other Restrictions. Financial holding companies generally can engage in a broader range of financial and related activities than are otherwise permissible for bank holding companies as long as they continue to meet the eligibility requirements for financial holding companies. The broader range of permissible activities for financial holding companies includes underwriting, dealing and making markets in securities and making investments in non-financial companies. In addition, financial holding companies are permitted under the GLB Act to engage in certain commodities activities in the United States that may otherwise be impermissible for bank holding companies, so long as the assets held pursuant to these activities do not equal 5% or more of their consolidated assets.

The Federal Reserve Board, however, has the authority to limit a financial holding company's ability to conduct activities that would otherwise be permissible, and will likely do so if the financial holding company does not satisfactorily meet certain requirements of the Federal Reserve Board. For example, if a financial holding company or any of its U.S. depository institution subsidiaries ceases to maintain its status as well-capitalized or well-managed, the Federal Reserve Board may impose corrective capital and/or managerial requirements, as well as additional limitations or conditions. If the deficiencies persist, the financial holding company may be required to divest its U.S. depository institution subsidiaries or to cease engaging in activities other than the business of banking and certain closely related activities.

In addition, we are required to obtain prior Federal Reserve Board approval before engaging in certain banking and other financial activities both within and outside the United States.

Single-counterparty credit limits and early remediation requirements have been proposed but are still under consideration by the Federal Reserve Board. The proposed single-counterparty credit limits impose more stringent requirements for credit exposure among major financial institutions, which (together with other provisions incorporated into the Basel III capital rules) may affect our ability to transact or hedge with other financial institutions. The proposed early remediation rules are modeled on the prompt corrective action regime, described under "U.S. Deposit Insurance and Prompt Corrective Action", but are designed to require action to begin in earlier stages of a company's financial distress, based on a range of triggers, including capital and leverage, stress test results, liquidity and risk management.

If any insured depository institution subsidiary of a financial holding company fails to maintain at least a "satisfactory" rating under the Community Reinvestment Act, the financial holding company would be subject to similar restrictions on activities.

In addition, New York State banking law imposes lending limits (which take into account credit exposure from derivative transactions) and other requirements that could impact the manner and scope of GS Bank USA's activities.

During the past several years, the U.S. federal bank regulatory agencies have raised concerns over origination and other practices in leveraged lending markets. The agencies have issued guidance that focuses on transaction structures and risk management frameworks and outlines high-level principles for safe-and-sound leveraged lending, including underwriting standards, valuation and stress testing.

Broker-Dealer and Securities Regulation

Our broker-dealer subsidiaries are subject to regulations that cover all aspects of the securities business, including sales methods, trade practices, use and safekeeping of clients' funds and securities, capital structure, recordkeeping, the financing of clients' purchases, and the conduct of directors, officers and employees. In the United States, the SEC is the federal agency responsible for the administration of the federal securities laws. GS&Co. is registered as a broker-dealer, a municipal advisor and an investment adviser with the SEC and as a broker-dealer in all 50 states and the District of Columbia. Self-regulatory organizations, such as FINRA and the NYSE, adopt rules that apply to, and examine, broker-dealers such as GS&Co.

In addition, state securities and other regulators also have regulatory or oversight authority over GS&Co. Similarly, our businesses are also subject to regulation by various non-U.S. governmental and regulatory bodies and self-regulatory authorities in virtually all countries where we have offices, as described further below, as well as under "Other Regulation." GSEC is a registered U.S. broker-dealer and is regulated by the SEC, the NYSE and FINRA. For a description of net capital requirements applicable to GS&Co. and GSEC, see Note 20 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K.

In Europe, we provide broker-dealer services that are subject to oversight by national regulators as well as EU regulators. These services are regulated in accordance with national laws, many of which implement EU directives, and increasingly by directly applicable EU regulations. These national and EU laws require, among other things, compliance with certain capital adequacy standards, customer protection requirements and market conduct and trade reporting rules.

We provide broker-dealer services in and from the United Kingdom under the regulation of the PRA and the FCA. GSI, our regulated U.K. broker-dealer subsidiary, is subject to capital requirements imposed by the PRA. GSI also has its own capital planning and stress testing process, which incorporates internally designed stress tests and those required under the PRA's Internal Capital Adequacy Assessment Process. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Equity Capital Management and Regulatory Capital — Subsidiary Capital Requirements" in Part II, Item 7 of the 2015 Form 10-K for information about GSI's capital ratios.

Goldman Sachs Japan Co., Ltd. (GSJCL), our regulated Japanese broker-dealer, is subject to capital requirements imposed by Japan's Financial Services Agency. GSJCL is also regulated by the Tokyo Stock Exchange, the Osaka Exchange, the Tokyo Financial Exchange, the Japan Securities Dealers Association, the Tokyo Commodity Exchange, Securities and Exchange Surveillance Commission, Bank of Japan, the Ministry of Finance and the Ministry of Economy, Trade and Industry, among others.

Also, the Securities and Futures Commission in Hong Kong, the Monetary Authority of Singapore, the China Securities Regulatory Commission, the Korean Financial Supervisory Service, the Reserve Bank of India, the Securities and Exchange Board of India, the Australian Securities and Investments Commission and the Australian Securities Exchange, among others, regulate various of our subsidiaries and also have capital standards and other requirements comparable to the rules of the SEC. Various of our other subsidiaries are regulated by the banking and regulatory authorities in jurisdictions in which we operate, including, among others, Brazil and Dubai.

Our exchange-based market-making activities are subject to extensive regulation by a number of securities exchanges. As a market maker on exchanges, we are required to maintain orderly markets in the securities to which we are assigned.

The Dodd-Frank Act will result in additional regulation by the SEC, the CFTC and other regulators of our broker-dealer and regulated subsidiaries in a number of respects. The legislation calls for the imposition of expanded standards of care by market participants in dealing with clients and customers, including by providing the SEC with authority to adopt rules establishing fiduciary duties for broker-dealers and directing the SEC to examine and improve sales practices and disclosure by broker-dealers and investment advisers. In addition, the U.S. Department of Labor has issued proposed rules defining the circumstances in which a person would be treated as a fiduciary under the Employee Retirement Income Security Act of 1974 by reason of providing investment advice to retirement plans and individual retirement accounts, as well as proposed exemptions.

Our broker-dealer and other subsidiaries are also subject to rules adopted by federal agencies pursuant to the Dodd-Frank Act that require any person who organizes or initiates an asset-backed security transaction to retain a portion (generally, at least five percent) of any credit risk that the person conveys to a third party. Securitizations would also be affected by rules proposed by the SEC to implement the Dodd-Frank Act's prohibition against securitization participants engaging in any transaction that would involve or result in any material conflict of interest with an investor in a securitization transaction. The proposed rules would exempt bona fide market-making activities and risk-mitigating hedging activities in connection with securitization activities from the general prohibition.

The SEC, FINRA and regulators in various non-U.S. jurisdictions have imposed both conduct-based and disclosure-based requirements with respect to research reports and research analysts and may impose additional regulations.

Swaps, Derivatives and Commodities Regulation

The commodity futures, commodity options and swaps industry in the United States is subject to regulation under the U.S. Commodity Exchange Act. The CFTC is the federal agency charged with the administration of the CEA. In addition, the SEC is the federal agency charged with the regulation of security-based swaps. Several of our subsidiaries, including GS&Co. and GSEC, are registered with the CFTC and act as futures commission merchants, commodity pool operators, commodity trading advisors or (as described below) swap dealers, and are subject to CFTC regulations. The rules and regulations of various self-regulatory organizations, such as the Chicago Board of Trade and the Chicago Mercantile Exchange, other futures exchanges and the National Futures Association, also govern the commodity futures, commodity options and swaps activities of these entities. In addition, Goldman Sachs Financial Markets, L.P. is registered with the SEC as an OTC derivatives dealer and conducts certain OTC derivatives activities.

The Dodd-Frank Act provides for significantly increased regulation of, and restrictions on, derivative markets and transactions. In particular, the Dodd-Frank Act imposes the following requirements relating to swaps and security-based swaps:

- Real-time public and regulatory reporting of trade information for swaps and security-based swaps and large trader reporting for swaps;
- Registration of swap dealers and major swap participants with the CFTC and of security-based swap dealers and major security-based swap participants with the SEC;
- Position limits, aggregated generally across commonly controlled accounts and commonly controlled affiliates, that cap exposure to derivatives on certain physical commodities;
- Mandated clearing through central counterparties and execution through regulated exchanges or electronic facilities for certain swaps and security-based swaps;
- New business conduct standards and other requirements for swap dealers, major swap participants, security-based swap dealers and major security-based swap participants, covering their relationships with counterparties, internal oversight and compliance structures, conflict of interest rules, internal information barriers, general and trade-specific record-keeping and risk management;

- Margin requirements for trades that are not cleared through a central counterparty; and
- Entity-level capital requirements for swap dealers, major swap participants, security-based swap dealers, and major security-based swap participants.

The terms "swaps" and "security-based swaps" are generally defined broadly for purposes of these requirements, and can include a wide variety of derivative instruments in addition to those conventionally called swaps. The definition includes certain forward contracts, options, certain loan participations and guarantees of swaps, subject to certain exceptions, and relates to a wide variety of underlying assets or obligations, including currencies, commodities, interest or other monetary rates, yields, indices, securities, credit events, loans and other financial obligations.

The CFTC is responsible for issuing rules relating to swaps, swap dealers and major swap participants, and the SEC is responsible for issuing rules relating to security-based swaps, security-based swap dealers and major security-based swap participants. The U.S. federal bank regulatory agencies (acting jointly) adopted final rules in October 2015 and the CFTC adopted final margin rules for uncleared swaps in December 2015 that will phase in variation margin requirements from September 1, 2016 through March 1, 2017 and initial margin requirements from September 1, 2016 through September 1, 2020, depending on the level of swaps and foreign exchange forward transaction activity of the swap dealer and the relevant counterparty. The final rules of the U.S. federal bank regulatory agencies would generally apply to inter-affiliate transactions, with limited relief available from the initial margin requirements for affiliates that have registered with the CFTC as swap dealers. Under the CFTC final rules, inter-affiliate transactions would be exempt from initial margin requirements with certain exceptions, but variation margin requirements would still apply. We expect the SEC to adopt margin regulations as well in 2016.

The CFTC has not yet finalized its capital regulations for swap dealers. However, many of the requirements, including registration of swap dealers, mandatory clearing and execution of certain swaps, business conduct standards and real-time public trade reporting, have taken effect already under CFTC rules, and the SEC and the CFTC have finalized the definitions of a number of key terms. Finally, the CFTC has begun to decide which swaps must be cleared through central counterparties and executed on swap execution facilities or exchanges. In particular, certain interest rate swaps and credit default swaps are now subject to these clearing and trade-execution requirements. The CFTC is expected to continue to make such determinations during 2016.

The SEC has adopted rules relating to trade reporting and real-time reporting requirements for security-based swap dealers and major security-based swap participants. The SEC has also adopted final rules relating to the registration of security-based swap dealers, but such registration is not currently required. The SEC has proposed, but not yet finalized, rules to impose margin, capital, segregation and business conduct requirements for security-based swap dealers and major security-based swap participants. The SEC has also proposed rules that would govern the design of new trading venues for security-based swaps and establish the process for determining which products must be traded on these venues.

We have registered certain subsidiaries as "swap dealers" under the CFTC rules, including GS&Co., GS Bank USA, GSI and J. Aron & Company. We also expect to register certain subsidiaries as security-based swap dealers. We expect that these subsidiaries, and our businesses more broadly, will continue to be subject to significant and developing regulation and regulatory oversight in connection with swap-related activities.

Similar regulations have been proposed or adopted in jurisdictions outside the United States, including the adoption of standardized execution and clearing, margining and reporting requirements for OTC derivatives. For instance, the EU has established regulatory requirements for OTC derivatives activities under the European Market Infrastructure Regulation, including requirements relating to portfolio reconciliation and reporting, which have already taken effect, as well as requirements relating to clearing and margining for uncleared derivatives, which are currently expected to be finalized during 2016.

The CFTC and SEC have issued guidance and rules relating to swap activities. The CFTC has provided guidance and timing on the cross-border regulation of swaps and announced that it had reached an understanding with the European Commission regarding the cross-border regulation of derivatives and the common goals underlying their respective regulations. The CFTC also approved certain comparability determinations that would permit substituted compliance with non-U.S. regulatory regimes for certain swap regulations related to certain business conduct requirements, including chief compliance officer duties, conflict of interest rules, monitoring of position limits, record-keeping and risk management. The SEC issued rules and guidance on cross-border security-based swap activities and the CFTC issued proposed rules that would determine the circumstances under which registered swap dealers would be subject to the CFTC's rules regarding margin in connection with uncleared swaps in cross-border transactions. In particular, under the proposal, certain non-U.S. swap dealers would generally be required to comply with the CFTC's rules but, with respect to the requirement to post margin, these non-U.S. swap dealers would be permitted to comply with comparable margin requirements in a foreign jurisdiction, subject to the CFTC's approval of the particular jurisdiction. Substituted compliance would also be available with respect to the collection of margin in certain circumstances. The CFTC's rules will only be applicable to those swap dealers that are not subject to the margin requirements of a prudential regulator.

The application of new derivatives rules across different national and regulatory jurisdictions has not yet been fully established and specific determinations of the extent to which regulators in each of the relevant jurisdictions will defer to regulations in other jurisdictions have not yet been completed. The full impact of the various U.S. and non-U.S. regulatory developments in this area will not be known with certainty until all the rules are finalized and implemented and market practices and structures develop under the final rules.

J. Aron & Company is authorized by the U.S. Federal Energy Regulatory Commission (FERC) to sell wholesale physical power at market-based rates. As a FERC-authorized power marketer, J. Aron & Company is subject to regulation under the U.S. Federal Power Act and FERC regulations and to the oversight of FERC. As a result of our investing activities, Group Inc. is also an "exempt holding company" under the U.S. Public Utility Holding Company Act of 2005 and applicable FERC rules.

In addition, as a result of our power-related and commodities activities, we are subject to energy, environmental and other governmental laws and regulations, as described under "Risk Factors — Our commodities activities, particularly our physical commodities activities, subject us to extensive regulation and involve certain potential risks, including environmental, reputational and other risks that may expose us to significant liabilities and costs" in Part I, Item 1A of the 2015 Form 10-K.

Investment Management Regulation

Our investment management business is subject to significant regulation in numerous jurisdictions around the world relating to, among other things, the safeguarding of client assets, offerings of funds, marketing activities, transactions among affiliates and our management of client funds.

Certain of our subsidiaries are registered with, and subject to oversight by, the SEC as investment advisers. The SEC recently adopted amendments to the rules that govern SEC-registered money market mutual funds. The new rules require institutional prime money market funds to value their portfolio securities using market-based factors and to sell and redeem their shares based on a floating net asset value. In addition, the rules allow, in certain circumstances, for the board of directors of money market mutual funds to impose liquidity fees and redemption gates and also require additional disclosure, reporting and stress testing. Certain reporting requirements became effective during 2015, and the firm's money market mutual funds will be required to comply with the amendments relating to floating net asset value, fees and redemption gates and stress testing in 2016.

In September 2015, the SEC also proposed rules that would require registered funds to adopt and implement liquidity risk management programs, including establishing a minimum percentage of net assets that could be invested only in assets offering three-day liquidity and classifying and reviewing the liquidity of fund portfolio assets; permit funds to employ "swing pricing," under which the net asset value of a fund's shares may be adjusted in order to pass the cost of trading in such shares to purchasing or redeeming shareholders; and require related disclosures.

In December 2015, the SEC also proposed a new rule regulating the use of derivatives by registered funds. Under the proposed rule, a registered fund would be required to, among other things, comply with one of two alternative portfolio limitations designed to impose a limit on the total amount of leverage the fund can obtain through derivatives transactions; maintain a minimum amount of "qualifying coverage assets" (generally limited to cash and cash equivalents) to support payment obligations for each derivative transaction; establish a derivatives risk management program if derivative use meets specified thresholds; and comply with new recordkeeping, disclosure and reporting requirements related to its use of derivatives.

Certain of our European subsidiaries are subject to the Alternative Investment Fund Managers Directive and related regulations, which govern the approval, organizational, marketing and reporting requirements of EU-based alternative investment managers and the ability of alternative investment fund managers located outside the EU to access the EU market.

The European Commission has published a proposal relating to money market funds, including provisions prescribing minimum levels of daily and weekly liquidity, clear labeling of money market funds, a 3% capital buffer for constant net asset value funds and internal credit risk assessments.

Compensation Practices

Our compensation practices are subject to oversight by the Federal Reserve Board and, with respect to some of our subsidiaries and employees, by other financial regulatory bodies worldwide. The scope and content of compensation regulation in the financial industry are continuing to develop, and we expect that these regulations and resulting market practices will evolve over a number of years.

The U.S. federal bank regulatory agencies have provided guidance designed to ensure that incentive compensation arrangements at banking organizations take into account risk and are consistent with safe and sound practices. The guidance sets forth the following three key principles with respect to incentive compensation arrangements: (i) the arrangements should provide employees with incentives that appropriately balance risk and financial results in a manner that does not encourage employees to expose their organizations to imprudent risk; (ii) the arrangements should be compatible with effective controls and risk management; and (iii) the arrangements should be supported by strong corporate governance. The guidance provides that supervisory findings with respect to incentive compensation will be incorporated, as appropriate, into the organization's supervisory ratings, which can affect its ability to make acquisitions or perform other actions. The guidance also provides that enforcement actions may be taken against a banking organization if its incentive compensation arrangements or related risk management, control or governance processes pose a risk to the organization's safety and soundness.

The Financial Stability Board has released standards for implementing certain compensation principles for banks and other financial companies designed to encourage sound compensation practices. These standards are to be implemented by local regulators. In the EU, CRD IV includes compensation provisions designed to implement the Financial Stability Board's compensation standards. These rules have been implemented by EU member states and, among other things, limit the ratio of variable to fixed compensation of certain employees, including those identified as having a material impact on the risk profile of EU-regulated entities, including GSI.

The EU has also introduced rules regulating compensation for certain persons providing services to certain investment funds. These requirements are in addition to the guidance issued by U.S. financial regulators described above and the Dodd-Frank Act provision described below.

The Dodd-Frank Act requires the U.S. financial regulators, including the Federal Reserve Board, to establish joint regulations or guidelines prohibiting incentive-based payment arrangements at specified regulated entities having at least $1 billion in total assets (which would include Group Inc. and some of its depository institution, broker-dealer and investment adviser subsidiaries) that encourage inappropriate risks by providing an executive officer, employee, director or principal shareholder with excessive compensation, fees, or benefits or that could lead to material financial loss to the entity. In addition, these regulators must establish regulations or guidelines requiring enhanced disclosure to regulators of incentive-based compensation arrangements. The initial version of these regulations was proposed by the U.S. financial regulators in early 2011 but the regulations have not yet been finalized. The proposed regulations incorporate the three key principles from the regulatory guidance described above. If the regulations are adopted in the form proposed, they may restrict our flexibility with respect to the manner in which we structure compensation.

Anti-Money Laundering and Anti-Bribery Rules and Regulations

The U.S. Bank Secrecy Act (BSA), as amended by the USA PATRIOT Act of 2001 (PATRIOT Act), contains anti-money laundering and financial transparency laws and mandated the implementation of various regulations applicable to all financial institutions, including standards for verifying client identification at account opening, and obligations to monitor client transactions and report suspicious activities. Through these and other provisions, the BSA and the PATRIOT Act seek to promote the identification of parties that may be involved in terrorism, money laundering or other suspicious activities. Anti-money laundering laws outside the United States contain some similar provisions.

In addition, we are subject to laws and regulations worldwide, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, relating to corrupt and illegal payments to, and hiring practices with regard to, government officials and others. The obligation of financial institutions, including Goldman Sachs, to identify their clients, to monitor for and report suspicious transactions, to monitor direct and indirect payments to government officials, to respond to requests for information by regulatory authorities and law enforcement agencies, and to share information with other financial institutions, has required the implementation and maintenance of internal practices, procedures and controls.

Other Regulation

The U.S. and non-U.S. government agencies, regulatory bodies and self-regulatory organizations, as well as state securities commissions and other state regulators in the United States, are empowered to conduct administrative proceedings that can result in censure, fine, the issuance of cease-and-desist orders, or the suspension or expulsion of a regulated entity or its directors, officers or employees. In addition, a number of our other activities require us to obtain licenses, adhere to applicable regulations and be subject to the oversight of various regulators in the jurisdictions in which we conduct these activities.

The EU finalized the Markets in Financial Instruments Regulation and a revision of the Markets in Financial Instruments Directive (collectively, MiFID II). These include new extensive market structure reforms, such as the establishment of new trading venue categories for the purposes of discharging the obligation to trade OTC derivatives on a trading platform, enhanced pre- and post-trade transparency covering a wider range of financial instruments and a reform of the equities markets. Commodities trading firms will be required to calculate their positions and adhere to specific limits. Other reforms introduce enhanced transaction reporting, the publication of best execution data by investment firms and trading venues, investor protection-related and organizational requirements. Other requirements may affect the way investment managers can pay for the receipt of investment research. On February 10, 2016, the European Commission proposed delaying the effectiveness of MiFID II until January 2018.

The EU and national financial legislators and regulators have proposed or adopted numerous further market reforms that may impact our businesses, including heightened corporate governance standards for financial institutions and rules on indices that are used as benchmarks for financial instruments or funds. In addition, the European Commission, the European Securities Market Authority and the European Banking Authority have announced or are formulating regulatory standards and other measures which will impact our European operations. Certain of our subsidiaries are also regulated by the European securities, derivatives and commodities exchanges of which they are members.

The European Commission has published a proposal for a common system of financial transactions tax which would be implemented in certain EU member states willing to engage in enhanced cooperation in this area. The proposed financial transactions tax is broad in scope and would apply to transactions in a wide variety of financial instruments and derivatives. The European Commission has also published a draft proposal for structural reform of EU banks, which would prohibit certain banks from proprietary trading and would require separating certain trading activities from deposit-taking entities.

As described above, many of our subsidiaries are subject to regulatory capital requirements in jurisdictions throughout the world. Subsidiaries not subject to separate regulation may hold capital to satisfy local tax guidelines, rating agency requirements or internal policies, including policies concerning the minimum amount of capital a subsidiary should hold based upon its underlying risk.

Certain of our businesses are subject to laws and regulations enacted by U.S. federal and state governments, the EU or other jurisdictions and/or enacted by various regulatory organizations or exchanges relating to the privacy of the information of clients, employees or others, including the GLB Act, the EU Data Protection Directive, the Japanese Personal Information Protection Act, the Hong Kong Personal Data (Privacy) Ordinance, the Australian Privacy Act and the Brazilian Bank Secrecy Law.

Available Information

Our internet address is www.gs.com and the investor relations section of our web site is located at www.gs.com/shareholders. We make available free of charge through the investor relations section of our web site, annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934 (Exchange Act), as well as proxy statements, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

Also posted on our web site, and available in print upon request of any shareholder to our Investor Relations Department, are our certificate of incorporation and by-laws, charters for our Audit Committee, Risk Committee, Compensation Committee, Corporate Governance and Nominating Committee, and Public Responsibilities Committee, our Policy Regarding Director Independence Determinations, our Policy on Reporting of Concerns Regarding Accounting and Other Matters, our Corporate Governance Guidelines and our Code of Business Conduct and Ethics governing our directors, officers and employees. Within the time period required by the SEC, we will post on our web site any amendment to the Code of Business Conduct and Ethics and any waiver applicable to any executive officer, director or senior financial officer.

In addition, our web site includes information concerning:

- Purchases and sales of our equity securities by our executive officers and directors;
- Disclosure relating to certain non-GAAP financial measures (as defined in the SEC's Regulation G) that we may make public orally, telephonically, by webcast, by broadcast or by similar means from time to time;
- Dodd-Frank Act stress test results; and
- The firm's risk management practices and regulatory capital ratios, as required under the disclosure-related provisions of the Revised Capital Framework, which are based on the third pillar of Basel III.

Our Investor Relations Department can be contacted at The Goldman Sachs Group, Inc., 200 West Street, 29th Floor, New York, New York 10282, Attn: Investor Relations, telephone: 212-902-0300, e-mail: gs-investor-relations@gs.com.

From time to time, we use our website, our Twitter account (twitter.com/GoldmanSachs) and other social media channels as additional means of disclosing public information to investors, the media and others interested in Goldman Sachs. It is possible that certain information we post on our website and on social media could be deemed to be material information, and we encourage investors, the media and others interested in Goldman Sachs to review the business and financial information we post on our website and on the social media channels identified above. The information on our website and the firm's social media channels is not incorporated by reference into the 2015 Form 10-K.

Cautionary Statement Pursuant to the U.S. Private Securities Litigation Reform Act of 1995

We have included or incorporated by reference in the 2015 Form 10-K, and from time to time our management may make, statements that may constitute "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements are not historical facts, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside our control. These statements include statements other than historical information or statements of current condition and may relate to our future plans and objectives and results, among other things, and may also include statements about the effect of changes to the capital, leverage, liquidity, long-term debt and total loss-absorbing capacity rules applicable to banks and bank holding companies, the impact of the Dodd-Frank Act on our businesses and operations, and various legal proceedings or mortgage-related contingencies as set forth in Notes 27 and 18, respectively, to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K, as well as statements about the results of our Dodd-Frank Act and firm stress tests, statements about the objectives and effectiveness of our business continuity plan, information security program, risk management and liquidity policies, statements about trends in or growth opportunities for our businesses, statements about our future status, activities or reporting under U.S. or non-U.S. banking and financial regulation, and statements about our investment banking transaction backlog. By identifying these statements for you in this manner, we are alerting you to the possibility that our actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Important factors that could cause our actual results and financial condition to differ from those indicated in the forward-looking statements include, among others, those described below and under "Risk Factors" in Part I, Item 1A of the 2015 Form 10-K.

Statements about the agreement in principle to resolve the RMBS Working Group investigation and its impact on the firm's results of operations, financial condition and cash flows are based on the firm's current expectations regarding the ultimate terms of the definitive settlement documentation. The agreement in principle is subject to the negotiation of definitive documentation, and there can be no assurance that the firm, the U.S. Department of Justice and the other applicable governmental authorities will agree on the definitive documentation. Accordingly, the effects of the definitive settlement, as well as the firm's ability to negotiate definitive documentation for the settlement, may change materially from what is currently expected.

Statements about our investment banking transaction backlog are subject to the risk that the terms of these transactions may be modified or that they may not be completed at all; therefore, the net revenues, if any, that we actually earn from these transactions may differ, possibly materially, from those currently expected. Important factors that could result in a modification of the terms of a transaction or a transaction not being completed include, in the case of underwriting transactions, a decline or continued weakness in general economic conditions, outbreak of hostilities, volatility in the securities markets generally or an adverse development with respect to the issuer of the securities and, in the case of financial advisory transactions, a decline in the securities markets, an inability to obtain adequate financing, an adverse development with respect to a party to the transaction or a failure to obtain a required regulatory approval. For information about other important factors that could adversely affect our investment banking transactions, see "Risk Factors" in Part I, Item 1A of the 2015 Form 10-K.

We have provided in this filing information regarding the firm's capital ratios, including the CET1 ratios under the Advanced and Standardized approaches on a fully phased-in basis, as well as the LCR and the supplementary leverage ratios for the firm and GS Bank USA. The statements with respect to these ratios are forward-looking statements, based on our current interpretation, expectations and understandings of the relevant regulatory rules and guidance, and reflect significant assumptions concerning the treatment of various assets and liabilities and the manner in which the ratios are calculated. As a result, the methods used to calculate these ratios may differ, possibly materially, from those used in calculating the firm's capital, liquidity and leverage ratios for any future disclosures. The ultimate methods of calculating the ratios will depend on, among other things, implementation guidance or further rulemaking from the U.S. federal bank regulatory agencies and the development of market practices and standards.

Item 1A. Risk Factors

We face a variety of risks that are substantial and inherent in our businesses, including market, liquidity, credit, operational, legal, regulatory and reputational risks. The following are some of the more important factors that could affect our businesses.

Our businesses have been and may continue to be adversely affected by conditions in the global financial markets and economic conditions generally.

Our businesses, by their nature, do not produce predictable earnings, and all of our businesses are materially affected by conditions in the global financial markets and economic conditions generally, both directly and through their impact on client activity levels. These conditions can change suddenly and negatively.

Our financial performance is highly dependent on the environment in which our businesses operate. A favorable business environment is generally characterized by, among other factors, high global gross domestic product growth, regulatory and market conditions which result in transparent, liquid and efficient capital markets, low inflation, high business and investor confidence, stable geopolitical conditions, clear regulations and strong business earnings. Unfavorable or uncertain economic and market conditions can be caused by: concerns about sovereign defaults; uncertainty in U.S. federal fiscal or monetary policy, the U.S. federal debt ceiling and the continued funding of the U.S. government; the extent of and uncertainty about the timing and nature of regulatory reforms; declines in economic growth, business activity or investor or business confidence; limitations on the availability or increases in the cost of credit and capital; illiquid markets; increases in inflation, interest rates, exchange rate or basic commodity price volatility or default rates; outbreaks of hostilities or other geopolitical instability; corporate, political or other scandals that reduce investor confidence in capital markets; extreme weather events or other natural disasters or pandemics; or a combination of these or other factors.

In 2008 and through early 2009, the financial services industry and the securities markets generally were materially and adversely affected by significant declines in the values of nearly all asset classes and by a serious lack of liquidity. Since 2011, concerns about European sovereign debt risk and its impact on the European banking system, and about changes in interest rates and other market conditions or actual changes in interest rates and other market conditions, including market conditions in China, have resulted, at times, in significant volatility while negatively impacting the levels of client activity.

General uncertainty about economic, political and market activities, and the scope, timing and final implementation of regulatory reform, as well as weak consumer, investor and CEO confidence resulting in large part from such uncertainty, continues to negatively impact client activity, which adversely affects many of our businesses. Periods of low volatility and periods of high volatility combined with a lack of liquidity, have at times had an unfavorable impact on our market-making businesses.

Our revenues and profitability and those of our competitors have been and will continue to be impacted by requirements relating to capital, additional loss-absorbing capacity, leverage, minimum liquidity and long-term funding levels, requirements related to resolution and recovery planning, derivatives clearing and margin rules and levels of regulatory oversight, as well as limitations on whether and how certain business activities may be carried out by financial institutions. Although interest rates are at or near historically low levels, financial institution returns have also been negatively impacted by increased funding costs due in part to the withdrawal of perceived government support of such institutions in the event of future financial crises. In addition, liquidity in the financial markets has also been negatively impacted as market participants and market practices and structures adjust to new regulations.

The degree to which these and other changes resulting from the financial crisis will have a long-term impact on the profitability of financial institutions will depend on the final interpretation and implementation of new regulations, the manner in which markets, market participants and financial institutions adapt to the new landscape, and the prevailing economic and financial market conditions. However, there is a significant risk that such changes will, at least in the near term, continue to negatively impact the absolute level of revenues, profitability and return on equity at our firm and at other financial institutions.

Our businesses and those of our clients are subject to extensive and pervasive regulation around the world.

As a participant in the financial services industry and a systemically important financial institution, we are subject to extensive regulation in jurisdictions around the world. We face the risk of significant intervention by regulatory and taxing authorities in all jurisdictions in which we conduct our businesses. In many cases, our activities may be subject to overlapping and divergent regulation in different jurisdictions. Among other things, as a result of regulators or private parties challenging our compliance with existing laws and regulations, we could be fined, prohibited from engaging in some of our business activities, subject to limitations or conditions on our business activities or subjected to new or substantially higher taxes or other governmental charges in connection with the conduct of our businesses or with respect to our employees. Such limitations or conditions may negatively impact our profitability.

Separate and apart from the impact on the scope and profitability of our business activities, day-to-day compliance with existing laws and regulations, in particular those laws and regulations adopted since 2008, has involved and will continue to involve significant amounts of time, including that of our senior leaders and that of an increasing number of dedicated compliance and other reporting and operational personnel, all of which may negatively impact our profitability.

If there are new laws or regulations or changes in the enforcement of existing laws or regulations applicable to our businesses or those of our clients, including capital, liquidity, leverage, long-term debt, total loss-absorbing capacity and margin requirements, restrictions on leveraged lending or other business practices, reporting requirements, requirements relating to recovery and resolution planning, tax burdens and compensation restrictions, that are imposed on a limited subset of financial institutions (either based on size, activities, geography or other criteria), compliance with these new laws or regulations, or changes in the enforcement of existing laws or regulations, could adversely affect our ability to compete effectively with other institutions that are not affected in the same way. In addition, regulation imposed on financial institutions or market participants generally, such as taxes on financial transactions, could adversely impact levels of market activity more broadly, and thus impact our businesses.

These developments could impact our profitability in the affected jurisdictions, or even make it uneconomic for us to continue to conduct all or certain of our businesses in such jurisdictions, or could cause us to incur significant costs associated with changing our business practices, restructuring our businesses, moving all or certain of our businesses and our employees to other locations or complying with applicable capital requirements, including liquidating assets or raising capital in a manner that adversely increases our funding costs or otherwise adversely affects our shareholders and creditors.

U.S. and non-U.S. regulatory developments, in particular the Dodd-Frank Act and Basel III, have significantly altered the regulatory framework within which we operate and may adversely affect our competitive position and profitability.

Among the aspects of the Dodd-Frank Act that have affected or may in the future affect our businesses are: increased capital, liquidity and reporting requirements; limitations on activities in which we may engage; increased regulation of and restrictions on OTC derivatives markets and transactions; limitations on incentive compensation; limitations on affiliate transactions; requirements to reorganize or limit activities in connection with recovery and resolution planning; increased deposit insurance assessments; and increased standards of care for broker-dealers and investment advisers in dealing with clients. The implementation of higher capital requirements, the liquidity coverage ratio, the net stable funding ratio, requirements relating to long-term debt and total loss-absorbing capacity and the prohibition on proprietary trading and the sponsorship of, or investment in, covered funds by the Volcker Rule may adversely affect our profitability and competitive position, particularly if these requirements do not apply, or do not apply equally, to our competitors or are not implemented uniformly across jurisdictions.

As described under "Business — Regulation — Capital and Liquidity Requirements — Payment of Dividends and Stock Repurchases" in Part I, Item 1 of the 2015 Form 10-K, Group Inc.'s proposed capital actions and capital plan are reviewed by the Federal Reserve Board as part of the CCAR process. If the Federal Reserve Board objects to our proposed capital actions in our capital plan, Group Inc. could be prohibited from taking some or all of the proposed capital actions, including increasing or paying dividends on common or preferred stock or repurchasing common stock or other capital securities. Our inability to carry out our proposed capital actions could, among other things, prevent us from returning capital to our shareholders and impact our return on equity.

We are also subject to laws and regulations relating to the privacy of the information of clients, employees or others, and any failure to comply with these regulations could expose us to liability and/or reputational damage. In addition, our businesses are increasingly subject to laws and regulations relating to surveillance, encryption and data on-shoring in the jurisdictions in which we operate. Compliance with these laws and regulations may require us to change our policies, procedures and technology for information security, which could, among other things, make us more vulnerable to cyber attacks and misappropriation, corruption or loss of information or technology.

Increasingly, regulators and courts have sought to hold financial institutions liable for the misconduct of their clients where such regulators and courts have determined that the financial institution should have detected that the client was engaged in wrongdoing, even though the financial institution had no direct knowledge of the activities engaged in by its client. Regulators and courts have also increasingly found liability as a "control person" for activities of entities in which financial institutions or funds controlled by financial institutions have an investment, but which they do not actively manage. In addition, regulators and courts continue to seek to establish "fiduciary" obligations to counterparties to which no such duty had been assumed to exist. To the extent that such efforts are successful, the cost of, and liabilities associated with, engaging in brokerage, clearing, market-making, prime brokerage, investing and other similar activities could increase significantly. To the extent that we have fiduciary obligations in connection with acting as a financial adviser, investment adviser or in other roles for individual, institutional, sovereign or investment fund clients, any breach, or even an alleged breach, of such obligations could have materially negative legal, regulatory and reputational consequences.

For information about the extensive regulation to which our businesses are subject, see "Business — Regulation" in Part I, Item 1 of the 2015 Form 10-K.

Our businesses have been and may be adversely affected by declining asset values. This is particularly true for those businesses in which we have net "long" positions, receive fees based on the value of assets managed, or receive or post collateral.

Many of our businesses have net "long" positions in debt securities, loans, derivatives, mortgages, equities (including private equity and real estate) and most other asset classes. These include positions we take when we act as a principal to facilitate our clients' activities, including our exchange-based market-making activities, or commit large amounts of capital to maintain positions in interest rate and credit products, as well as through our currencies, commodities, equities and mortgage-related activities. Because substantially all of these investing, lending and market-making positions are marked-to-market on a daily basis, declines in asset values directly and immediately impact our earnings, unless we have effectively "hedged" our exposures to such declines.

In certain circumstances (particularly in the case of credit products, including leveraged loans, and private equities or other securities that are not freely tradable or lack established and liquid trading markets), it may not be possible or economic to hedge such exposures and to the extent that we do so the hedge may be ineffective or may greatly reduce our ability to profit from increases in the values of the assets. Sudden declines and significant volatility in the prices of assets may substantially curtail or eliminate the trading markets for certain assets, which may make it difficult to sell, hedge or value such assets. The inability to sell or effectively hedge assets reduces our ability to limit losses in such positions and the difficulty in valuing assets may negatively affect our capital, liquidity or leverage ratios, increase our funding costs and generally require us to maintain additional capital.

In our exchange-based market-making activities, we are obligated by stock exchange rules to maintain an orderly market, including by purchasing securities in a declining market. In markets where asset values are declining and in volatile markets, this results in losses and an increased need for liquidity.

We receive asset-based management fees based on the value of our clients' portfolios or investment in funds managed by us and, in some cases, we also receive incentive fees based on increases in the value of such investments. Declines in asset values reduce the value of our clients' portfolios or fund assets, which in turn reduce the fees we earn for managing such assets.

We post collateral to support our obligations and receive collateral to support the obligations of our clients and counterparties in connection with our client execution businesses. When the value of the assets posted as collateral or the credit ratings of the party posting collateral decline, the party posting the collateral may need to provide additional collateral or, if possible, reduce its trading position. A classic example of such a situation is a "margin call" in connection with a brokerage account. Therefore, declines in the value of asset classes used as collateral mean that either the cost of funding positions is increased or the size of positions is decreased. If we are the party providing collateral, this can increase our costs and reduce our profitability and if we are the party receiving collateral, this can also reduce our profitability by reducing the level of business done with our clients and counterparties. In addition, volatile or less liquid markets increase the difficulty of valuing assets which can lead to costly and time-consuming disputes over asset values and the level of required collateral, as well as increased credit risk to the recipient of the collateral due to delays in receiving adequate collateral.

Our businesses have been and may be adversely affected by disruptions in the credit markets, including reduced access to credit and higher costs of obtaining credit.

Widening credit spreads, as well as significant declines in the availability of credit, have in the past adversely affected our ability to borrow on a secured and unsecured basis and may do so in the future. We fund ourselves on an unsecured basis by issuing long-term debt, by accepting deposits at our bank subsidiaries, by issuing hybrid financial instruments, or by obtaining bank loans or lines of credit. We seek to finance many of our assets on a secured basis. Any disruptions in the credit markets may make it harder and more expensive to obtain funding for our businesses. If our available funding is limited or we are forced to fund our operations at a higher cost, these conditions may require us to curtail our business activities and increase our cost of funding, both of which could reduce our profitability, particularly in our businesses that involve investing, lending and market making.

Our clients engaging in mergers and acquisitions often rely on access to the secured and unsecured credit markets to finance their transactions. A lack of available credit or an increased cost of credit can adversely affect the size, volume and timing of our clients' merger and acquisition transactions — particularly large transactions — and adversely affect our financial advisory and underwriting businesses.

Our credit businesses have been and may in the future be negatively affected by a lack of liquidity in credit markets. A lack of liquidity reduces price transparency, increases price volatility and decreases transaction volumes and size, all of which can increase transaction risk or decrease the profitability of such businesses.

To the extent that the final rules related to TLAC require us to issue material amounts of additional qualified loss-absorbing debt or to refinance material amounts of our existing debt, such requirements, at least in the near term, could increase our borrowing costs, perhaps materially, and negatively impact the debt capital markets. See "Business — Regulation — Banking Supervision and Regulation — Total Loss-Absorbing Capacity" in Part I, Item 1 of the 2015 Form 10-K for more information about the Federal Reserve Board's proposed rules on loss-absorbency requirements.

Our market-making activities have been and may be affected by changes in the levels of market volatility.

Certain of our market-making activities depend on market volatility to provide trading and arbitrage opportunities to our clients, and decreases in volatility may reduce these opportunities and adversely affect the results of these activities. On the other hand, increased volatility, while it can increase trading volumes and spreads, also increases risk as measured by Value-at-Risk (VaR) and may expose us to increased risks in connection with our market-making activities or cause us to reduce our market-making positions in order to avoid increasing our VaR. Limiting the size of our market-making positions can adversely affect our profitability. In periods when volatility is increasing, but asset values are declining significantly, it may not be possible to sell assets at all or it may only be possible to do so at steep discounts. In such circumstances we may be forced to either take on additional risk or to realize losses in order to decrease our VaR. In addition, increases in volatility increase the level of our RWAs, which increases our capital requirements.

Our investment banking, client execution and investment management businesses have been adversely affected and may in the future be adversely affected by market uncertainty or lack of confidence among investors and CEOs due to general declines in economic activity and other unfavorable economic, geopolitical or market conditions.

Our investment banking business has been and may continue to be adversely affected by market conditions. Poor economic conditions and other adverse geopolitical conditions can adversely affect and have in the past adversely affected investor and CEO confidence, resulting in significant industry-wide declines in the size and number of underwritings and of financial advisory transactions, which could have an adverse effect on our revenues and our profit margins. In particular, because a significant portion of our investment banking revenues is derived from our participation in large transactions, a decline in the number of large transactions would adversely affect our investment banking business.

In certain circumstances, market uncertainty or general declines in market or economic activity may affect our client execution businesses by decreasing levels of overall activity or by decreasing volatility, but at other times market uncertainty and even declining economic activity may result in higher trading volumes or higher spreads or both.

Market uncertainty, volatility and adverse economic conditions, as well as declines in asset values, may cause our clients to transfer their assets out of our funds or other products or their brokerage accounts and result in reduced net revenues, principally in our investment management business. To the extent that clients do not withdraw their funds, they may invest them in products that generate less fee income.

Our investment management business may be affected by the poor investment performance of our investment products.

Poor investment returns in our investment management business, due to either general market conditions or underperformance (relative to our competitors or to benchmarks) by funds or accounts that we manage or investment products that we design or sell, affects our ability to retain existing assets and to attract new clients or additional assets from existing clients. This could affect the management and incentive fees that we earn on assets under supervision or the commissions and net spreads that we earn for selling other investment products, such as structured notes or derivatives.

We may incur losses as a result of ineffective risk management processes and strategies.

We seek to monitor and control our risk exposure through a risk and control framework encompassing a variety of separate but complementary financial, credit, operational, compliance and legal reporting systems, internal controls, management review processes and other mechanisms. Our risk management process seeks to balance our ability to profit from market-making, investing or lending positions with our exposure to potential losses. While we employ a broad and diversified set of risk monitoring and risk mitigation techniques, those techniques and the judgments that accompany their application cannot anticipate every economic and financial outcome or the specifics and timing of such outcomes. Thus, we may, in the course of our activities, incur losses. Market conditions in recent years have involved unprecedented dislocations and highlight the limitations inherent in using historical data to manage risk.

The models that we use to assess and control our risk exposures reflect assumptions about the degrees of correlation or lack thereof among prices of various asset classes or other market indicators. In times of market stress or other unforeseen circumstances, such as occurred during 2008 and early 2009, and to some extent since 2011, previously uncorrelated indicators may become correlated, or conversely previously correlated indicators may move in different directions. These types of market movements have at times limited the effectiveness of our hedging strategies and have caused us to incur significant losses, and they may do so in the future. These changes in correlation can be exacerbated where other market participants are using risk or trading models with assumptions or algorithms that are similar to ours. In these and other cases, it may be difficult to reduce our risk positions due to the activity of other market participants or widespread market dislocations, including circumstances where asset values are declining significantly or no market exists for certain assets.

To the extent that we have positions through our market-making or origination activities or we make investments directly through our investing activities, including private equity, that do not have an established liquid trading market or are otherwise subject to restrictions on sale or hedging, we may not be able to reduce our positions and therefore reduce our risk associated with such positions. In addition, to the extent permitted by applicable law and regulation, we invest our own capital in private equity, credit, real estate and hedge funds that we manage and limitations on our ability to withdraw some or all of our investments in these funds, whether for legal, reputational or other reasons, may make it more difficult for us to control the risk exposures relating to these investments. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Regulatory Developments — Volcker Rule" in Part II, Item 7 of the 2015 Form 10-K for information about our plans to reduce our interests in covered funds in order to comply with the Volcker Rule.

Prudent risk management, as well as regulatory restrictions, may cause us to limit our exposure to counterparties, geographic areas or markets, which may limit our business opportunities and increase the cost of our funding or hedging activities.

For further information about our risk management policies and procedures, see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Management" in Part II, Item 7 of the 2015 Form 10-K.

Our liquidity, profitability and businesses may be adversely affected by an inability to access the debt capital markets or to sell assets or by a reduction in our credit ratings or by an increase in our credit spreads.

Liquidity is essential to our businesses. Our liquidity may be impaired by an inability to access secured and/or unsecured debt markets, an inability to access funds from our subsidiaries or otherwise allocate liquidity optimally across our firm, an inability to sell assets or redeem our investments, or unforeseen outflows of cash or collateral. This situation may arise due to circumstances that we may be unable to control, such as a general market disruption or an operational problem that affects third parties or us, or even by the perception among market participants that we, or other market participants, are experiencing greater liquidity risk.

We employ structured products to benefit our clients and hedge our own risks. The financial instruments that we hold and the contracts to which we are a party are often complex, and these complex structured products often do not have readily available markets to access in times of liquidity stress. Our investing and lending activities may lead to situations where the holdings from these activities represent a significant portion of specific markets, which could restrict liquidity for our positions.

Further, our ability to sell assets may be impaired if other market participants are seeking to sell similar assets at the same time, as is likely to occur in a liquidity or other market crisis or in response to changes to rules or regulations. In addition, financial institutions with which we interact may exercise set-off rights or the right to require additional collateral, including in difficult market conditions, which could further impair our access to liquidity.

Our credit ratings are important to our liquidity. A reduction in our credit ratings could adversely affect our liquidity and competitive position, increase our borrowing costs, limit our access to the capital markets or trigger our obligations under certain provisions in some of our trading and collateralized financing contracts. Under these provisions, counterparties could be permitted to terminate contracts with us or require us to post additional collateral. Termination of our trading and collateralized financing contracts could cause us to sustain losses and impair our liquidity by requiring us to find other sources of financing or to make significant cash payments or securities movements. As of December 2015, in the event of a one-notch and two-notch downgrade of our credit ratings our counterparties could have called for additional collateral or termination payments related to our net derivative liabilities under bilateral agreements in an aggregate amount of $1.06 billion and $2.69 billion, respectively. A downgrade by any one rating agency, depending on the agency's relative ratings of the firm at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies. For further information about our credit ratings, see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Management — Liquidity Risk Management — Credit Ratings" in Part II, Item 7 of the 2015 Form 10-K.

Our cost of obtaining long-term unsecured funding is directly related to our credit spreads (the amount in excess of the interest rate of U.S. Treasury securities (or other benchmark securities) of the same maturity that we need to pay to our debt investors). Increases in our credit spreads can significantly increase our cost of this funding. Changes in credit spreads are continuous, market-driven, and subject at times to unpredictable and highly volatile movements. Our credit spreads are also influenced by market perceptions of our creditworthiness. In addition, our credit spreads may be influenced by movements in the costs to purchasers of credit default swaps referenced to our long-term debt. The market for credit default swaps has proven to be extremely volatile and at times has lacked a high degree of transparency or liquidity.

Regulatory changes relating to liquidity may also negatively impact our results of operations and competitive position. Recently, numerous regulations have been adopted or proposed, and additional regulations are under consideration, to introduce more stringent liquidity requirements for large financial institutions. These regulations and others being considered address, among other matters, liquidity stress testing, minimum liquidity requirements, wholesale funding, limitations on the issuance of short-term debt and structured notes and prohibitions on parent guarantees that are subject to cross-defaults. These may overlap with, and be impacted by, other regulatory changes, including new guidance on the treatment of brokered deposits and the capital, leverage and resolution and recovery frameworks applicable to large financial institutions, as well as proposals relating to minimum long-term debt requirements and TLAC, including limitations on the terms of eligible debt securities qualifying as TLAC or as eligible long-term debt – limiting events of default, excluding structured notes and restrictions on non-U.S. governing law. Given the overlap and complex interactions among these new and prospective regulations, they may have unintended cumulative effects, and their full impact will remain uncertain until implementation of post-financial crisis regulatory reform is complete.

A failure to appropriately identify and address potential conflicts of interest could adversely affect our businesses.

Due to the broad scope of our businesses and our client base, we regularly address potential conflicts of interest, including situations where our services to a particular client or our own investments or other interests conflict, or are perceived to conflict, with the interests of another client, as well as situations where one or more of our businesses have access to material non-public information that may not be shared with other businesses within the firm and situations where we may be a creditor of an entity with which we also have an advisory or other relationship.

In addition, our status as a bank holding company subjects us to heightened regulation and increased regulatory scrutiny by the Federal Reserve Board with respect to transactions between GS Bank USA and entities that are or could be viewed as affiliates of ours and, under the Volcker Rule, transactions between Goldman Sachs and certain covered funds.

We have extensive procedures and controls that are designed to identify and address conflicts of interest, including those designed to prevent the improper sharing of information among our businesses. However, appropriately identifying and dealing with conflicts of interest is complex and difficult, and our reputation, which is one of our most important assets, could be damaged and the willingness of clients to enter into transactions with us may be affected if we fail, or appear to fail, to identify, disclose and deal appropriately with conflicts of interest. In addition, potential or perceived conflicts could give rise to litigation or regulatory enforcement actions.

A failure in our operational systems or infrastructure, or those of third parties, as well as human error, could impair our liquidity, disrupt our businesses, result in the disclosure of confidential information, damage our reputation and cause losses.

Our businesses are highly dependent on our ability to process and monitor, on a daily basis, a large number of transactions, many of which are highly complex and occur at high volumes and frequencies, across numerous and diverse markets in many currencies. These transactions, as well as the information technology services we provide to clients, often must adhere to client-specific guidelines, as well as legal and regulatory standards.

Many rules and regulations worldwide govern our obligations to report transactions to regulators, exchanges and investors. Compliance with these legal and reporting requirements can be challenging, and the firm and other financial institutions have been subject to regulatory fines and penalties for failing to report timely, accurate and complete information. As reporting requirements expand, compliance with these rules and regulations has become more challenging.

As our client base, and our geographical reach expands, and the volume, speed, frequency and complexity of transactions, especially electronic transactions (as well as the requirements to report such transactions on a real-time basis to clients, regulators and exchanges) increases, developing and maintaining our operational systems and infrastructure becomes more challenging, and the risk of systems or human error in connection with such transactions increases, as well as the potential consequences of such errors due to the speed and volume of transactions involved and the potential difficulty associated with discovering such errors quickly enough to limit the resulting consequences.

Our financial, accounting, data processing or other operational systems and facilities may fail to operate properly or become disabled as a result of events that are wholly or partially beyond our control, such as a spike in transaction volume, adversely affecting our ability to process these transactions or provide these services. We must continuously update these systems to support our operations and growth and to respond to changes in regulations and markets, and invest heavily in systemic controls and training to ensure that such transactions do not violate applicable rules and regulations or, due to errors in processing such transactions, adversely affect markets, our clients and counterparties or the firm.

Systems enhancements and updates, as well as the requisite training, including in connection with the integration of new businesses, entail significant costs and create risks associated with implementing new systems and integrating them with existing ones.

Notwithstanding the proliferation of technology and technology-based risk and control systems, our businesses ultimately rely on human beings as our greatest resource, and, from time-to-time, they make mistakes that are not always caught immediately by our technological processes or by our other procedures which are intended to prevent and detect such errors. These can include calculation errors, mistakes in addressing emails, errors in software development or implementation, or simple errors in judgment. We strive to eliminate such human errors through training, supervision, technology and by redundant processes and controls. Human errors, even if promptly discovered and remediated, can result in material losses and liabilities for the firm.

In addition, we face the risk of operational failure, termination or capacity constraints of any of the clearing agents, exchanges, clearing houses or other financial intermediaries we use to facilitate our securities and derivatives transactions, and as our interconnectivity with our clients grows, we increasingly face the risk of operational failure with respect to our clients' systems.

In recent years, there has been significant consolidation among clearing agents, exchanges and clearing houses and an increasing number of derivative transactions are now or in the near future will be cleared on exchanges, which has increased our exposure to operational failure, termination or capacity constraints of the particular financial intermediaries that we use and could affect our ability to find adequate and cost-effective alternatives in the event of any such failure, termination or constraint. Industry consolidation, whether among market participants or financial intermediaries, increases the risk of operational failure as disparate complex systems need to be integrated, often on an accelerated basis.

Furthermore, the interconnectivity of multiple financial institutions with central agents, exchanges and clearing houses, and the increased centrality of these entities, increases the risk that an operational failure at one institution or entity may cause an industry-wide operational failure that could materially impact our ability to conduct business. Any such failure, termination or constraint could adversely affect our ability to effect transactions, service our clients, manage our exposure to risk or expand our businesses or result in financial loss or liability to our clients, impairment of our liquidity, disruption of our businesses, regulatory intervention or reputational damage.

Despite the resiliency plans and facilities we have in place, our ability to conduct business may be adversely impacted by a disruption in the infrastructure that supports our businesses and the communities in which we are located. This may include a disruption involving electrical, satellite, undersea cable or other communications, internet, transportation or other services facilities used by us or third parties with which we conduct business, including cloud service providers. These disruptions may occur as a result of events that affect only our buildings or systems or those of such third parties, or as a result of events with a broader impact globally, regionally or in the cities where those buildings or systems are located, including, but not limited to, natural disasters, war, civil unrest, terrorism, economic or political developments, pandemics and weather events.

Nearly all of our employees in our primary locations, including the New York metropolitan area, London, Bengaluru, Hong Kong, Tokyo and Salt Lake City, work in close proximity to one another, in one or more buildings. Notwithstanding our efforts to maintain business continuity, given that our headquarters and the largest concentration of our employees are in the New York metropolitan area, and our two principal office buildings in the New York area both are located on the waterfront of the Hudson River, depending on the intensity and longevity of the event, a catastrophic event impacting our New York metropolitan area offices, including a terrorist attack, extreme weather event or other hostile or catastrophic event, could negatively affect our business. If a disruption occurs in one location and our employees in that location are unable to occupy our offices or communicate with or travel to other locations, our ability to service and interact with our clients may suffer, and we may not be able to successfully implement contingency plans that depend on communication or travel.

A failure to protect our computer systems, networks and information, and our clients' information, against cyber attacks and similar threats could impair our ability to conduct our businesses, result in the disclosure, theft or destruction of confidential information, damage our reputation and cause losses.

Our operations rely on the secure processing, storage and transmission of confidential and other information in our computer systems and networks. There have been several highly publicized cases involving financial services and consumer-based companies reporting the unauthorized disclosure of client or customer information in recent years, as well as cyber attacks involving the dissemination, theft and destruction of corporate information or other assets, as a result of failure to follow procedures by employees or contractors or as a result of actions by third parties, including actions by foreign governments.

We are regularly the target of attempted cyber attacks, including denial-of-service attacks, and must continuously monitor and develop our systems to protect our technology infrastructure and data from misappropriation or corruption. In addition, due to our interconnectivity with third-party vendors, central agents, exchanges, clearing houses and other financial institutions, we could be adversely impacted if any of them is subject to a successful cyber attack or other information security event.

Despite our efforts to ensure the integrity of our systems and information, we may not be able to anticipate, detect or implement effective preventive measures against all cyber threats, especially because the techniques used are increasingly sophisticated, change frequently and are often not recognized until launched. Cyber attacks can originate from a variety of sources, including third parties who are affiliated with foreign governments or are involved with organized crime or terrorist organizations. Third parties may also attempt to place individuals within the firm or induce employees, clients or other users of our systems to disclose sensitive information or provide access to our data or that of our clients, and these types of risks may be difficult to detect or prevent.

Although we take protective measures and endeavor to modify them as circumstances warrant, our computer systems, software and networks may be vulnerable to unauthorized access, misuse, computer viruses or other malicious code and other events that could have a security impact. If one or more of such events occur, this potentially could jeopardize our or our clients' or counterparties' confidential and other information processed and stored in, and transmitted through, our computer systems and networks, or otherwise cause interruptions or malfunctions in our, our clients', our counterparties' or third parties' operations, which could impact their ability to transact with us or otherwise result in significant losses or reputational damage.

The increased use of mobile and cloud technologies can heighten these and other operational risks. We expect to expend significant additional resources on an ongoing basis to modify our protective measures and to investigate and remediate vulnerabilities or other exposures, but these measures may be ineffective and we may be subject to litigation and financial losses that are either not insured against or not fully covered through any insurance maintained by us. Certain aspects of the security of such technologies are unpredictable or beyond our control, and the failure by mobile technology and cloud service providers to adequately safeguard their systems and prevent cyber attacks could disrupt our operations and result in misappropriation, corruption or loss of confidential and other information. In addition, there is a risk that encryption and other protective measures, despite their sophistication, may be defeated, particularly to the extent that new computing technologies vastly increase the speed and computing power available.

We routinely transmit and receive personal, confidential and proprietary information by email and other electronic means. We have discussed and worked with clients, vendors, service providers, counterparties and other third parties to develop secure transmission capabilities and protect against cyber attacks, but we do not have, and may be unable to put in place, secure capabilities with all of our clients, vendors, service providers, counterparties and other third parties and we may not be able to ensure that these third parties have appropriate controls in place to protect the confidentiality of the information. An interception, misuse or mishandling of personal, confidential or proprietary information being sent to or received from a client, vendor, service provider, counterparty or other third party could result in legal liability, regulatory action and reputational harm.

Group Inc. is a holding company and is dependent for liquidity on payments from its subsidiaries, many of which are subject to restrictions.

Group Inc. is a holding company and, therefore, depends on dividends, distributions and other payments from its subsidiaries to fund dividend payments and to fund all payments on its obligations, including debt obligations. Many of our subsidiaries, including our broker-dealer and bank subsidiaries, are subject to laws that restrict dividend payments or authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to Group Inc.

In addition, our broker-dealer and bank subsidiaries are subject to restrictions on their ability to lend or transact with affiliates and to minimum regulatory capital and other requirements, as well as restrictions on their ability to use funds deposited with them in brokerage or bank accounts to fund their businesses. Additional restrictions on related-party transactions, increased capital and liquidity requirements and additional limitations on the use of funds on deposit in bank or brokerage accounts, as well as lower earnings, can reduce the amount of funds available to meet the obligations of Group Inc., including under the Federal Reserve Board's source of strength policy, and even require Group Inc. to provide additional funding to such subsidiaries. Restrictions or regulatory action of that kind could impede access to funds that Group Inc. needs to make payments on its obligations, including debt obligations, or dividend payments. In addition, Group Inc.'s right to participate in a distribution of assets upon a subsidiary's liquidation or reorganization is subject to the prior claims of the subsidiary's creditors.

There has been a trend towards increased regulation and supervision of our subsidiaries by the governments and regulators in the countries in which those subsidiaries are located or do business. Concerns about protecting clients and creditors of financial institutions that are controlled by persons or entities located outside of the country in which such entities are located or do business have caused or may cause a number of governments and regulators to take additional steps to "ring fence" or maintain internal total loss-absorbing capacity at such entities in order to protect clients and creditors of such entities in the event of financial difficulties involving such entities. The result has been and may continue to be additional limitations on our ability to efficiently move capital and liquidity among our affiliated entities, thereby increasing the overall level of capital and liquidity required by the firm on a consolidated basis.

Furthermore, Group Inc. has guaranteed the payment obligations of certain of its subsidiaries, including GS&Co., GS Bank USA and GSEC subject to certain exceptions. In addition, Group Inc. guarantees many of the obligations of its other consolidated subsidiaries on a transaction-by-transaction basis, as negotiated with counterparties. These guarantees may require Group Inc. to provide substantial funds or assets to its subsidiaries or their creditors or counterparties at a time when Group Inc. is in need of liquidity to fund its own obligations.

The requirements for Group Inc. and GS Bank USA to develop and submit recovery and resolution plans to regulators, and the incorporation of feedback received from regulators, may require us to increase capital or liquidity levels or issue additional long-term debt at Group Inc. or particular subsidiaries or otherwise incur additional or duplicative operational or other costs at multiple entities, and may reduce our ability to provide Group Inc. guarantees of the obligations of our subsidiaries or raise debt at Group Inc. Resolution planning may also impair our ability to structure our intercompany and external activities in a manner that we may otherwise deem most operationally efficient. Furthermore, we may incur additional taxes. Any such limitations or requirements would be in addition to the legal and regulatory restrictions described above on our ability to engage in capital actions or make intercompany dividends or payments.

See "Business — Regulation" in Part I, Item 1 of the 2015 Form 10-K for further information about regulatory restrictions.

The application of regulatory strategies and requirements in the United States and non-U.S. jurisdictions to facilitate the orderly resolution of large financial institutions could create greater risk of loss for Group Inc.'s security holders.

As described under "Business — Regulation — Insolvency of an Insured Depository Institution or a Bank Holding Company," if the FDIC is appointed as receiver under the orderly liquidation authority, the rights of Group Inc.'s creditors would be determined under the orderly liquidation authority, and substantial differences exist in the rights of creditors between the orderly liquidation authority and the U.S. Bankruptcy Code, including the right of the FDIC under the orderly liquidation authority to disregard the strict priority of creditor claims in some circumstances, which could have a material adverse effect on debt holders.

The FDIC has announced that a single point of entry strategy may be a desirable strategy under the orderly liquidation authority to resolve a large financial institution such as Group Inc. in a manner that would, among other things, impose losses on shareholders, debt holders (including, in our case, holders of our debt securities) and other creditors of the top-tier holding company (in our case, Group Inc.), while the holding company's subsidiaries may continue to operate. It is possible that the application of the single point of entry strategy, in which Group Inc. would be the only legal entity to enter resolution proceedings, could result in greater losses to Group Inc.'s security holders (including holders of our fixed rate, floating rate and indexed debt securities), than the losses that could result from the application of a bankruptcy proceeding or a different resolution strategy for Group Inc. Assuming Group Inc. entered resolution proceedings and that support from Group Inc. to its subsidiaries was sufficient to enable the subsidiaries to remain solvent, losses at the subsidiary level would be transferred to Group Inc. and ultimately borne by Group Inc.'s security holders, third-party creditors of Group Inc.'s subsidiaries would receive full recoveries on their claims, and Group Inc.'s security holders (including our shareholders, holders of our debt securities and other unsecured creditors) could face significant losses.

The orderly liquidation authority also provides the FDIC with authority to cause creditors and shareholders of the financial company such as Group Inc. in receivership to bear losses before taxpayers are exposed to such losses, and amounts owed to the U.S. government would generally receive a statutory payment priority over the claims of private creditors, including senior creditors. In addition, under the orderly liquidation authority, claims of creditors (including holders of our debt securities) could be satisfied through the issuance of equity or other securities in a bridge entity to which Group Inc.'s assets are transferred. If such a securities-for-claims exchange were implemented, there can be no assurance that the value of the securities of the bridge entity would be sufficient to repay or satisfy all or any part of the creditor claims for which the securities were exchanged. While the FDIC has issued regulations to implement the orderly liquidation authority, not all aspects of how the FDIC might exercise this authority are known and additional rulemaking is likely.

The ultimate impact of the recently proposed rules requiring U.S. G-SIBs to maintain minimum amounts of long-term debt meeting specified eligibility requirements is uncertain.

On October 30, 2015, the Federal Reserve Board released for comment proposed rules (the TLAC Rules) that would require the eight U.S. G-SIBs, including Group Inc., among other things, to maintain minimum amounts of long-term debt (i.e., debt having a maturity greater than one year from issuance (LTD)) satisfying certain eligibility criteria commencing January 1, 2019. As proposed, the TLAC Rules would disqualify from eligible LTD, among other instruments, senior debt securities that permit acceleration for reasons other than insolvency or payment default, as well as debt securities defined as structured notes in the TLAC Rules (e.g., many of our indexed debt securities) and debt securities not governed by U.S. law. The currently outstanding senior LTD of U.S. G-SIBs, including Group Inc., typically permits acceleration for reasons other than insolvency or payment default and, as a result, neither such outstanding senior LTD nor any subsequently issued senior LTD with similar terms, would qualify as eligible LTD under the proposed rules. The Federal Reserve Board has requested comment on whether currently outstanding instruments should be allowed to count as eligible LTD "despite containing features that would be prohibited under the proposal." The U.S. G-SIBs, including Group Inc., may need to take steps to come into compliance with the final TLAC Rules depending in substantial part on the ultimate eligibility requirements for senior LTD and any grandfathering provisions. Non-U.S. regulators are considering similar requirements. See "Business — Regulation — Banking Supervision and Regulation — Total Loss-Absorbing Capacity" in Part I, Item 1 of the 2015 Form 10-K for more information about the Federal Reserve Board's proposed rules on loss-absorbency requirements.

In addition, certain jurisdictions, including the United Kingdom and the EU, have implemented, or are considering, changes to resolution regimes to provide resolution authorities with the ability to recapitalize a failing entity by writing down its unsecured debt or converting its unsecured debt into equity. Such "bail-in" powers are intended to enable the recapitalization of a failing institution by allocating losses to its shareholders and unsecured debt holders. U.S. and non-U.S. regulators are also considering requirements that certain subsidiaries of large financial institutions maintain minimum amounts of total loss-absorbing capacity that would pass losses up from the subsidiaries to the top-tier holding company and, ultimately, to security holders of the top-tier holding company in the event of failure.

The application of Group Inc.'s proposed resolution strategy could result in greater losses for Group Inc.'s security holders, and failure to address shortcomings in our resolution plan could subject us to increased regulatory requirements.

In our resolution plan, Group Inc. would be resolved under the U.S. Bankruptcy Code. The strategy described in our resolution plan is a variant of the single point of entry strategy: Group Inc. would recapitalize and provide liquidity to certain major subsidiaries, including through the forgiveness of intercompany indebtedness, the extension of the maturities of intercompany indebtedness and the extension of additional intercompany loans. If this strategy were successful, creditors of some or all of Group Inc.'s major subsidiaries would receive full recoveries on their claims, while Group Inc.'s security holders could face significant losses. If this strategy were not successful, Group Inc.'s financial condition would be adversely impacted and Group Inc.'s security holders, including debt holders, may as a consequence be in a worse position than if the strategy had not been implemented. In all cases, any payments to debt holders are dependent on our ability to make such payments and are therefore subject to our credit risk.

In August 2014, the Federal Reserve Board and the FDIC indicated that Group Inc., along with other large industry participants, had certain shortcomings in the 2013 resolution plans that were required to have been addressed in the 2015 resolution plans. If it is determined that Group Inc. did not effectively address these shortcomings, the Federal Reserve Board and the FDIC could, after any permitted resubmission, find our resolution plan not credible and require us to hold more capital, change our business structure or dispose of businesses, which could have a negative impact on our ability to return capital to shareholders, financial condition, results of operations or competitive position.

Our businesses, profitability and liquidity may be adversely affected by deterioration in the credit quality of, or defaults by, third parties who owe us money, securities or other assets or whose securities or obligations we hold.

We are exposed to the risk that third parties that owe us money, securities or other assets will not perform their obligations. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. A failure of a significant market participant, or even concerns about a default by such an institution, could lead to significant liquidity problems, losses or defaults by other institutions, which in turn could adversely affect us.

We are also subject to the risk that our rights against third parties may not be enforceable in all circumstances. In addition, deterioration in the credit quality of third parties whose securities or obligations we hold, including a deterioration in the value of collateral posted by third parties to secure their obligations to us under derivatives contracts and loan agreements, could result in losses and/or adversely affect our ability to rehypothecate or otherwise use those securities or obligations for liquidity purposes.

A significant downgrade in the credit ratings of our counterparties could also have a negative impact on our results. While in many cases we are permitted to require additional collateral from counterparties that experience financial difficulty, disputes may arise as to the amount of collateral we are entitled to receive and the value of pledged assets. The termination of contracts and the foreclosure on collateral may subject us to claims for the improper exercise of our rights. Default rates, downgrades and disputes with counterparties as to the valuation of collateral increase significantly in times of market stress and illiquidity.

As part of our clearing and prime brokerage activities, we finance our clients' positions, and we could be held responsible for the defaults or misconduct of our clients. Although we regularly review credit exposures to specific clients and counterparties and to specific industries, countries and regions that we believe may present credit concerns, default risk may arise from events or circumstances that are difficult to detect or foresee.

Concentration of risk increases the potential for significant losses in our market-making, underwriting, investing and lending activities.

Concentration of risk increases the potential for significant losses in our market-making, underwriting, investing and lending activities. The number and size of such transactions may affect our results of operations in a given period. Moreover, because of concentration of risk, we may suffer losses even when economic and market conditions are generally favorable for our competitors. Disruptions in the credit markets can make it difficult to hedge these credit exposures effectively or economically. In addition, we extend large commitments as part of our credit origination activities.

Rules adopted under the Dodd-Frank Act require issuers of asset-backed securities and any person who organizes and initiates an asset-backed securities transaction to retain economic exposure to the asset, which is likely to significantly increase the cost to us of engaging in securitization activities. Our inability to reduce our credit risk by selling, syndicating or securitizing these positions, including during periods of market stress, could negatively affect our results of operations due to a decrease in the fair value of the positions, including due to the insolvency or bankruptcy of the borrower, as well as the loss of revenues associated with selling such securities or loans.

In the ordinary course of business, we may be subject to a concentration of credit risk to a particular counterparty, borrower, issuer, including sovereign issuers, or geographic area or group of related countries, such as the EU, and a failure or downgrade of, or default by, such entity could negatively impact our businesses, perhaps materially, and the systems by which we set limits and monitor the level of our credit exposure to individual entities, industries and countries may not function as we have anticipated. While our activities expose us to many different industries, counterparties and countries, we routinely execute a high volume of transactions with counterparties engaged in financial services activities, including brokers and dealers, commercial banks, clearing houses, exchanges and investment funds. This has resulted in significant credit concentration with respect to these counterparties. Provisions of the Dodd-Frank Act have led to increased centralization of trading activity through particular clearing houses, central agents or exchanges, which has significantly increased our concentration of risk with respect to these entities.

The financial services industry is both highly competitive and interrelated.

The financial services industry and all of our businesses are intensely competitive, and we expect them to remain so. We compete on the basis of a number of factors, including transaction execution, our products and services, innovation, reputation, creditworthiness and price. There has been substantial consolidation and convergence among companies in the financial services industry. This consolidation and convergence has hastened the globalization of the securities and other financial services markets.

As a result, we have had to commit capital to support our international operations and to execute large global transactions. To the extent we expand into new business areas and new geographic regions, we will face competitors with more experience and more established relationships with clients, regulators and industry participants in the relevant market, which could adversely affect our ability to expand. Governments and regulators have recently adopted regulations, imposed taxes, adopted compensation restrictions or otherwise put forward various proposals that have or may impact our ability to conduct certain of our businesses in a cost-effective manner or at all in certain or all jurisdictions, including proposals relating to restrictions on the type of activities in which financial institutions are permitted to engage. These or other similar rules, many of which do not apply to all our U.S. or non-U.S. competitors, could impact our ability to compete effectively.

Pricing and other competitive pressures in our businesses have continued to increase, particularly in situations where some of our competitors may seek to increase market share by reducing prices. For example, in connection with investment banking and other assignments, we have experienced pressure to extend and price credit at levels that may not always fully compensate us for the risks we take.

The financial services industry is highly interrelated in that a significant volume of transactions occur among a limited number of members of that industry. Many transactions are syndicated to other financial institutions and financial institutions are often counterparties in transactions. This has led to claims by other market participants and regulators that such institutions have colluded in order to manipulate markets or market prices, including allegations that antitrust laws have been violated. While we have extensive procedures and controls that are designed to identify and prevent such activities, allegations of such activities, particularly by regulators, can have a negative reputational impact and can subject us to large fines and settlements, and potentially significant penalties, including treble damages.

We face enhanced risks as new business initiatives lead us to transact with a broader array of clients and counterparties and expose us to new asset classes and new markets.

A number of our recent and planned business initiatives and expansions of existing businesses may bring us into contact, directly or indirectly, with individuals and entities that are not within our traditional client and counterparty base and expose us to new asset classes and new markets. For example, we continue to transact business and invest in new regions, including a wide range of emerging and growth markets. Furthermore, in a number of our businesses, including where we make markets, invest and lend, we directly or indirectly own interests in, or otherwise become affiliated with the ownership and operation of public services, such as airports, toll roads and shipping ports, as well as physical commodities and commodities infrastructure components, both within and outside the United States.

We have announced our intention to increase our consumer-oriented deposit-taking activities. To the extent we engage in such activities or similar consumer-oriented activities, we could face additional compliance, legal and regulatory risk, increased reputational risk and increased operational risk due to, among other things, higher transaction volumes and significantly increased retention and transmission of customer and client information.

New business initiatives expose us to new and enhanced risks, including risks associated with dealing with governmental entities, reputational concerns arising from dealing with less sophisticated counterparties and investors, greater regulatory scrutiny of these activities, increased credit-related, market, sovereign and operational risks, risks arising from accidents or acts of terrorism, and reputational concerns with the manner in which these assets are being operated or held or in which we interact with these counterparties.

Derivative transactions and delayed settlements may expose us to unexpected risk and potential losses.

We are party to a large number of derivative transactions, including credit derivatives. Many of these derivative instruments are individually negotiated and non-standardized, which can make exiting, transferring or settling positions difficult. Many credit derivatives require that we deliver to the counterparty the underlying security, loan or other obligation in order to receive payment. In a number of cases, we do not hold the underlying security, loan or other obligation and may not be able to obtain the underlying security, loan or other obligation. This could cause us to forfeit the payments due to us under these contracts or result in settlement delays with the attendant credit and operational risk as well as increased costs to the firm.

Derivative transactions may also involve the risk that documentation has not been properly executed, that executed agreements may not be enforceable against the counterparty, or that obligations under such agreements may not be able to be "netted" against other obligations with such counterparty. In addition, counterparties may claim that such transactions were not appropriate or authorized.

As a signatory to the ISDA Protocol, we may not be able to exercise remedies against counterparties and, as this new regime has not yet been tested, we may suffer risks or losses that we would not have expected to suffer if we could immediately close out transactions upon a termination event. The ISDA Protocol contemplates adoption of implementing regulations by various U.S. and non-U.S. regulators, and the ISDA Protocol's impact will depend on, among other things, how it is implemented.

Derivative contracts and other transactions, including secondary bank loan purchases and sales, entered into with third parties are not always confirmed by the counterparties or settled on a timely basis. While the transaction remains unconfirmed or during any delay in settlement, we are subject to heightened credit and operational risk and in the event of a default may find it more difficult to enforce our rights. In addition, as new complex derivative products are created, covering a wider array of underlying credit and other instruments, disputes about the terms of the underlying contracts could arise, which could impair our ability to effectively manage our risk exposures from these products and subject us to increased costs. The provisions of the Dodd-Frank Act requiring central clearing of credit derivatives and other OTC derivatives, or a market shift toward standardized derivatives, could reduce the risk associated with such transactions, but under certain circumstances could also limit our ability to develop derivatives that best suit the needs of our clients and to hedge our own risks, and could adversely affect our profitability and increase our credit exposure to such platform.

Our businesses may be adversely affected if we are unable to hire and retain qualified employees.

Our performance is largely dependent on the talents and efforts of highly skilled individuals; therefore, our continued ability to compete effectively in our businesses, to manage our businesses effectively and to expand into new businesses and geographic areas depends on our ability to attract new talented and diverse employees and to retain and motivate our existing employees. Factors that affect our ability to attract and retain such employees include our compensation and benefits, and our reputation as a successful business with a culture of fairly hiring, training and promoting qualified employees. As a significant portion of the compensation that we pay to our employees is paid in the form of year-end discretionary compensation, a significant portion of which is in the form of deferred equity-related awards, declines in our profitability, or in the outlook for our future profitability, as well as regulatory limitations on compensation levels and terms, can negatively impact our ability to hire and retain highly qualified employees.

Competition from within the financial services industry and from businesses outside the financial services industry for qualified employees has often been intense. Recently, we have experienced increased competition in hiring and retaining employees to address the demands of new regulatory requirements. This is also the case in emerging and growth markets, where we are often competing for qualified employees with entities that have a significantly greater presence or more extensive experience in the region.

Changes in law or regulation in jurisdictions in which our operations are located that affect taxes on our employees' income, or the amount or composition of compensation, may also adversely affect our ability to hire and retain qualified employees in those jurisdictions.

As described further in "Business — Regulation — Compensation Practices" in Part I, Item 1 of the 2015 Form 10-K, our compensation practices are subject to review by, and the standards of, the Federal Reserve Board. As a large global financial and banking institution, we are subject to limitations on compensation practices (which may or may not affect our competitors) by the Federal Reserve Board, the PRA, the FCA, the FDIC and other regulators worldwide. These limitations, including any imposed by or as a result of future legislation or regulation, may require us to alter our compensation practices in ways that could adversely affect our ability to attract and retain talented employees.

We may be adversely affected by increased governmental and regulatory scrutiny or negative publicity.

Governmental scrutiny from regulators, legislative bodies and law enforcement agencies with respect to matters relating to compensation, our business practices, our past actions and other matters has increased dramatically in the past several years. The financial crisis and the current political and public sentiment regarding financial institutions has resulted in a significant amount of adverse press coverage, as well as adverse statements or charges by regulators or other government officials. Press coverage and other public statements that assert some form of wrongdoing often result in some type of investigation by regulators, legislators and law enforcement officials or in lawsuits.

Responding to these investigations and lawsuits, regardless of the ultimate outcome of the proceeding, is time-consuming and expensive and can divert the time and effort of our senior management from our business. Penalties and fines sought by regulatory authorities have increased substantially over the last several years, and certain regulators have been more likely in recent years to commence enforcement actions or to advance or support legislation targeted at the financial services industry. Adverse publicity, governmental scrutiny and legal and enforcement proceedings can also have a negative impact on our reputation and on the morale and performance of our employees, which could adversely affect our businesses and results of operations.

Substantial legal liability or significant regulatory action against us could have material adverse financial effects or cause us significant reputational harm, which in turn could seriously harm our business prospects.

We face significant legal risks in our businesses, and the volume of claims and amount of damages and penalties claimed in litigation and regulatory proceedings against financial institutions remain high. See Note 27 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K for information about certain legal proceedings in which we are involved and Note 18 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K for information regarding certain mortgage-related contingencies. Our experience has been that legal claims by customers and clients increase in a market downturn and that employment-related claims increase following periods in which we have reduced our staff. Additionally, governmental entities are plaintiffs in certain of the legal proceedings in which we are involved, and we may face future actions or claims by the same or other governmental entities, as well as follow-on civil litigation that is often commenced after regulatory settlements.

Recently, significant settlements by several large financial institutions with governmental entities have been publicly announced. The trend of large settlements with governmental entities may adversely affect the outcomes for other financial institutions in similar actions, especially where governmental officials have announced that the large settlements will be used as the basis or a template for other settlements. The uncertain regulatory enforcement environment makes it difficult to estimate probable losses, which can lead to substantial disparities between legal reserves and subsequent actual settlements or penalties.

Certain regulators, including the SEC, have announced policies that make it more likely that they will seek an admission of wrongdoing as part of any settlement of a matter brought by them against a regulated entity or individual, which could lead to increased exposure to civil litigation, could adversely affect our reputation, could result in penalties or limitations on our ability to do business in certain jurisdictions with so-called “bad actor” laws and could have other negative effects.

In addition, the U.S. Department of Justice has announced a policy of requiring companies to provide investigators with all relevant facts relating to the individuals responsible for the alleged misconduct in order to qualify for any cooperation credit in civil and criminal investigations of corporate wrongdoing, which may result in our incurring increased fines and penalties if the Department of Justice determines that we have not provided sufficient information about applicable individuals in connection with an investigation, as well as increased costs in responding to Department of Justice investigations. It is possible that other governmental authorities will adopt similar policies.

The growth of electronic trading and the introduction of new trading technology may adversely affect our business and may increase competition.

Technology is fundamental to our business and our industry. The growth of electronic trading and the introduction of new technologies is changing our businesses and presenting us with new challenges. Securities, futures and options transactions are increasingly occurring electronically, both on our own systems and through other alternative trading systems, and it appears that the trend toward alternative trading systems will continue. Some of these alternative trading systems compete with us, particularly our exchange-based market-making activities, and we may experience continued competitive pressures in these and other areas. In addition, the increased use by our clients of low-cost electronic trading systems and direct electronic access to trading markets could cause a reduction in commissions and spreads. As our clients increasingly use our systems to trade directly in the markets, we may incur liabilities as a result of their use of our order routing and execution infrastructure. We have invested significant resources into the development of electronic trading systems and expect to continue to do so, but there is no assurance that the revenues generated by these systems will yield an adequate return on our investment, particularly given the generally lower commissions arising from electronic trades.

Our commodities activities, particularly our physical commodities activities, subject us to extensive regulation and involve certain potential risks, including environmental, reputational and other risks that may expose us to significant liabilities and costs.

As part of our commodities business, we purchase and sell certain physical commodities, arrange for their storage and transport, and engage in market making of commodities. The commodities involved in these activities may include crude oil, oil refined products, natural gas, liquefied natural gas, electric power, agricultural products, metals (base and precious), minerals (including unenriched uranium), emission credits, coal, freight and related products and indices.

In our investing and lending businesses, we make investments in and finance entities that engage in the production, storage and transportation of numerous commodities, including many of the commodities referenced above.

These activities subject us and/or the entities in which we invest to extensive and evolving federal, state and local energy, environmental, antitrust and other governmental laws and regulations worldwide, including environmental laws and regulations relating to, among others, air quality, water quality, waste management, transportation of hazardous substances, natural resources, site remediation and health and safety. Additionally, rising climate change concerns may lead to additional regulation that could increase the operating costs and profitability of our investments.

There may be substantial costs in complying with current or future laws and regulations relating to our commodities-related activities and investments. Compliance with these laws and regulations could require significant commitments of capital toward environmental monitoring, renovation of storage facilities or transport vessels, payment of emission fees and carbon or other taxes, and application for, and holding of, permits and licenses.

Commodities involved in our intermediation activities and investments are also subject to the risk of unforeseen or catastrophic events, which are likely to be outside of our control, including those arising from the breakdown or failure of transport vessels, storage facilities or other equipment or processes or other mechanical malfunctions, fires, leaks, spills or release of hazardous substances, performance below expected levels of output or efficiency, terrorist attacks, extreme weather events or other natural disasters or other hostile or catastrophic events. In addition, we rely on third-party suppliers or service providers to perform their contractual obligations and any failure on their part, including the failure to obtain raw materials at reasonable prices or to safely transport or store commodities, could expose us to costs or losses. Also, while we seek to insure against potential risks, we may not be able to obtain insurance to cover some of these risks and the insurance that we have may be inadequate to cover our losses.

The occurrence of any of such events may prevent us from performing under our agreements with clients, may impair our operations or financial results and may result in litigation, regulatory action, negative publicity or other reputational harm.

We may also be required to divest or discontinue certain of these activities for regulatory or legal reasons. If that occurs, the firm may receive a value that is less than the then carrying value, as the firm may be unable to exit these activities in an orderly transaction.

In conducting our businesses around the world, we are subject to political, economic, legal, operational and other risks that are inherent in operating in many countries.

In conducting our businesses and maintaining and supporting our global operations, we are subject to risks of possible nationalization, expropriation, price controls, capital controls, exchange controls and other restrictive governmental actions, as well as the outbreak of hostilities or acts of terrorism. For example, there has been significant conflict between Russia and Ukraine in recent years, and sanctions have been imposed by the U.S. and EU on certain individuals and companies in Russia. In many countries, the laws and regulations applicable to the securities and financial services industries and many of the transactions in which we are involved are uncertain and evolving, and it may be difficult for us to determine the exact requirements of local laws in every market. Any determination by local regulators that we have not acted in compliance with the application of local laws in a particular market or our failure to develop effective working relationships with local regulators could have a significant and negative effect not only on our businesses in that market but also on our reputation generally. We are also subject to the enhanced risk that transactions we structure might not be legally enforceable in all cases.

A determination by the United Kingdom to exit or otherwise significantly change its relationship with the European Union could affect the manner in which we conduct our businesses.

Our businesses and operations are increasingly expanding throughout the world, including in emerging and growth markets, and we expect this trend to continue. Various emerging and growth market countries have experienced severe economic and financial disruptions, including significant devaluations of their currencies, defaults or threatened defaults on sovereign debt, capital and currency exchange controls, and low or negative growth rates in their economies, as well as military activity, civil unrest or acts of terrorism. The possible effects of any of these conditions include an adverse impact on our businesses and increased volatility in financial markets generally.

While business and other practices throughout the world differ, our principal legal entities are subject in their operations worldwide to rules and regulations relating to corrupt and illegal payments, hiring practices and money laundering, as well as laws relating to doing business with certain individuals, groups and countries, such as the U.S. Foreign Corrupt Practices Act, the USA PATRIOT Act and U.K. Bribery Act. While we have invested and continue to invest significant resources in training and in compliance monitoring, the geographical diversity of our operations, employees, clients and customers, as well as the vendors and other third parties that we deal with, greatly increases the risk that we may be found in violation of such rules or regulations and any such violation could subject us to significant penalties or adversely affect our reputation.

In addition, there have been a number of highly publicized cases around the world, involving actual or alleged fraud or other misconduct by employees in the financial services industry in recent years, and we run the risk that employee misconduct could occur. This misconduct has included and may include in the future the theft of proprietary information, including proprietary software. It is not always possible to deter or prevent employee misconduct and the precautions we take to prevent and detect this activity have not been and may not be effective in all cases.

We may incur losses as a result of unforeseen or catastrophic events, including the emergence of a pandemic, terrorist attacks, extreme weather events or other natural disasters.

The occurrence of unforeseen or catastrophic events, including the emergence of a pandemic, such as the Ebola or Zika viruses, or other widespread health emergency (or concerns over the possibility of such an emergency), terrorist attacks, extreme terrestrial or solar weather events or other natural disasters, could create economic and financial disruptions, and could lead to operational difficulties (including travel limitations) that could impair our ability to manage our businesses.

Item 1B. Unresolved Staff Comments

There are no material unresolved written comments that were received from the SEC staff 180 days or more before the end of our fiscal year relating to our periodic or current reports under the Exchange Act.

Item 2. Properties

Our principal executive offices are located at 200 West Street, New York, New York and comprise approximately 2.1 million gross square feet. The building is located on a parcel leased from Battery Park City Authority pursuant to a ground lease. Under the lease, Battery Park City Authority holds title to all improvements, including the office building, subject to Goldman Sachs' right of exclusive possession and use until June 2069, the expiration date of the lease. Under the terms of the ground lease, we made a lump sum ground rent payment in June 2007 of $161 million for rent through the term of the lease.

We have offices at 30 Hudson Street in Jersey City, New Jersey, which we own and which include approximately 1.6 million gross square feet of office space.

We have additional offices and commercial space in the United States and elsewhere in the Americas, which together comprise approximately 2.5 million square feet of leased and owned space.

In Europe, the Middle East and Africa, we have offices that total approximately 1.5 million square feet of leased and owned space. Our European headquarters is located in London at Peterborough Court, pursuant to a lease expiring in 2026. In total, we have offices with approximately 1.2 million square feet in London, relating to various properties.

In Asia (including India), Australia and New Zealand, we have offices with approximately 1.9 million square feet. Our headquarters in this region are in Tokyo, at the Roppongi Hills Mori Tower, and in Hong Kong, at the Cheung Kong Center. In Japan, we currently have offices with approximately 219,000 square feet, the majority of which have leases that will expire in 2018. In Hong Kong, we currently have offices with approximately 315,000 square feet, the majority of which have leases that will expire in 2017.

In the preceding paragraphs, square footage figures are provided only for properties that are used in the operation of our businesses.

See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Off-Balance-Sheet Arrangements and Contractual Obligations — Contractual Obligations" in Part II, Item 7 of the 2015 Form 10-K for information about exit costs we may incur in the future to the extent we reduce our space capacity or commit to, or occupy, new properties in the locations in which we operate and, consequently, dispose of existing space that had been held for potential growth.

Item 3. Legal Proceedings

We are involved in a number of judicial, regulatory and arbitration proceedings concerning matters arising in connection with the conduct of our businesses. Many of these proceedings are in early stages, and many of these cases seek an indeterminate amount of damages. However, we believe, based on currently available information, that the results of such proceedings, in the aggregate, will not have a material adverse effect on our financial condition, but may be material to our operating results for any particular period, depending, in part, upon the operating results for such period. Given the range of litigation and investigations presently under way, our litigation expenses can be expected to remain high. See "Management's Discussion and Analysis of Financial Condition and Results of Operations — Use of Estimates" in Part II, Item 7 of the 2015 Form 10-K. See Note 27 to the consolidated financial statements in Part II, Item 8 of the 2015 Form 10-K for information about certain judicial, regulatory and legal proceedings.

Item 4. Mine Safety Disclosures

Not applicable.

Executive Officers of The Goldman Sachs Group, Inc.

Set forth below are the name, age, present title, principal occupation and certain biographical information for our executive officers. All of our executive officers have been appointed by and serve at the pleasure of our board of directors.

Lloyd C. Blankfein, 61
Mr. Blankfein has been our Chairman and Chief Executive Officer since June 2006, and a director since April 2003.

Alan M. Cohen, 65
Mr. Cohen has been an Executive Vice President of Goldman Sachs and our Global Head of Compliance since February 2004.

Gary D. Cohn, 55
Mr. Cohn has been our President and Chief Operating Officer (or Co-Chief Operating Officer) and a director since June 2006.

Edith W. Cooper, 54
Ms. Cooper has been an Executive Vice President of Goldman Sachs since April 2011 and our Global Head of Human Capital Management since March 2008. From 2002 to 2008, she served in various positions at the firm, including sales management within the Securities Division.

Gregory K. Palm, 67
Mr. Palm has been an Executive Vice President of Goldman Sachs since May 1999, and our General Counsel and head or co-head of the Legal Department since May 1992.

John F.W. Rogers, 59
Mr. Rogers has been an Executive Vice President of Goldman Sachs since April 2011 and Chief of Staff and Secretary to the Board of Directors of Goldman Sachs since December 2001.

Harvey M. Schwartz, 51
Mr. Schwartz has been an Executive Vice President of Goldman Sachs and our Chief Financial Officer since January 2013. From February 2008 to January 2013, Mr. Schwartz was global co-head of the Securities Division.

Mark Schwartz, 61
Mr. Schwartz has been a Vice Chairman of Goldman Sachs and Chairman of Goldman Sachs Asia Pacific since rejoining the firm in June 2012. From 2006 to June 2012, he was Chairman of MissionPoint Capital Partners, an investment firm he co-founded.

Michael S. Sherwood, 50
Mr. Sherwood has been a Vice Chairman of Goldman Sachs since February 2008 and co-chief executive officer of Goldman Sachs International since 2005. He assumed responsibility for coordinating the firm's business and activities around Growth Markets in November 2013.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The principal market on which our common stock is traded is the NYSE. Information relating to the high and low sales prices per share of our common stock, as reported by the Consolidated Tape Association, for each full quarterly period during 2013, 2014 and 2015 is set forth under the heading "Supplemental Financial Information — Common Stock Price Range" in Part II, Item 8 of the 2015 Form 10-K. As of February 5, 2016, there were 9,307 holders of record of our common stock.

The table below presents dividends declared by Group Inc. during 2014 and 2015.

	Date of Declaration	Dividend Declared Per Common Share
2014		
First Quarter	January 15, 2014	$0.55
Second Quarter	April 16, 2014	0.55
Third Quarter	July 14, 2014	0.55
Fourth Quarter	October 15, 2014	0.60
2015		
First Quarter	January 15, 2015	0.60
Second Quarter	April 15, 2015	0.65
Third Quarter	July 15, 2015	0.65
Fourth Quarter	October 14, 2015	0.65

The declaration of dividends by Group Inc. is subject to the discretion of our Board. Our Board will take into account such matters as general business conditions, our financial results, capital requirements, contractual, legal and regulatory restrictions on the payment of dividends by us to our shareholders or by our subsidiaries to us, the effect on our debt ratings and such other factors as our Board may deem relevant. The holders of our common stock share proportionately on a per share basis in all dividends and other distributions on common stock declared by the Board of Directors of Group Inc. (Board). See "Business — Regulation" in Part I, Item 1 of the 2015 Form 10-K for information about potential regulatory limitations on our receipt of funds from our regulated subsidiaries and our payment of dividends to shareholders of Group Inc.

The table below presents purchases made by or on behalf of Group Inc. or any "affiliated purchaser" (as defined in Rule 10b-18(a)(3) under the Exchange Act), of our common stock during the fourth quarter of 2015. Information relating to compensation plans under which our equity securities are authorized for issuance is presented in Part III, Item 12 of the 2015 Form 10-K.

	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares That May Yet Be Purchased Under the Plans or Programs
Month #1 (October 1, 2015 to October 31, 2015)	**2,901,624**	**$183.27**	**2,901,624**	**69,164,345**
Month #2 (November 1, 2015 to November 30, 2015)	**2,915,027**	**192.22**	**2,915,027**	**66,249,318**
Month #3 (December 1, 2015 to December 31, 2015)	**3,047,435**	**183.07**	**3,047,435**	**63,201,883**
Total	**8,864,086**		**8,864,086**	

On March 21, 2000, we announced that our Board had approved a repurchase program authorizing repurchases of up to 15 million shares of our common stock, which was increased by an aggregate of 490 million shares by resolutions of our Board adopted from June 2001 through October 2015. The repurchase program is effected primarily through regular open-market purchases (which may include repurchase plans designed to comply with Rule 10b5-1), the amounts and timing of which are determined primarily by the firm's current and projected capital position, but which may also be influenced by general market conditions and the prevailing price and trading volumes of our common stock. The repurchase program has no set expiration or termination date. Prior to repurchasing common stock, we must receive confirmation that the Board of Governors of the Federal Reserve System does not object to such capital actions.

Item 6. Selected Financial Data

The Selected Financial Data table is set forth under Part II, Item 8 of the 2015 Form 10-K.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

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Introduction

The Goldman Sachs Group, Inc. (Group Inc. or parent company), a Delaware corporation, together with its consolidated subsidiaries (collectively, the firm), is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and individuals. Founded in 1869, the firm is headquartered in New York and maintains offices in all major financial centers around the world.

We report our activities in four business segments: Investment Banking, Institutional Client Services, Investing & Lending and Investment Management. See "Results of Operations" below for further information about our business segments.

When we use the terms "Goldman Sachs," "the firm," "we," "us" and "our," we mean Group Inc. and its consolidated subsidiaries.

References to "the 2015 Form 10-K" are to our Annual Report on Form 10-K for the year ended December 31, 2015. All references to "the consolidated financial statements" or "Supplemental Financial Information" are to Part II, Item 8 of the 2015 Form 10-K. All references to 2015, 2014 and 2013 refer to our years ended, or the dates, as the context requires, December 31, 2015, December 31, 2014 and December 31, 2013, respectively. Any reference to a future year refers to a year ending on December 31 of that year. Certain reclassifications have been made to previously reported amounts to conform to the current presentation.

In this discussion and analysis of our financial condition and results of operations, we have included information that may constitute "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements are not historical facts, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside our control. This information includes statements other than historical information or statements of current condition and may relate to our future plans and objectives and results, among other things, and may also include statements about the effect of changes to the capital, leverage, liquidity, long-term debt and total loss-absorbing capacity rules applicable to banks and bank holding companies, the impact of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) on our businesses and operations, and various legal proceedings or mortgage-related contingencies as set forth under "Legal Proceedings" and "Certain Mortgage-Related Contingencies" in Notes 27 and 18, respectively, to the consolidated financial statements, as well as statements about the results of our Dodd-Frank Act and firm stress tests, statements about the objectives and effectiveness of our business continuity plan, information security program, risk management and liquidity policies, statements about trends in or growth opportunities for our businesses, statements about our future status, activities or reporting under U.S. or non-U.S. banking and financial regulation, and statements about our investment banking transaction backlog.

By identifying these statements for you in this manner, we are alerting you to the possibility that our actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Important factors that could cause our actual results and financial condition to differ from those indicated in these forward-looking statements include, among others, those described in "Risk Factors" in Part I, Item 1A of the 2015 Form 10-K and "Cautionary Statement Pursuant to the U.S. Private Securities Litigation Reform Act of 1995" in Part I, Item 1 of the 2015 Form 10-K.

Executive Overview

2015 versus 2014. The firm generated net earnings of $6.08 billion and diluted earnings per common share of $12.14 for 2015, a decrease of 28% and 29%, respectively, compared with $8.48 billion and $17.07 per share for 2014. Return on average common shareholders' equity (ROE) was 7.4% for 2015, compared with 11.2% for 2014. During 2015, the firm recorded provisions for the agreement in principle with the RMBS Working Group [1] of $3.37 billion ($2.99 billion after-tax), which reduced diluted earnings per common share by $6.53 and ROE by 3.8 percentage points.

Book value per common share was $171.03 as of December 2015, 5% higher compared with the end of 2014. During the year, the firm repurchased 22.1 million shares of its common stock for a total cost of $4.20 billion.

Net revenues were $33.82 billion for 2015, 2% lower than 2014, as significantly lower net revenues in Investing & Lending were largely offset by higher net revenues in Investment Banking and slightly higher net revenues in Investment Management. Net revenues in Institutional Client Services were essentially unchanged compared with 2014.

Operating expenses were $25.04 billion for 2015, 13% higher than 2014, due to significantly higher non-compensation expenses, primarily reflecting significantly higher net provisions for mortgage-related litigation and regulatory matters. Compensation and benefits expenses were essentially unchanged compared with the prior year.

We continued to maintain strong capital ratios and liquidity. As of December 2015, our Common Equity Tier 1 ratio [2] as computed in accordance with the Standardized approach and the Basel III Advanced approach, in each case reflecting the applicable transitional provisions, was 13.6% and 12.4%, respectively. In addition, our global core liquid assets [3] were $199 billion as of December 2015.

2014 versus 2013. The firm generated net earnings of $8.48 billion and diluted earnings per common share of $17.07 for 2014, an increase of 5% and 10%, respectively, compared with $8.04 billion and $15.46 per share for 2013. ROE was 11.2% for 2014, compared with 11.0% for 2013. Book value per common share was $163.01 as of December 2014, 7% higher compared with the end of 2013.

Net revenues were $34.53 billion for 2014, essentially unchanged compared with 2013, as higher net revenues in both Investment Management and Investment Banking, reflecting strong performances in these businesses, were largely offset by slightly lower net revenues in both Institutional Client Services and Investing & Lending.

Operating expenses were $22.17 billion for 2014, essentially unchanged compared with 2013. Non-compensation expenses were slightly lower compared with the prior year, primarily reflecting lower net provisions for litigation and regulatory proceedings, while compensation and benefits expenses were essentially unchanged.

During 2014, as part of a firmwide initiative to reduce activities with lower returns, total assets were reduced by $55 billion to $856 billion as of December 2014, while pre-tax margin improved approximately 150 basis points to 35.8%.

We also maintained strong capital ratios and liquidity, while returning $6.52 billion of capital to shareholders during 2014. During 2014, the firm repurchased 31.8 million shares of its common stock for a total cost of $5.47 billion and paid common dividends of $1.05 billion. Our Common Equity Tier 1 ratio [2] was 12.2% as of December 2014, under the Basel III Advanced approach reflecting the applicable transitional provisions. In addition, our global core liquid assets [3] were $183 billion as of December 2014.

See "Results of Operations — Segment Operating Results" below for information about net revenues and pre-tax earnings for each of our business segments.

1. On January 14, 2016, the firm announced an agreement in principle, subject to the negotiation of definitive documentation, to resolve the ongoing investigation of the Residential Mortgage-Backed Securities Working Group of the U.S. Financial Fraud Enforcement Task Force (RMBS Working Group). See Note 27 to the consolidated financial statements for further information about this agreement in principle.

2. See Note 20 to the consolidated financial statements for further information about our capital ratios.

3. See "Risk Management — Liquidity Risk Management" below for further information about our global core liquid assets.

Our businesses, by their nature, do not produce predictable earnings. Our results in any given period can be materially affected by conditions in global financial markets, economic conditions generally and other factors. For further information about the factors that may affect our future operating results, see "Risk Factors" in Part I, Item 1A of the 2015 Form 10-K.

Business Environment

Global

During 2015, real gross domestic product (GDP) growth appeared stable but subdued in most advanced economies and weaker in emerging market economies compared with 2014. In developed markets, growth was higher in the Euro area and Japan, while growth in the United Kingdom was lower and growth in the United States remained stable. In emerging markets, many economies suffered from lower commodity prices, and Latin America was particularly weak with negative aggregate growth in 2015. Monetary policy diverged in 2015, as the U.S. Federal Reserve increased its target interest rate, while policy remained accommodative in the Euro area and Japan. In addition, oil prices declined by 30%, and there were concerns about the debt situation in Greece earlier in the year and China's growth outlook later in the year. In investment banking, industry-wide mergers and acquisitions activity remained strong, while industry-wide activity in both debt and equity underwriting declined compared with 2014.

United States

In the United States, real GDP increased by 2.4% in both 2015 and 2014. Residential fixed investment growth and consumer expenditures growth both improved, while business fixed investment growth declined. Measures of consumer confidence improved on average compared with the prior year, while the unemployment rate declined. Housing starts and house sales increased in 2015, but house prices declined compared with the end of 2014. Measures of inflation were mixed, with headline measures lower alongside declining commodity prices, and core inflation metrics stable during 2015. The U.S. Federal Reserve raised its target rate for the federal funds rate at the December meeting to a range of 0.25% to 0.50%, ending a seven-year period at a range of zero to 0.25%. The yield on the 10-year U.S. Treasury note increased by 10 basis points during 2015 to 2.27%. In equity markets, the NASDAQ Composite Index increased by 6%, while the Dow Jones Industrial Average and the S&P 500 Index declined by 2% and 1%, respectively, during 2015.

Europe

In the Euro area, real GDP increased by 1.5% in 2015, compared to an increase of 0.9% in 2014, as fixed investment, consumer spending and government consumption all grew. Measures of inflation remained subdued, prompting the European Central Bank (ECB) to announce quantitative easing in the form of an expanded asset purchase program in January 2015. The central bank continued its asset purchase program through the second and third quarters and announced further easing measures in the fourth quarter, cutting the deposit rate by 10 basis points to (0.30)% and extending purchases to March 2017. The ECB maintained its main refinancing operations rate at 0.05% during 2015. The Euro depreciated by 10% against the U.S. dollar. In the United Kingdom, real GDP increased by 2.2% in 2015, compared with an increase of 2.9% in 2014. The Bank of England maintained its official bank rate at 0.50% and the British pound depreciated by 5% against the U.S. dollar. Yields on 10-year government bonds in the region generally increased slightly during the year. In equity markets, the DAX Index, CAC 40 Index and the Euro Stoxx 50 Index increased by 10%, 9%, and 4%, respectively, while the FTSE 100 Index decreased by 5% during 2015.

Asia

In Japan, real GDP increased by 0.4% in 2015, compared with no growth in 2014. Measures of inflation were lower compared with 2014 and remained well below the Bank of Japan's (BOJ) 2% inflation target. In 2015, the BOJ extended the timing to achieve 2% inflation, continued its program of monetary easing and introduced measures to supplement and facilitate the quantitative and qualitative easing program. During the year, the yield on 10-year Japanese government bonds declined, the U.S. dollar was essentially unchanged against the Japanese yen and, in equity markets, the Nikkei 225 Index increased by 9%. In China, real GDP increased by 6.9% in 2015 compared with 7.3% in 2014. During 2015, the People's Bank of China announced multiple cuts in the reserve requirement ratio and took policy actions that led to a depreciation of the Chinese yuan. Measures of inflation were slightly lower and the U.S. dollar appreciated by 5% against the Chinese yuan. In equity markets, the Shanghai Composite Index increased by 9% after large mid-year swings, while the Hang Seng Index decreased by 7%. In India, real GDP increased by 7.5% in 2015 compared with 7.3% in 2014, and the rate of inflation declined compared with 2014. The U.S. dollar appreciated by 5% against the Indian rupee and, in equity markets, the BSE Sensex Index declined by 5% during 2015.

Other Markets

In Brazil, real GDP appeared to contract by 3.8% in 2015 compared with an increase of 0.1% in 2014, reflecting sharp contractions in fixed investment and private consumption. The U.S. dollar appreciated by 49% against the Brazilian real and, in equity markets, the Bovespa Index decreased by 13%. In Russia, real GDP contracted by 3.7% in 2015 compared with an increase of 0.6% in 2014, reflecting contractions in private consumption and investment. The U.S. dollar appreciated by 26% against the Russian ruble and, in equity markets, the MICEX Index increased by 26% during 2015.

Critical Accounting Policies

Fair Value

Fair Value Hierarchy. Financial instruments owned, at fair value and Financial instruments sold, but not yet purchased, at fair value (i.e., inventory), as well as certain other financial assets and financial liabilities, are reflected in our consolidated statements of financial condition at fair value (i.e., marked-to-market), with related gains or losses generally recognized in our consolidated statements of earnings. The use of fair value to measure financial instruments is fundamental to our risk management practices and is our most critical accounting policy.

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. We measure certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks). In determining fair value, the hierarchy under U.S. generally accepted accounting principles (U.S. GAAP) gives (i) the highest priority to unadjusted quoted prices in active markets for identical, unrestricted assets or liabilities (level 1 inputs), (ii) the next priority to inputs other than level 1 inputs that are observable, either directly or indirectly (level 2 inputs), and (iii) the lowest priority to inputs that cannot be observed in market activity (level 3 inputs). Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to their fair value measurement.

The fair values for substantially all of our financial assets and financial liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors such as counterparty and the firm's credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads.

Instruments categorized within level 3 of the fair value hierarchy are those which require one or more significant inputs that are not observable. As of December 2015 and December 2014, level 3 financial assets represented 2.8% and 4.2%, respectively, of our total assets. See Notes 5 through 8 to the consolidated financial statements for further information about level 3 financial assets, including changes in level 3 financial assets and related fair value measurements. Absent evidence to the contrary, instruments classified within level 3 of the fair value hierarchy are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequent to the transaction date, we use other methodologies to determine fair value, which vary based on the type of instrument. Estimating the fair value of level 3 financial instruments requires judgments to be made. These judgments include:

- Determining the appropriate valuation methodology and/or model for each type of level 3 financial instrument;
- Determining model inputs based on an evaluation of all relevant empirical market data, including prices evidenced by market transactions, interest rates, credit spreads, volatilities and correlations; and
- Determining appropriate valuation adjustments, including those related to illiquidity or counterparty credit quality.

Regardless of the methodology, valuation inputs and assumptions are only changed when corroborated by substantive evidence.

Controls Over Valuation of Financial Instruments. Market makers and investment professionals in our revenue-producing units are responsible for pricing our financial instruments. Our control infrastructure is independent of the revenue-producing units and is fundamental to ensuring that all of our financial instruments are appropriately valued at market-clearing levels. In the event that there is a difference of opinion in situations where estimating the fair value of financial instruments requires judgment (e.g., calibration to market comparables or trade comparison, as described below), the final valuation decision is made by senior managers in control and support functions. This independent price verification is critical to ensuring that our financial instruments are properly valued.

Price Verification. All financial instruments at fair value in levels 1, 2 and 3 of the fair value hierarchy are subject to our independent price verification process. The objective of price verification is to have an informed and independent opinion with regard to the valuation of financial instruments under review. Instruments that have one or more significant inputs which cannot be corroborated by external market data are classified within level 3 of the fair value hierarchy. Price verification strategies utilized by our independent control and support functions include:

- **Trade Comparison.** Analysis of trade data (both internal and external where available) is used to determine the most relevant pricing inputs and valuations.
- **External Price Comparison.** Valuations and prices are compared to pricing data obtained from third parties (e.g., brokers or dealers, MarkIt, Bloomberg, IDC, TRACE). Data obtained from various sources is compared to ensure consistency and validity. When broker or dealer quotations or third-party pricing vendors are used for valuation or price verification, greater priority is generally given to executable quotations.
- **Calibration to Market Comparables.** Market-based transactions are used to corroborate the valuation of positions with similar characteristics, risks and components.
- **Relative Value Analyses.** Market-based transactions are analyzed to determine the similarity, measured in terms of risk, liquidity and return, of one instrument relative to another or, for a given instrument, of one maturity relative to another.
- **Collateral Analyses.** Margin calls on derivatives are analyzed to determine implied values which are used to corroborate our valuations.
- **Execution of Trades.** Where appropriate, trading desks are instructed to execute trades in order to provide evidence of market-clearing levels.
- **Backtesting.** Valuations are corroborated by comparison to values realized upon sales.

See Notes 5 through 8 to the consolidated financial statements for further information about fair value measurements.

Review of Net Revenues. Independent control and support functions ensure adherence to our pricing policy through a combination of daily procedures, including the explanation and attribution of net revenues based on the underlying factors. Through this process we independently validate net revenues, identify and resolve potential fair value or trade booking issues on a timely basis and seek to ensure that risks are being properly categorized and quantified.

Review of Valuation Models. Our independent model risk management group (Model Risk Management), consisting of quantitative professionals who are separate from model developers, performs an independent model review and validation process of our valuation models. New or changed models are reviewed and approved prior to being put into use. Models are evaluated and re-approved annually to assess the impact of any changes in the product or market and any market developments in pricing theories. See "Risk Management — Model Risk Management" for further information about the review and validation of our valuation models.

Goodwill and Identifiable Intangible Assets

Goodwill. Goodwill is the cost of acquired companies in excess of the fair value of net assets, including identifiable intangible assets, at the acquisition date. Goodwill is assessed for impairment annually in the fourth quarter or more frequently if events occur or circumstances change that indicate an impairment may exist, by first assessing qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the results of the qualitative assessment are not conclusive, a quantitative goodwill test is performed by comparing the estimated fair value of each reporting unit with its estimated net book value.

Estimating the fair value of our reporting units requires management to make judgments. Critical inputs to the fair value estimates include projected earnings and attributed equity. There is inherent uncertainty in the projected earnings. The net book value of each reporting unit reflects an allocation of total shareholders' equity and represents the estimated amount of total shareholders' equity required to support the activities of the reporting unit under currently applicable regulatory capital requirements. See "Equity Capital Management and Regulatory Capital" for further information about our capital requirements.

We last performed a quantitative goodwill test in 2012 and, as we believe it is appropriate to periodically update it, we performed another quantitative goodwill test during the fourth quarter of 2015. We determined that goodwill was not impaired. The estimated fair value of our reporting units in which we hold substantially all of our goodwill significantly exceeded their estimated carrying values. However, the estimated fair value of the Fixed Income, Currency and Commodities Client Execution reporting unit, which represents approximately 7% of our goodwill, was not substantially in excess of its carrying value. This reporting unit and the industry more broadly have been adversely impacted by the currently challenging operating environment and increased capital requirements. We will continue to closely monitor it to determine whether an impairment is required in the future. As of December 2015, the goodwill related to the Fixed Income, Currency and Commodities Client Execution reporting unit was $269 million, substantially all of which originated from the acquisition of Goldman Sachs Australia Pty Ltd in 2011.

If we experience a prolonged or severe period of weakness in the business environment or financial markets, or additional increases in capital requirements, our goodwill could be impaired in the future. In addition, significant changes to other inputs of the quantitative goodwill test could cause the estimated fair value of our reporting units to decline, which could result in an impairment of goodwill in the future.

See Note 13 to the consolidated financial statements for further information about our goodwill and our quantitative goodwill test.

Identifiable Intangible Assets. We amortize our identifiable intangible assets over their estimated useful lives using the straight-line method or based on economic usage for certain commodities-related intangibles. Identifiable intangible assets are tested for impairment whenever events or changes in circumstances suggest that an asset's or asset group's carrying value may not be fully recoverable. See Note 13 to the consolidated financial statements for the carrying value and estimated remaining useful lives of our identifiable intangible assets by major asset class.

A prolonged or severe period of market weakness, or significant changes in regulation could adversely impact our businesses and impair the value of our identifiable intangible assets. In addition, certain events could indicate a potential impairment of our identifiable intangible assets, including weaker business performance resulting in a decrease in our customer base and decreases in revenues from commodities-related transportation rights, customer contracts and relationships. Management judgment is required to evaluate whether indications of potential impairment have occurred, and to test intangible assets for impairment if required.

An impairment, generally calculated as the difference between the estimated fair value and the carrying value of an asset or asset group, is recognized if the total of the estimated undiscounted cash flows relating to the asset or asset group is less than the corresponding carrying value.

See Note 13 to the consolidated financial statements for further information about our identifiable intangible assets.

Recent Accounting Developments

See Note 3 to the consolidated financial statements for information about Recent Accounting Developments.

Use of Estimates

The use of generally accepted accounting principles requires management to make certain estimates and assumptions. In addition to the estimates we make in connection with fair value measurements and the accounting for goodwill and identifiable intangible assets, the use of estimates and assumptions is also important in determining provisions for losses that may arise from litigation, regulatory proceedings and tax audits, and the allowance for losses on loans and lending commitments held for investment.

We estimate and provide for potential losses that may arise out of litigation and regulatory proceedings to the extent that such losses are probable and can be reasonably estimated. In addition, we estimate the upper end of the range of reasonably possible aggregate loss in excess of the related reserves for litigation proceedings where the firm believes the risk of loss is more than slight. See Notes 18 and 27 to the consolidated financial statements for information about certain judicial, regulatory and legal proceedings.

Significant judgment is required in making these estimates and our final liabilities may ultimately be materially different. Our total estimated liability in respect of litigation and regulatory proceedings is determined on a case-by-case basis and represents an estimate of probable losses after considering, among other factors, the progress of each case or proceeding, our experience and the experience of others in similar cases or proceedings, and the opinions and views of legal counsel.

In accounting for income taxes, we recognize tax positions in the financial statements only when it is more likely than not that the position will be sustained on examination by the relevant taxing authority based on the technical merits of the position. See Note 24 to the consolidated financial statements for further information about accounting for income taxes.

We also estimate and record an allowance for credit losses related to our loans receivable and lending commitments held for investment. Management's estimate of loan losses entails judgment about loan collectability at the reporting dates, and there are uncertainties inherent in those judgments. See Note 9 to the consolidated financial statements for further information about the allowance for losses on loans and lending commitments held for investment.

Results of Operations

The composition of our net revenues has varied over time as financial markets and the scope of our operations have changed. The composition of net revenues can also vary over the shorter term due to fluctuations in U.S. and global economic and market conditions. See "Risk Factors" in Part I, Item 1A of the 2015 Form 10-K for further information about the impact of economic and market conditions on our results of operations.

Financial Overview

The table below presents an overview of our financial results.

$ in millions, except per share amounts	Year Ended December		
	2015	2014	2013
Net revenues	**$ 33,820**	$34,528	$34,206
Pre-tax earnings	**8,778**	12,357	11,737
Net earnings	**6,083**	8,477	8,040
Net earnings applicable to common shareholders	**5,568**	8,077	7,726
Diluted earnings per common share	**12.14**	17.07	15.46
Return on average common shareholders' equity [1]	**7.4%**	11.2%	11.0%

1. ROE is computed by dividing net earnings applicable to common shareholders by average monthly common shareholders' equity. The table below presents our average common shareholders' equity.

$ in millions	Average for the Year Ended December		
	2015	2014	2013
Total shareholders' equity	**$ 86,314**	$80,839	$77,353
Preferred stock	**(10,585)**	(8,585)	(6,892)
Common shareholders' equity	**$ 75,729**	$72,254	$70,461

The table below presents selected financial ratios.

	Year Ended December		
	2015	2014	2013
Net earnings to average assets	**0.7%**	0.9%	0.9%
Return on average total shareholders' equity [1]	**7.0%**	10.5%	10.4%
Total average equity to average assets	**9.9%**	9.0%	8.2%
Dividend payout ratio [2]	**21.0%**	13.2%	13.3%

1. Return on average total shareholders' equity is computed by dividing net earnings by average monthly total shareholders' equity.
2. Dividend payout ratio is computed by dividing dividends declared per common share by diluted earnings per common share.

Net Revenues

The table below presents our net revenues by line item on the consolidated statements of earnings.

$ in millions	Year Ended December		
	2015	2014	2013
Investment banking	**$ 7,027**	$ 6,464	$ 6,004
Investment management	**5,868**	5,748	5,194
Commissions and fees	**3,320**	3,316	3,255
Market making	**9,523**	8,365	9,368
Other principal transactions	**5,018**	6,588	6,993
Total non-interest revenues	**30,756**	30,481	30,814
Interest income	**8,452**	9,604	10,060
Interest expense	**5,388**	5,557	6,668
Net interest income	**3,064**	4,047	3,392
Total net revenues	**$33,820**	$34,528	$34,206

In the table above:

- "Investment banking" is comprised of revenues (excluding net interest) from financial advisory and underwriting assignments, as well as derivative transactions directly related to these assignments. These activities are included in our Investment Banking segment.
- "Investment management" is comprised of revenues (excluding net interest) from providing investment management services to a diverse set of clients, as well as wealth advisory services and certain transaction services to high-net-worth individuals and families. These activities are included in our Investment Management segment.
- "Commissions and fees" is comprised of revenues from executing and clearing client transactions on major stock, options and futures exchanges worldwide, as well as over-the-counter (OTC) transactions. These activities are included in our Institutional Client Services and Investment Management segments.
- "Market making" is comprised of revenues (excluding net interest) from client execution activities related to making markets in interest rate products, credit products, mortgages, currencies, commodities and equity products. These activities are included in our Institutional Client Services segment.
- "Other principal transactions" is comprised of revenues (excluding net interest) from our investing activities and the origination of loans to provide financing to clients. In addition, "Other principal transactions" includes revenues related to our consolidated investments. These activities are included in our Investing & Lending segment.

2015 versus 2014

Net revenues on the consolidated statements of earnings were $33.82 billion for 2015, 2% lower than 2014, reflecting significantly lower other principal transactions revenues and net interest income, largely offset by higher market-making revenues and investment banking revenues, as well as slightly higher investment management revenues. Commissions and fees were essentially unchanged compared with 2014.

During 2015, the operating environment for market-making activities was positively impacted by diverging central bank monetary policies in the United States and the Euro area in the first quarter, as increased volatility levels contributed to strong client activity levels in currencies, interest rate products and equity products. However, during the remainder of the year, concerns about global growth and uncertainty about the U.S. Federal Reserve's interest rate policy, along with lower global equity prices, widening high-yield credit spreads and declining commodity prices, contributed to lower levels of client activity, particularly in mortgages and credit, and more difficult market-making conditions. The operating environment for investment banking activities for 2015 reflected strong industry-wide mergers and acquisitions activity. In addition, investment management reflected an environment generally characterized by strong client net inflows, which more than offset the declines in equity and fixed income asset prices. Although other principal transactions for 2015 benefited from favorable company-specific events, including sales, initial public offerings and financings, a decline in global equity prices and widening high-yield credit spreads during the second half of the year impacted results. If macroeconomic concerns continue over the long term, and market-making activity levels, investment banking activity levels or assets under supervision decline, or if asset prices continue to decline, net revenues would likely be negatively impacted. See "Segment Operating Results" below for further information about material trends and uncertainties that may impact our results of operations.

Non-Interest Revenues. Investment banking revenues on the consolidated statements of earnings were $7.03 billion for 2015, 9% higher than 2014, due to significantly higher revenues in financial advisory, reflecting strong client activity, particularly in the United States. Industry-wide completed mergers and acquisitions increased significantly compared with the prior year. Revenues in underwriting were lower compared with a strong 2014. Revenues in debt underwriting were lower compared with 2014, reflecting significantly lower leveraged finance activity. Revenues in equity underwriting were also lower, reflecting significantly lower revenues from initial public offerings and convertible offerings, partially offset by significantly higher revenues from secondary offerings.

Investment management revenues on the consolidated statements of earnings were $5.87 billion for 2015, 2% higher than 2014, due to slightly higher management and other fees, primarily reflecting higher average assets under supervision, and higher transaction revenues.

Commissions and fees on the consolidated statements of earnings were $3.32 billion for 2015, essentially unchanged compared with 2014.

Market-making revenues on the consolidated statements of earnings were $9.52 billion for 2015, 14% higher than 2014. Excluding a gain of $289 million in 2014 related to the extinguishment of certain of our junior subordinated debt, market-making revenues were 18% higher than 2014, reflecting significantly higher revenues in interest rate products, currencies, equity cash products and equity derivatives. These increases were partially offset by significantly lower revenues in mortgages, commodities and credit products.

Other principal transactions revenues on the consolidated statements of earnings were $5.02 billion for 2015, 24% lower than 2014. This decrease was primarily due to lower revenues from investments in equities, principally reflecting the sale of Metro International Trade Services (Metro) in the fourth quarter of 2014 and lower net gains from investments in private equities, driven by corporate performance. In addition, revenues in debt securities and loans were significantly lower, reflecting lower net gains from investments.

Net Interest Income. Net interest income on the consolidated statements of earnings was $3.06 billion for 2015, 24% lower than 2014. The decrease compared with 2014 was due to lower interest income resulting from a reduction in interest income related to financial instruments owned, at fair value, partially offset by the impact of an increase in total average loans receivable. The decrease in interest income was partially offset by a decrease in interest expense, which primarily reflected lower interest expense related to financial instruments sold, but not yet purchased, at fair value and other interest-bearing liabilities, partially offset by higher interest expense related to long-term borrowings. See "Supplemental Financial Information — Statistical Disclosures — Distribution of Assets, Liabilities and Shareholders' Equity" for further information about our sources of net interest income.

2014 versus 2013

Net revenues on the consolidated statements of earnings were $34.53 billion for 2014, essentially unchanged compared with 2013, reflecting higher net interest income, investment management revenues and investment banking revenues, as well as slightly higher commissions and fees, largely offset by lower market-making revenues and other principal transactions revenues.

During 2014, the operating environment was favorable for investment banking activities, as industry-wide underwriting activity was strong and industry-wide mergers and acquisitions activity increased. Improved asset prices resulted in appreciation in the value of client assets in investment management. In addition, other principal transactions were impacted by favorable company-specific events and strong corporate performance. However, the operating environment remained challenging for market-making activities as economic uncertainty and low volatility levels contributed to generally low levels of activity, particularly in fixed income products. See "Segment Operating Results" below for further information about material trends and uncertainties that may impact our results of operations.

Non-Interest Revenues. Investment banking revenues on the consolidated statements of earnings were $6.46 billion for 2014, 8% higher than 2013, due to significantly higher revenues in financial advisory, reflecting an increase in industry-wide completed mergers and acquisitions, primarily in the United States. Revenues in underwriting were essentially unchanged compared with a strong 2013, as industry-wide activity levels remained high. Revenues in debt underwriting were slightly lower compared with 2013, reflecting lower revenues from commercial mortgage-related activity, while revenues in equity underwriting were slightly higher, principally from initial public offerings.

Investment management revenues on the consolidated statements of earnings were $5.75 billion for 2014, 11% higher than 2013, reflecting higher management and other fees, primarily due to higher average assets under supervision, as well as higher incentive fees and transaction revenues.

Commissions and fees on the consolidated statements of earnings were $3.32 billion for 2014, 2% higher than 2013, due to higher commissions and fees in both Europe and the United States, reflecting generally higher client activity, consistent with increases in listed cash equity market volumes in these regions.

Market-making revenues on the consolidated statements of earnings were $8.37 billion for 2014, 11% lower than 2013. Results for 2014 included a gain of $289 million ($270 million of which was recorded at extinguishment in the third quarter) related to the extinguishment of certain of our junior subordinated debt. Excluding this gain and a gain of $211 million on the sale of a majority stake in our European insurance business in 2013, the decrease in market-making revenues compared with 2013 reflected significantly lower revenues in both credit products and equity derivatives, lower revenues in mortgages and the sale of our Americas reinsurance business in 2013. These decreases were partially offset by significantly higher revenues in commodities, as well as higher revenues in equity cash products, currencies and interest rate products.

Other principal transactions revenues on the consolidated statements of earnings were $6.59 billion for 2014, 6% lower than 2013. Revenues from investments in equity securities were lower due to a significant decrease in net gains from investments in public equities, as movements in global equity prices during 2014 were less favorable compared with 2013, as well as significantly lower revenues related to our consolidated investments, reflecting a decrease in operating revenues from commodities-related consolidated investments. These decreases were partially offset by an increase in net gains from investments in private equities, primarily driven by company-specific events. Revenues from debt securities and loans were slightly higher than 2013, primarily due to sales of certain investments during 2014.

Net Interest Income. Net interest income on the consolidated statements of earnings was $4.05 billion for 2014, 19% higher than 2013. The increase compared with 2013 was primarily due to lower interest expense resulting from a reduction in our total liabilities, lower costs of long-term funding due to a decline in interest rates and the impact of rebates in the securities services business, partially offset by lower interest income due to a reduction in our total assets. See "Supplemental Financial Information — Statistical Disclosures — Distribution of Assets, Liabilities and Shareholders' Equity" for further information about our sources of net interest income.

Operating Expenses

Our operating expenses are primarily influenced by compensation, headcount and levels of business activity. Compensation and benefits includes salaries, discretionary compensation, amortization of equity awards and other items such as benefits. Discretionary compensation is significantly impacted by, among other factors, the level of net revenues, overall financial performance, prevailing labor markets, business mix, the structure of our share-based compensation programs and the external environment. In addition, see "Use of Estimates" for additional information about expenses that may arise from litigation and regulatory proceedings.

The table below presents our operating expenses and total staff (which includes employees, consultants and temporary staff).

	Year Ended December		
$ in millions	**2015**	2014	2013
Compensation and benefits	**$12,678**	$12,691	$12,613
Brokerage, clearing, exchange and distribution fees	**2,576**	2,501	2,341
Market development	**557**	549	541
Communications and technology	**806**	779	776
Depreciation and amortization	**991**	1,337	1,322
Occupancy	**772**	827	839
Professional fees	**963**	902	930
Insurance reserves [1]	**—**	—	176
Other expenses [2]	**5,699**	2,585	2,931
Total non-compensation expenses	**12,364**	9,480	9,856
Total operating expenses	**$25,042**	$22,171	$22,469
Total staff at period-end	**36,800**	34,000	32,900

1. Consists of changes in reserves related to our Americas reinsurance business, including interest credited to policyholder account balances, and expenses related to property catastrophe reinsurance claims. In April 2013, we completed the sale of a majority stake in our Americas reinsurance business and no longer consolidate this business.

2. Includes provisions of $3.37 billion recorded during 2015 for the agreement in principle with the RMBS Working Group. See Note 27 to the consolidated financial statements for further information about this agreement in principle.

2015 versus 2014. Operating expenses on the consolidated statements of earnings were $25.04 billion for 2015, 13% higher than 2014. Compensation and benefits expenses on the consolidated statements of earnings were $12.68 billion for 2015, essentially unchanged compared with 2014. The ratio of compensation and benefits to net revenues for 2015 was 37.5% compared with 36.8% for 2014. Total staff increased 8% during 2015, primarily due to activity levels in certain businesses and continued investment in regulatory compliance.

Non-compensation expenses on the consolidated statements of earnings were $12.36 billion for 2015, 30% higher than 2014, due to significantly higher net provisions for mortgage-related litigation and regulatory matters, which are included in other expenses. This increase was partially offset by lower depreciation and amortization expenses, primarily reflecting lower impairment charges related to consolidated investments, and a reduction in expenses related to the sale of Metro in the fourth quarter of 2014. Net provisions for litigation and regulatory proceedings for 2015 were $4.01 billion compared with $754 million for 2014 (both primarily comprised of net provisions for mortgage-related matters). 2015 included a $148 million charitable contribution to Goldman Sachs Gives, our donor-advised fund. Compensation was reduced to fund this charitable contribution to Goldman Sachs Gives. The firm asks its participating managing directors to make recommendations regarding potential charitable recipients for this contribution.

2014 versus 2013. Operating expenses on the consolidated statements of earnings were $22.17 billion for 2014, essentially unchanged compared with 2013. Compensation and benefits expenses on the consolidated statements of earnings were $12.69 billion for 2014, essentially unchanged compared with 2013. The ratio of compensation and benefits to net revenues for 2014 was 36.8% compared with 36.9% for 2013. Total staff increased 3% during 2014.

Non-compensation expenses on the consolidated statements of earnings were $9.48 billion for 2014, 4% lower than 2013. The decrease compared with 2013 included a decrease in other expenses, due to lower net provisions for litigation and regulatory proceedings and lower operating expenses related to consolidated investments, as well as a decline in insurance reserves, reflecting the sale of our Americas reinsurance business in 2013. These decreases were partially offset by an increase in brokerage, clearing, exchange and distribution fees. Net provisions for litigation and regulatory proceedings for 2014 were $754 million compared with $962 million for 2013 (both primarily comprised of net provisions for mortgage-related matters). 2014 included a charitable contribution of $137 million to Goldman Sachs Gives, our donor-advised fund. Compensation was reduced to fund this charitable contribution to Goldman Sachs Gives. The firm asks its participating managing directors to make recommendations regarding potential charitable recipients for this contribution.

Provision for Taxes

The effective income tax rate for 2015 was 30.7%, down from 31.4% for 2014. The decline compared with 2014 reflected reductions related to a change in the mix of earnings, the impact of changes in tax law on deferred tax assets, settlements of tax audits and the determination that certain non-U.S. earnings would be permanently reinvested abroad, and an increase related to the impact of non-deductible provisions for mortgage-related litigation and regulatory matters.

The effective income tax rate for 2014 was 31.4%, essentially unchanged compared with 31.5% for 2013.

On December 18, 2015, U.S. federal legislation was enacted to permanently defer U.S. tax on certain non-repatriated active financing income. This legislation did not have a material impact on our effective tax rate for the year ended December 2015, and we do not expect it will have a material impact on our effective tax rate for 2016.

New York State enacted executive budget legislation for the 2015-2016 fiscal year which makes changes to the income taxation of corporations doing business in New York City. This change did not have a material impact on our effective tax rate for 2015, and we do not expect this legislation will have a material impact on our effective tax rate for 2016.

In November 2015, the United Kingdom government enacted a budget which contained several changes that impact our subsidiaries operating in the U.K., including: (i) an 8 percentage point surcharge on banking profits effective in 2016, (ii) a 1 percentage point reduction in corporate income tax rates effective in 2017, (iii) a further 1 percentage point reduction in corporate tax rates effective in 2020, and (iv) a phased-in reduction from 2016 through 2021 in the U.K. Bank Levy rate (for which the related expense is included in our non-compensation expenses). During the fourth quarter of 2015, we recognized a benefit related to the revaluation of deferred income tax assets. Beginning in 2016, the new legislation will increase our effective income tax rate and the impact will depend on the level and mix of our earnings.

Segment Operating Results

The table below presents the net revenues, operating expenses and pre-tax earnings of our segments.

	Year Ended December		
$ in millions	**2015**	2014	2013
Investment Banking			
Net revenues	**$ 7,027**	$ 6,464	$ 6,004
Operating expenses	**3,713**	3,688	3,479
Pre-tax earnings	**$ 3,314**	$ 2,776	$ 2,525
Institutional Client Services			
Net revenues	**$15,151**	$15,197	$15,721
Operating expenses [1]	**13,938**	10,880	11,792
Pre-tax earnings	**$ 1,213**	$ 4,317	$ 3,929
Investing & Lending			
Net revenues	**$ 5,436**	$ 6,825	$ 7,018
Operating expenses	**2,402**	2,819	2,686
Pre-tax earnings	**$ 3,034**	$ 4,006	$ 4,332
Investment Management			
Net revenues	**$ 6,206**	$ 6,042	$ 5,463
Operating expenses	**4,841**	4,647	4,357
Pre-tax earnings	**$ 1,365**	$ 1,395	$ 1,106
Total net revenues	**$33,820**	$34,528	$34,206
Total operating expenses [2]	**25,042**	22,171	22,469
Total pre-tax earnings	**$ 8,778**	$12,357	$11,737

1. Includes provisions of $3.37 billion recorded during 2015 for the agreement in principle with the RMBS Working Group. See Note 27 to the consolidated financial statements for further information about this agreement in principle.
2. Includes charitable contributions that have not been allocated to our segments of $148 million for 2015, $137 million for 2014 and $155 million for 2013.

Net revenues in our segments include allocations of interest income and interest expense to specific securities, commodities and other positions in relation to the cash generated by, or funding requirements of, such underlying positions. See Note 25 to the consolidated financial statements for further information about our business segments.

The cost drivers of Goldman Sachs taken as a whole — compensation, headcount and levels of business activity — are broadly similar in each of our business segments. Compensation and benefits expenses within our segments reflect, among other factors, the overall performance of Goldman Sachs as well as the performance of individual businesses. Consequently, pre-tax margins in one segment of our business may be significantly affected by the performance of our other business segments. A description of segment operating results follows.

Investment Banking

Our Investment Banking segment is comprised of:

Financial Advisory. Includes strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings, spin-offs, risk management and derivative transactions directly related to these client advisory assignments.

Underwriting. Includes public offerings and private placements, including local and cross-border transactions and acquisition financing, of a wide range of securities, loans and other financial instruments, and derivative transactions directly related to these client underwriting activities.

The table below presents the operating results of our Investment Banking segment.

	Year Ended December		
$ in millions	**2015**	2014	2013
Financial Advisory	**$3,470**	$2,474	$1,978
Equity underwriting	**1,546**	1,750	1,659
Debt underwriting	**2,011**	2,240	2,367
Total Underwriting	**3,557**	3,990	4,026
Total net revenues	**7,027**	6,464	6,004
Operating expenses	**3,713**	3,688	3,479
Pre-tax earnings	**$3,314**	$2,776	$2,525

The table below presents our financial advisory and underwriting transaction volumes. [1]

	Year Ended December		
$ in billions	**2015**	2014	2013
Announced mergers and acquisitions	**$1,774**	$ 973	$ 602
Completed mergers and acquisitions	**1,090**	661	634
Equity and equity-related offerings [2]	**72**	78	90
Debt offerings [3]	**251**	270	281

1. Source: Thomson Reuters. Announced and completed mergers and acquisitions volumes are based on full credit to each of the advisors in a transaction. Equity and equity-related offerings and debt offerings are based on full credit for single book managers and equal credit for joint book managers. Transaction volumes may not be indicative of net revenues in a given period. In addition, transaction volumes for prior periods may vary from amounts previously reported due to the subsequent withdrawal or a change in the value of a transaction.
2. Includes Rule 144A and public common stock offerings, convertible offerings and rights offerings.
3. Includes non-convertible preferred stock, mortgage-backed securities, asset-backed securities and taxable municipal debt. Includes publicly registered and Rule 144A issues. Excludes leveraged loans.

2015 versus 2014. Net revenues in Investment Banking were $7.03 billion for 2015, 9% higher than 2014.

Net revenues in Financial Advisory were $3.47 billion, 40% higher than 2014, reflecting strong client activity, particularly in the United States. Industry-wide completed mergers and acquisitions increased significantly compared with the prior year. Net revenues in Underwriting were $3.56 billion, 11% lower compared with a strong 2014. Net revenues in debt underwriting were lower compared with 2014, reflecting significantly lower leveraged finance activity. Net revenues in equity underwriting were also lower, reflecting significantly lower net revenues from initial public offerings and convertible offerings, partially offset by significantly higher net revenues from secondary offerings.

During 2015, Investment Banking operated in an environment characterized by strong industry-wide mergers and acquisitions activity. Industry-wide activity in both debt and equity underwriting declined compared with 2014. In the future, if client activity levels in mergers and acquisitions decline, or client activity levels in underwriting continue to decline, net revenues in Investment Banking would likely be negatively impacted.

Operating expenses were $3.71 billion for 2015, essentially unchanged compared with 2014. Pre-tax earnings were $3.31 billion in 2015, 19% higher than 2014.

As of December 2015, our investment banking transaction backlog was higher compared with the end of 2014, primarily due to significantly higher estimated net revenues from potential debt underwriting transactions, principally related to leveraged finance transactions, and higher estimated net revenues from potential advisory transactions, reflecting the continued high level of mergers and acquisitions activity. Estimated net revenues from potential equity underwriting transactions were slightly higher compared with the end of 2014.

Our investment banking transaction backlog represents an estimate of our future net revenues from investment banking transactions where we believe that future revenue realization is more likely than not. We believe changes in our investment banking transaction backlog may be a useful indicator of client activity levels which, over the long term, impact our net revenues. However, the time frame for completion and corresponding revenue recognition of transactions in our backlog varies based on the nature of the assignment, as certain transactions may remain in our backlog for longer periods of time and others may enter and leave within the same reporting period. In addition, our transaction backlog is subject to certain limitations, such as assumptions about the likelihood that individual client transactions will occur in the future. Transactions may be cancelled or modified, and transactions not included in the estimate may also occur.

2014 versus 2013. Net revenues in Investment Banking were $6.46 billion for 2014, 8% higher than 2013.

Net revenues in Financial Advisory were $2.47 billion, 25% higher than 2013, reflecting an increase in industry-wide completed mergers and acquisitions, primarily in the United States. Net revenues in Underwriting were $3.99 billion, essentially unchanged compared with a strong 2013, as industry-wide activity levels remained high. Net revenues in debt underwriting were slightly lower compared with 2013, reflecting lower net revenues from commercial mortgage-related activity, while net revenues in equity underwriting were slightly higher, principally from initial public offerings.

During 2014, Investment Banking operated in an environment generally characterized by strong industry-wide underwriting activity in both equity and debt, and an increase in industry-wide completed mergers and acquisitions activity compared with 2013. Industry-wide announced mergers and acquisitions activity significantly increased compared with 2013.

Operating expenses were $3.69 billion for 2014, 6% higher than 2013, primarily due to increased compensation and benefits expenses, reflecting higher net revenues. Pre-tax earnings were $2.78 billion in 2014, 10% higher than 2013.

As of December 2014, our investment banking transaction backlog was significantly higher compared with the end of 2013, due to a significant increase in estimated net revenues from potential advisory transactions. Estimated net revenues from potential underwriting transactions were lower compared with the end of 2013, as a significant decrease in estimated net revenues from potential equity underwriting transactions, particularly in initial public offerings, was partially offset by an increase in estimated net revenues from potential debt underwriting transactions, reflecting increases across most products.

Institutional Client Services

Our Institutional Client Services segment is comprised of:

Fixed Income, Currency and Commodities Client Execution. Includes client execution activities related to making markets in interest rate products, credit products, mortgages, currencies and commodities.

- **Interest Rate Products.** Government bonds, money market instruments, treasury bills, repurchase agreements and other highly liquid securities and instruments, as well as interest rate swaps, options and other derivatives.
- **Credit Products.** Investment-grade corporate securities, high-yield securities, credit derivatives, bank and bridge loans, municipal securities, emerging market and distressed debt, and trade claims.
- **Mortgages.** Commercial mortgage-related securities, loans and derivatives, residential mortgage-related securities, loans and derivatives (including U.S. government agency-issued collateralized mortgage obligations, other prime, subprime and Alt-A securities and loans), and other asset-backed securities, loans and derivatives.
- **Currencies.** Most currencies, including growth-market currencies.
- **Commodities.** Crude oil and petroleum products, natural gas, base, precious and other metals, electricity, coal, agricultural and other commodity products.

Equities. Includes client execution activities related to making markets in equity products and commissions and fees from executing and clearing institutional client transactions on major stock, options and futures exchanges worldwide, as well as OTC transactions. Equities also includes our securities services business, which provides financing, securities lending and other prime brokerage services to institutional clients, including hedge funds, mutual funds, pension funds and foundations, and generates revenues primarily in the form of interest rate spreads or fees.

The table below presents the operating results of our Institutional Client Services segment.

	Year Ended December		
$ in millions	**2015**	2014	2013
Fixed Income, Currency and Commodities Client Execution	**$ 7,322**	$ 8,461	$ 8,651
Equities client execution [1]	**3,028**	2,079	2,594
Commissions and fees	**3,156**	3,153	3,103
Securities services	**1,645**	1,504	1,373
Total Equities	**7,829**	6,736	7,070
Total net revenues	**15,151**	15,197	15,721
Operating expenses	**13,938**	10,880	11,792
Pre-tax earnings	**$ 1,213**	$ 4,317	$ 3,929

1. Net revenues related to the Americas reinsurance business were $317 million for 2013. In April 2013, we completed the sale of a majority stake in our Americas reinsurance business and no longer consolidate this business.

2015 versus 2014. Net revenues in Institutional Client Services were $15.15 billion for 2015, essentially unchanged compared with 2014.

Net revenues in Fixed Income, Currency and Commodities Client Execution were $7.32 billion for 2015, 13% lower than 2014. Excluding a gain of $168 million in 2014 related to the extinguishment of certain of our junior subordinated debt, net revenues in Fixed Income, Currency and Commodities Client Execution were 12% lower than 2014, reflecting significantly lower net revenues in mortgages, credit products and commodities. The decreases in mortgages and credit products reflected challenging market-making conditions and generally low levels of activity during 2015. The decline in commodities primarily reflected less favorable market-making conditions compared with 2014, which included a strong first quarter of 2014. These decreases were partially offset by significantly higher net revenues in interest rate products and currencies, reflecting higher volatility levels which contributed to higher client activity levels, particularly during the first quarter of 2015.

Net revenues in Equities were $7.83 billion for 2015, 16% higher than 2014. Excluding a gain of $121 million ($30 million and $91 million included in equities client execution and securities services, respectively) in 2014 related to the extinguishment of certain of our junior subordinated debt, net revenues in Equities were 18% higher than 2014, primarily due to significantly higher net revenues in equities client execution across the major regions, reflecting significantly higher results in both derivatives and cash products, and higher net revenues in securities services, reflecting the impact of higher average customer balances and improved securities lending spreads. Commissions and fees were essentially unchanged compared with 2014.

The firm elects the fair value option for certain unsecured borrowings. The fair value net gain attributable to the impact of changes in our credit spreads on these borrowings was $255 million ($214 million and $41 million related to Fixed Income, Currency and Commodities Client Execution and equities client execution, respectively) for 2015, compared with a net gain of $144 million ($108 million and $36 million related to Fixed Income, Currency and Commodities Client Execution and equities client execution, respectively) for 2014.

During 2015, the operating environment for Institutional Client Services was positively impacted by diverging central bank monetary policies in the United States and the Euro area in the first quarter, as increased volatility levels contributed to strong client activity levels in currencies, interest rate products and equity products, and market-making conditions improved. However, during the remainder of the year, concerns about global growth and uncertainty about the U.S. Federal Reserve's interest rate policy, along with lower global equity prices, widening high-yield credit spreads and declining commodity prices, contributed to lower levels of client activity, particularly in mortgages and credit, and more difficult market-making conditions. If macroeconomic concerns continue over the long term and activity levels decline, net revenues in Institutional Client Services would likely be negatively impacted.

Operating expenses were $13.94 billion for 2015, 28% higher than 2014, due to significantly higher net provisions for mortgage-related litigation and regulatory matters, partially offset by decreased compensation and benefits expenses. Pre-tax earnings were $1.21 billion in 2015, 72% lower than 2014.

2014 versus 2013. Net revenues in Institutional Client Services were $15.20 billion for 2014, 3% lower than 2013. Results for 2014 included a gain of $289 million ($270 million of which was recorded at extinguishment in the third quarter) related to the extinguishment of certain of our junior subordinated debt, of which $168 million was included in Fixed Income, Currency and Commodities Client Execution and $121 million in Equities ($30 million and $91 million included in equities client execution and securities services, respectively).

Net revenues in Fixed Income, Currency and Commodities Client Execution were $8.46 billion for 2014, 2% lower than 2013. Excluding the gain related to the extinguishment of debt in 2014 and a gain of $211 million on the sale of a majority stake in our European insurance business in 2013, net revenues in Fixed Income, Currency and Commodities Client Execution were slightly lower compared with 2013. This decline reflected significantly lower net revenues in credit products and slightly lower net revenues in both interest rate products and mortgages. The decrease in credit products primarily reflected difficult market-making conditions, particularly during the second half of 2014, and generally low levels of activity. These results were largely offset by significantly higher net revenues in commodities and higher net revenues in currencies. The increase in commodities reflected more favorable market-making conditions in certain energy products, primarily during the first quarter of 2014. The increase in currencies reflected a stronger performance towards the end of 2014, as activity levels improved and volatility was higher.

Net revenues in Equities were $6.74 billion for 2014, 5% lower than 2013. Excluding the gain related to the extinguishment of debt in 2014 and net revenues of $317 million related to the sale of a majority stake in our Americas reinsurance business in 2013, net revenues in Equities were slightly lower compared with 2013. This decline reflected lower net revenues in derivatives, partially offset by slightly higher commissions and fees and slightly higher net revenues in securities services. The increase in securities services net revenues reflected the impact of higher average customer balances. The increase in commissions and fees was due to higher commissions and fees in both Europe and the United States, reflecting generally higher client activity, consistent with increases in listed cash equity market volumes in these regions.

The firm elects the fair value option for certain unsecured borrowings. The fair value net gain attributable to the impact of changes in our credit spreads on these borrowings was $144 million ($108 million and $36 million related to Fixed Income, Currency and Commodities Client Execution and equities client execution, respectively) for 2014, compared with a net loss of $296 million ($220 million and $76 million related to Fixed Income, Currency and Commodities Client Execution and equities client execution, respectively) for 2013.

During 2014, Institutional Client Services continued to operate in a challenging environment, as economic uncertainty contributed to subdued risk appetite for our clients and generally low levels of activity, particularly in credit products, interest rate products and mortgages. In addition, volatility levels remained low, although volatility increased in certain businesses towards the end of the year. Debt markets were also impacted by the widening of high-yield credit spreads and the decline in oil prices during the second half of the year, which contributed to low liquidity, particularly in credit. Equity markets, however, generally increased during the year.

Operating expenses were $10.88 billion for 2014, 8% lower than 2013, due to decreased compensation and benefits expenses, reflecting lower net revenues, lower net provisions for litigation and regulatory proceedings, and lower expenses as a result of the sale of a majority stake in our Americas reinsurance business. Pre-tax earnings were $4.32 billion in 2014, 10% higher than 2013.

Investing & Lending

Investing & Lending includes our investing activities and the origination of loans to provide financing to clients. These investments and loans are typically longer-term in nature. We make investments, some of which are consolidated, directly and indirectly through funds and separate accounts that we manage, in debt securities and loans, public and private equity securities, and real estate entities.

The table below presents the operating results of our Investing & Lending segment.

	Year Ended December		
$ in millions	**2015**	2014	2013
Equity securities	**$3,781**	$4,579	$4,974
Debt securities and loans	**1,655**	2,246	2,044
Total net revenues [1]	**5,436**	6,825	7,018
Operating expenses	**2,402**	2,819	2,686
Pre-tax earnings	**$3,034**	$4,006	$4,332

1. Net revenues related to our consolidated investments, previously reported in other net revenues within Investing & Lending, are now reported in equity securities and debt securities and loans, as results from these activities ($391 million for 2015) are no longer significant principally due to the sale of Metro in the fourth quarter of 2014. Reclassifications have been made to previously reported amounts to conform to the current presentation.

2015 versus 2014. Net revenues in Investing & Lending were $5.44 billion for 2015, 20% lower than 2014. This decrease was primarily due to lower net revenues from investments in equities, principally reflecting the sale of Metro in the fourth quarter of 2014 and lower net gains from investments in private equities, driven by corporate performance. In addition, net revenues in debt securities and loans were significantly lower, reflecting lower net gains from investments.

Although net revenues in Investing & Lending for 2015 benefited from favorable company-specific events, including sales, initial public offerings and financings, a decline in global equity prices and widening high-yield credit spreads during the second half of the year impacted results. Concern about the outlook for the global economy continues to be a meaningful consideration for the global marketplace. If equity markets continue to decline or credit spreads widen further, net revenues in Investing & Lending would likely continue to be negatively impacted.

Operating expenses were $2.40 billion for 2015, 15% lower than 2014, due to lower depreciation and amortization expenses, primarily reflecting lower impairment charges related to consolidated investments, and a reduction in expenses related to the sale of Metro in the fourth quarter of 2014. Pre-tax earnings were $3.03 billion in 2015, 24% lower than 2014.

2014 versus 2013. Net revenues in Investing & Lending were $6.83 billion for 2014, 3% lower than 2013. Net revenues from investments in equity securities were lower due to a significant decrease in net gains from investments in public equities, as movements in global equity prices during 2014 were less favorable compared with 2013, as well as significantly lower net revenues related to our consolidated investments, reflecting a decrease in operating revenues from commodities-related consolidated investments. These decreases were partially offset by an increase in net gains from investments in private equities, primarily driven by company-specific events. Net revenues from debt securities and loans were higher than 2013, reflecting a significant increase in net interest income, primarily driven by increased lending, and a slight increase in net gains, primarily due to sales of certain investments during 2014.

During 2014, net revenues in Investing & Lending generally reflected favorable company-specific events, including initial public offerings and financings, and strong corporate performance, as well as net gains from sales of certain investments.

Operating expenses were $2.82 billion for 2014, 5% higher than 2013, reflecting higher compensation and benefits expenses, partially offset by lower expenses related to consolidated investments. Pre-tax earnings were $4.01 billion in 2014, 8% lower than 2013.

Investment Management

Investment Management provides investment management services and offers investment products (primarily through separately managed accounts and commingled vehicles, such as mutual funds and private investment funds) across all major asset classes to a diverse set of institutional and individual clients. Investment Management also offers wealth advisory services, including portfolio management and financial counseling, and brokerage and other transaction services to high-net-worth individuals and families.

Assets under supervision include assets under management and other client assets. Assets under management include client assets where we earn a fee for managing assets on a discretionary basis. This includes net assets in our mutual funds, hedge funds, credit funds and private equity funds (including real estate funds), and separately managed accounts for institutional and individual investors. Other client assets include client assets invested with third-party managers, bank deposits and advisory relationships where we earn a fee for advisory and other services, but do not have investment discretion. Assets under supervision do not include the self-directed brokerage assets of our clients. Long-term assets under supervision represent assets under supervision excluding liquidity products. Liquidity products represent money market and bank deposit assets.

Assets under supervision typically generate fees as a percentage of net asset value, which vary by asset class and are affected by investment performance as well as asset inflows and redemptions. Asset classes such as alternative investment and equity assets typically generate higher fees relative to fixed income and liquidity product assets. The average effective management fee (which excludes non-asset-based fees) we earned on our assets under supervision was 39 basis points for 2015 and 40 basis points for both 2014 and 2013.

In certain circumstances, we are also entitled to receive incentive fees based on a percentage of a fund's or a separately managed account's return, or when the return exceeds a specified benchmark or other performance target. Incentive fees are recognized only when all material contingencies are resolved.

The table below presents the operating results of our Investment Management segment.

	Year Ended December		
$ in millions	**2015**	2014	2013
Management and other fees	**$4,887**	$4,800	$4,386
Incentive fees	**780**	776	662
Transaction revenues	**539**	466	415
Total net revenues	**6,206**	6,042	5,463
Operating expenses	**4,841**	4,647	4,357
Pre-tax earnings	**$1,365**	$1,395	$1,106

The tables below present our period-end assets under supervision (AUS) by asset class and by distribution channel.

	As of December		
$ in billions	**2015**	2014	2013
Assets under management	**$1,078**	$1,027	$ 919
Other client assets	**174**	151	123
Total AUS	**$1,252**	$1,178	$1,042
Asset Class			
Alternative investments [1]	**$ 148**	$ 143	$ 142
Equity	**252**	236	208
Fixed income	**546**	516	446
Long-term AUS	**946**	895	796
Liquidity products	**306**	283	246
Total AUS	**$1,252**	$1,178	$1,042
Distribution Channel			
Institutional	**$ 471**	$ 412	$ 363
High-net-worth individuals	**369**	363	330
Third-party distributed	**412**	403	349
Total AUS	**$1,252**	$1,178	$1,042

1. Primarily includes hedge funds, credit funds, private equity, real estate, currencies, commodities and asset allocation strategies.

The table below presents our average monthly assets under supervision by asset class.

	Average for the Year Ended December		
$ in billions	**2015**	2014	2013
Alternative investments	**$ 145**	$ 145	$ 145
Equity	**247**	225	180
Fixed income	**530**	499	425
Long-term AUS	**922**	869	750
Liquidity products	**272**	248	235
Total AUS	**$1,194**	$1,117	$ 985

The table below presents a summary of the changes in our assets under supervision.

	Year Ended December		
$ in billions	**2015**	2014	2013
Balance, beginning of year	**$1,178**	$1,042	$ 965
Net inflows/(outflows)			
Alternative investments	**7**	1	(13)
Equity	**23**	15	13
Fixed income	**41**	58	41 [3]
Long-term AUS net inflows/(outflows)	**71** [1]	74	41
Liquidity products	**23**	37	(4)
Total AUS net inflows/(outflows)	**94**	111 [2]	37
Net market appreciation/(depreciation)	**(20)**	25	40
Balance, end of year	**$1,252**	$1,178	$1,042

1. Includes $18 billion of fixed income, equity and alternative investments asset inflows in connection with our acquisition of Pacific Global Advisors' solutions business.
2. Includes $19 billion of fixed income asset inflows in connection with our acquisition of Deutsche Asset & Wealth Management's stable value business and $6 billion of liquidity products inflows in connection with our acquisition of RBS Asset Management's money market funds.
3. Includes $10 billion in assets managed by the firm related to our Americas reinsurance business, in which a majority stake was sold in April 2013, that were previously excluded from assets under supervision as they were assets of a consolidated subsidiary.

2015 versus 2014. Net revenues in Investment Management were $6.21 billion for 2015, 3% higher than 2014, due to slightly higher management and other fees, primarily reflecting higher average assets under supervision, and higher transaction revenues. During 2015, total assets under supervision increased $74 billion to $1.25 trillion. Long-term assets under supervision increased $51 billion, including net inflows of $71 billion (which includes $18 billion of asset inflows in connection with our acquisition of Pacific Global Advisors' solutions business), and net market depreciation of $20 billion, both primarily in fixed income and equity assets. In addition, liquidity products increased $23 billion.

During 2015, Investment Management operated in an environment generally characterized by strong client net inflows, which more than offset the declines in equity and fixed income asset prices, which resulted in depreciation in the value of client assets, particularly in the third quarter of 2015. The mix of average assets under supervision shifted slightly from long-term assets under supervision to liquidity products compared with 2014. In the future, if asset prices continue to decline, or investors continue to favor asset classes that typically generate lower fees or investors withdraw their assets, net revenues in Investment Management would likely be negatively impacted.

Operating expenses were $4.84 billion for 2015, 4% higher than 2014, due to increased compensation and benefits expenses, reflecting higher net revenues. Pre-tax earnings were $1.37 billion in 2015, 2% lower than 2014.

2014 versus 2013. Net revenues in Investment Management were $6.04 billion for 2014, 11% higher than 2013, reflecting higher management and other fees, primarily due to higher average assets under supervision, as well as higher incentive fees and transaction revenues. During 2014, total assets under supervision increased $136 billion to $1.18 trillion. Long-term assets under supervision increased $99 billion, including net inflows of $74 billion (including $19 billion of fixed income asset inflows in connection with our acquisition of Deutsche Asset & Wealth Management's stable value business) and net market appreciation of $25 billion, both primarily in fixed income and equity assets. In addition, liquidity products increased $37 billion (including $6 billion of inflows in connection with our acquisition of RBS Asset Management's money market funds).

During 2014, Investment Management operated in an environment generally characterized by improved asset prices, primarily in equity and fixed income assets, resulting in appreciation in the value of client assets. In addition, the mix of average assets under supervision shifted slightly from liquidity products to long-term assets under supervision, due to growth in fixed income and equity assets, compared with 2013.

Operating expenses were $4.65 billion for 2014, 7% higher than 2013, primarily due to increased compensation and benefits expenses, reflecting higher net revenues, and higher fund distribution fees. Pre-tax earnings were $1.40 billion in 2014, 26% higher than 2013.

Geographic Data

See Note 25 to the consolidated financial statements for a summary of our total net revenues, pre-tax earnings and net earnings by geographic region.

Balance Sheet and Funding Sources

Balance Sheet Management

One of our most important risk management disciplines is our ability to manage the size and composition of our balance sheet. While our asset base changes due to client activity, market fluctuations and business opportunities, the size and composition of our balance sheet reflect (i) our overall risk tolerance, (ii) our ability to access stable funding sources and (iii) the amount of equity capital we hold. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" for information about our equity capital management process.

Although our balance sheet fluctuates on a day-to-day basis, our total assets at quarter-end and year-end dates are generally not materially different from those occurring within our reporting periods.

In order to ensure appropriate risk management, we seek to maintain a liquid balance sheet and have processes in place to dynamically manage our assets and liabilities which include (i) quarterly planning, (ii) business-specific limits, (iii) monitoring of key metrics and (iv) scenario analyses.

Quarterly Planning. We prepare a quarterly balance sheet plan that combines our projected total assets and composition of assets with our expected funding sources for the upcoming quarter. The objectives of this quarterly planning process are:

- To develop our near-term balance sheet projections, taking into account the general state of the financial markets and expected business activity levels, as well as current regulatory requirements;
- To determine the target amount, tenor and type of funding to raise, based on our projected assets and forecasted maturities; and
- To allow business risk managers and managers from our independent control and support functions to objectively evaluate balance sheet limit requests from business managers in the context of the firm's overall balance sheet constraints, including the firm's liability profile and equity capital levels, and key metrics. Limits are typically set at levels that will be periodically exceeded, rather than at levels which reflect our maximum risk appetite.

To prepare our quarterly balance sheet plan, business risk managers and managers from our independent control and support functions meet with business managers to review current and prior period information and discuss expectations for the upcoming quarter. The specific information reviewed includes asset and liability size and composition, aged inventory, limit utilization, risk and performance measures, and capital usage.

Our consolidated quarterly plan, including our balance sheet plans by business, funding projections, and projected key metrics, is reviewed and approved by the Firmwide Finance Committee. See "Overview and Structure of Risk Management" for an overview of our risk management structure.

Business-Specific Limits. The Firmwide Finance Committee sets asset and liability limits for each business and aged inventory limits for certain financial instruments as a disincentive to hold inventory over longer periods of time. These limits are set at levels which are close to actual operating levels in order to ensure prompt escalation and discussion among business managers and managers in our independent control and support functions on a routine basis. The Firmwide Finance Committee reviews and approves balance sheet limits on a quarterly basis and may also approve changes in limits on an ad hoc basis in response to changing business needs or market conditions. Requests for changes in limits are evaluated after giving consideration to their impact on key firm metrics. Compliance with limits is monitored on a daily basis by business risk managers, as well as managers in our independent control and support functions.

Monitoring of Key Metrics. We monitor key balance sheet metrics daily both by business and on a consolidated basis, including asset and liability size and composition, aged inventory, limit utilization and risk measures. We allocate assets to businesses and review and analyze movements resulting from new business activity as well as market fluctuations.

Scenario Analyses. We conduct various scenario analyses including as part of the Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act Stress Tests (DFAST), as well as our resolution and recovery planning. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" below for further information. These scenarios cover short-term and long-term time horizons using various macroeconomic and firm-specific assumptions, based on a range of economic scenarios. We use these analyses to assist us in developing our longer-term balance sheet management strategy, including the level and composition of assets, funding and equity capital. Additionally, these analyses help us develop approaches for maintaining appropriate funding, liquidity and capital across a variety of situations, including a severely stressed environment.

Balance Sheet Allocation

In addition to preparing our consolidated statements of financial condition in accordance with U.S. GAAP, we prepare a balance sheet that generally allocates assets to our businesses, which is a non-GAAP presentation and may not be comparable to similar non-GAAP presentations used by other companies. We believe that presenting our assets on this basis is meaningful because it is consistent with the way management views and manages risks associated with the firm's assets and better enables investors to assess the liquidity of the firm's assets.

The table below presents our balance sheet allocation.

	As of December	
$ in millions	**2015**	2014
Global Core Liquid Assets (GCLA)	**$199,120**	$182,947
Other cash	**9,180**	7,805
GCLA and cash	**208,300**	190,752
Secured client financing	**221,325**	210,641
Inventory	**208,836**	230,667
Secured financing agreements	**63,495**	74,767
Receivables	**39,976**	47,317
Institutional Client Services	**312,307**	352,751
Public equity	**3,991**	4,041
Private equity	**16,985**	17,979
Debt [1]	**23,216**	24,768
Loans receivable [2]	**45,407**	28,938
Other	**4,646**	3,771
Investing & Lending	**94,245**	79,497
Total inventory and related assets	**406,552**	432,248
Other assets	**25,218**	22,201
Total assets	**$861,395**	$855,842

1. Includes $17.29 billion and $18.24 billion as of December 2015 and December 2014, respectively, of direct loans primarily extended to corporate and private wealth management clients that are accounted for at fair value.

2. See Note 9 to the consolidated financial statements for further information about loans receivable.

The following is a description of the captions in the table above:

- **Global Core Liquid Assets and Cash.** We maintain liquidity to meet a broad range of potential cash outflows and collateral needs in a stressed environment. See "Liquidity Risk Management" below for details on the composition and sizing of our "Global Core Liquid Assets" (GCLA). In addition to our GCLA, we maintain other operating cash balances, primarily for use in specific currencies, entities, or jurisdictions where we do not have immediate access to parent company liquidity.
- **Secured Client Financing.** We provide collateralized financing for client positions, including margin loans secured by client collateral, securities borrowed, and resale agreements primarily collateralized by government obligations. As a result of client activities, we are required to segregate cash and securities to satisfy regulatory requirements. Our secured client financing arrangements, which are generally short-term, are accounted for at fair value or at amounts that approximate fair value, and include daily margin requirements to mitigate counterparty credit risk.
- **Institutional Client Services.** In Institutional Client Services, we maintain inventory positions to facilitate market making in fixed income, equity, currency and commodity products. Additionally, as part of market-making activities, we enter into resale or securities borrowing arrangements to obtain securities which we can use to cover transactions in which we or our clients have sold securities that have not yet been purchased. The receivables in Institutional Client Services primarily relate to securities transactions.
- **Investing & Lending.** In Investing & Lending, we make investments and originate loans to provide financing to clients. These investments and loans are typically longer-term in nature. We make investments, directly and indirectly through funds and separate accounts that we manage, in debt securities, loans, public and private equity securities, real estate entities and other investments.
- **Other Assets.** Other assets are generally less liquid, non-financial assets, including property, leasehold improvements and equipment, goodwill and identifiable intangible assets, income tax-related receivables, equity-method investments, assets classified as held for sale and miscellaneous receivables.

The tables below present the reconciliation of this balance sheet allocation to our U.S. GAAP balance sheet. In the tables below:

- Total assets for Institutional Client Services and Investing & Lending represent inventory and related assets. These amounts differ from total assets by business segment disclosed in Note 25 to the consolidated financial statements because total assets disclosed in Note 25 include allocations of our GCLA and cash, secured client financing and other assets.
- See "Balance Sheet Analysis and Metrics" for explanations on the changes in our balance sheet from December 2014 to December 2015.

	As of December 2015					
$ in millions	**GCLA and Cash**	**Secured Client Financing**	**Institutional Client Services**	**Investing & Lending**	**Other Assets**	**Total Assets**
Cash and cash equivalents	**$ 75,105**	**$ —**	**$ —**	**$ —**	**$ —**	**$ 75,105**
Cash and securities segregated for regulatory and other purposes	**—**	**56,838**	**—**	**—**	**—**	**56,838**
Securities purchased under agreements to resell and federal funds sold	**60,092**	**42,786**	**16,368**	**1,659**	**—**	**120,905**
Securities borrowed	**33,260**	**91,712**	**47,127**	**—**	**—**	**172,099**
Receivables from brokers, dealers and clearing organizations	**—**	**5,912**	**19,541**	**—**	**—**	**25,453**
Receivables from customers and counterparties	**—**	**24,077**	**20,435**	**1,918**	**—**	**46,430**
Loans receivable	**—**	**—**	**—**	**45,407**	**—**	**45,407**
Financial instruments owned, at fair value	**39,843**	**—**	**208,836**	**45,261**	**—**	**293,940**
Other assets	**—**	**—**	**—**	**—**	**25,218**	**25,218**
Total assets	**$208,300**	**$221,325**	**$ 312,307**	**$94,245**	**$25,218**	**$861,395**

	As of December 2014					
$ in millions	GCLA and Cash	Secured Client Financing	Institutional Client Services	Investing & Lending	Other Assets	Total Assets
Cash and cash equivalents	$ 57,600	$ —	$ —	$ —	$ —	$ 57,600
Cash and securities segregated for regulatory and other purposes	—	51,716	—	—	—	51,716
Securities purchased under agreements to resell and federal funds sold	66,928	34,506	24,940	1,564	—	127,938
Securities borrowed	32,311	78,584	49,827	—	—	160,722
Receivables from brokers, dealers and clearing organizations	—	8,908	21,656	107	—	30,671
Receivables from customers and counterparties	—	36,927	25,661	1,220	—	63,808
Loans receivable	—	—	—	28,938	—	28,938
Financial instruments owned, at fair value	33,913	—	230,667	47,668	—	312,248
Other assets	—	—	—	—	22,201	22,201
Total assets	$190,752	$210,641	$ 352,751	$79,497	$22,201	$855,842

Balance Sheet Analysis and Metrics

As of December 2015, total assets on our consolidated statements of financial condition were $861.40 billion, an increase of $5.55 billion from December 2014, reflecting increases in cash and cash equivalents of $17.51 billion, loans receivable of $16.47 billion and securities borrowed of $11.38 billion, partially offset by decreases in financial instruments owned, at fair value of $18.31 billion, and receivables from customers and counterparties of $17.38 billion. During 2015, cash and cash equivalents increased primarily due to an increase in GCLA, loans receivable increased, reflecting lending activity, and securities borrowed increased due to firm-related activity. Financial instruments owned, at fair value decreased primarily reflecting the impact of movements in interest rate and currency markets on derivative valuations and the impact of lower market-making activity related to non-U.S. government and agency obligations and corporate debt securities, partially offset by the impact of higher market-making activity related to equities and convertible debentures. Receivables from customers and counterparties decreased primarily due to lower client activity.

As of December 2015, total liabilities on our consolidated statements of financial condition were $774.67 billion, an increase of $1.62 billion from December 2014, reflecting increases in deposits of $14.64 billion and unsecured long-term borrowings of $8.12 billion, partially offset by a decrease in financial instruments sold, but not yet purchased, at fair value of $16.84 billion. During 2015, deposits increased primarily in Goldman Sachs Bank USA (GS Bank USA) and unsecured long-term borrowings increased due to net new issuances. Financial instruments sold, but not yet purchased, at fair value decreased primarily reflecting the impact of movements in interest rate and currency markets on derivative valuations.

As of December 2015, our total securities sold under agreements to repurchase, accounted for as collateralized financings, were $86.07 billion, which was 3% higher than the daily average amount of repurchase agreements during both the quarter ended and year ended December 2015. The increase in our repurchase agreements relative to the daily average during 2015 resulted from an increase in firm financing and client activity at the end of the year.

As of December 2014, our total securities sold under agreements to repurchase, accounted for as collateralized financings, were $88.22 billion, which was 3% lower and 26% lower than the daily average amount of repurchase agreements during the quarter ended and year ended December 2014, respectively. The decrease in our repurchase agreements relative to the daily average during 2014 resulted from a decrease in client and firm financing activity during the second half of the year, including a reduction in our matched book, primarily resulting from a firmwide initiative to reduce activities with lower returns.

The level of our repurchase agreements fluctuates between and within periods, primarily due to providing clients with access to highly liquid collateral, such as U.S. government and federal agency, and investment-grade sovereign obligations through collateralized financing activities.

The table below presents information about our assets, unsecured long-term borrowings, shareholders' equity and leverage ratios.

	As of December	
$ in millions	**2015**	2014
Total assets	**$861,395**	$855,842
Unsecured long-term borrowings	**$175,422**	$167,302
Total shareholders' equity	**$ 86,728**	$ 82,797
Leverage ratio	**9.9x**	10.3x
Debt to equity ratio	**2.0x**	2.0x

In the table above:

- The leverage ratio equals total assets divided by total shareholders' equity and measures the proportion of equity and debt the firm is using to finance assets. This ratio is different from the Tier 1 leverage ratio included in Note 20 to the consolidated financial statements.
- The debt to equity ratio equals unsecured long-term borrowings divided by total shareholders' equity.

The table below presents information about our shareholders' equity and book value per common share, including the reconciliation of total shareholders' equity to tangible common shareholders' equity.

	As of December	
$ in millions, except per share amounts	**2015**	2014
Total shareholders' equity	**$ 86,728**	$ 82,797
Less: Preferred stock	**(11,200)**	(9,200)
Common shareholders' equity	**75,528**	73,597
Less: Goodwill and identifiable intangible assets	**(4,148)**	(4,160)
Tangible common shareholders' equity	**$ 71,380**	$ 69,437
Book value per common share	**$ 171.03**	$ 163.01
Tangible book value per common share	**161.64**	153.79

In the table above:

- Tangible common shareholders' equity equals total shareholders' equity less preferred stock, goodwill and identifiable intangible assets. We believe that tangible common shareholders' equity is meaningful because it is a measure that we and investors use to assess capital adequacy. Tangible common shareholders' equity is a non-GAAP measure and may not be comparable to similar non-GAAP measures used by other companies.
- Book value per common share and tangible book value per common share are based on common shares outstanding, including restricted stock units (RSUs) granted to employees with no future service requirements, of 441.6 million and 451.5 million as of December 2015 and December 2014, respectively. We believe that tangible book value per common share (tangible common shareholders' equity divided by common shares outstanding, including RSUs granted to employees with no future service requirements) is meaningful because it is a measure that we and investors use to assess capital adequacy. Tangible book value per common share is a non-GAAP measure and may not be comparable to similar non-GAAP measures used by other companies.

Funding Sources

Our primary sources of funding are secured financings, unsecured long-term and short-term borrowings, and deposits. We seek to maintain broad and diversified funding sources globally across products, programs, markets, currencies and creditors to avoid funding concentrations.

We raise funding through a number of different products, including:

- Collateralized financings, such as repurchase agreements, securities loaned and other secured financings;
- Long-term unsecured debt (including structured notes) through syndicated U.S. registered offerings, U.S. registered and Rule 144A medium-term note programs, offshore medium-term note offerings and other debt offerings;
- Savings and demand deposits through deposit sweep programs and time deposits through internal and third-party broker-dealers; and
- Short-term unsecured debt at the subsidiary level through U.S. and non-U.S. hybrid financial instruments, commercial paper and promissory note issuances and other methods.

Our funding is primarily raised in U.S. dollar, Euro, British pound and Japanese yen. We generally distribute our funding products through our own sales force and third-party distributors to a large, diverse creditor base in a variety of markets in the Americas, Europe and Asia. We believe that our relationships with our creditors are critical to our liquidity. Our creditors include banks, governments, securities lenders, pension funds, insurance companies, mutual funds and individuals. We have imposed various internal guidelines to monitor creditor concentration across our funding programs.

Secured Funding. We fund a significant amount of inventory on a secured basis. Secured funding is less sensitive to changes in our credit quality than unsecured funding, due to our posting of collateral to our lenders. Nonetheless, we continually analyze the refinancing risk of our secured funding activities, taking into account trade tenors, maturity profiles, counterparty concentrations, collateral eligibility and counterparty rollover probabilities. We seek to mitigate our refinancing risk by executing term trades with staggered maturities, diversifying counterparties, raising excess secured funding, and pre-funding residual risk through our GCLA.

We seek to raise secured funding with a term appropriate for the liquidity of the assets that are being financed, and we seek longer maturities for secured funding collateralized by asset classes that may be harder to fund on a secured basis especially during times of market stress. Substantially all of our secured funding, excluding funding collateralized by liquid government obligations, is executed for tenors of one month or greater. Assets that may be harder to fund on a secured basis during times of market stress include certain financial instruments in the following categories: mortgage and other asset-backed loans and securities, non-investment-grade corporate debt securities, equities and convertible debentures and emerging market securities. Assets that are classified as level 3 in the fair value hierarchy are generally funded on an unsecured basis. See Notes 5 and 6 to the consolidated financial statements for further information about the classification of financial instruments in the fair value hierarchy and "Unsecured Long-Term Borrowings" below for further information about the use of unsecured long-term borrowings as a source of funding.

The weighted average maturity of our secured funding, excluding funding collateralized by highly liquid securities eligible for inclusion in our GCLA, exceeded 120 days as of December 2015.

A majority of our secured funding for securities not eligible for inclusion in the GCLA is executed through term repurchase agreements and securities loaned contracts. We also raise financing through other types of collateralized financings, such as secured loans and notes. GS Bank USA has access to funding from the Federal Home Loan Bank (FHLB). As of December 2015, our outstanding borrowings against the FHLB were $2.92 billion.

GS Bank USA also has access to funding through the Federal Reserve Bank discount window. While we do not rely on this funding in our liquidity planning and stress testing, we maintain policies and procedures necessary to access this funding and test discount window borrowing procedures.

Unsecured Long-Term Borrowings. We issue unsecured long-term borrowings as a source of funding for inventory and other assets and to finance a portion of our GCLA. We issue in different tenors, currencies and products to maximize the diversification of our investor base.

The table below presents our quarterly unsecured long-term borrowings maturity profile as of December 2015.

	Unsecured Long-Term Borrowings Maturity Profile				
$ in millions	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**	**Total**
2017	**$12,618**	**$3,403**	**$7,305**	**$2,036**	**$ 25,362**
2018	**8,114**	**8,258**	**5,243**	**3,516**	**25,131**
2019	**6,318**	**663**	**2,243**	**6,811**	**16,035**
2020	**4,290**	**7,368**	**5,455**	**842**	**17,955**
2021 - thereafter					**90,939**
Total					**$175,422**

The weighted average maturity of our unsecured long-term borrowings as of December 2015 was approximately nine years. To mitigate refinancing risk, we seek to limit the principal amount of debt maturing on any one day or during any week or year. We enter into interest rate swaps to convert a majority of the amount of our unsecured long-term borrowings into floating-rate obligations in order to manage our exposure to interest rates. See Note 16 to the consolidated financial statements for further information about our unsecured long-term borrowings.

Deposits. We raise deposits mainly through GS Bank USA and Goldman Sachs International Bank (GSIB). The tables below present the types and sources of our deposits.

	As of December 2015		
$ in millions	**Savings and Demand [1]**	**Time [2]**	**Total**
Private bank deposits [3]	**$38,715**	**$ 2,354**	**$41,069**
Certificates of deposit	**—**	**34,375**	**34,375**
Deposit sweep programs [4]	**15,791**	**—**	**15,791**
Institutional	**1**	**6,283**	**6,284**
Total [5]	**$54,507**	**$43,012**	**$97,519**

	As of December 2014		
$ in millions	Savings and Demand [1]	Time [2]	Total
Private bank deposits [3]	$33,590	$ 1,609	$35,199
Certificates of deposit	—	25,780	25,780
Deposit sweep programs [4]	15,691	—	15,691
Institutional	12	6,198	6,210
Total [5]	$49,293	$33,587	$82,880

1. Represents deposits with no stated maturity.
2. Weighted average maturity of approximately three years as of both December 2015 and December 2014.
3. Substantially all were from overnight deposit sweep programs related to private wealth management clients.
4. Represents long-term contractual agreements with several U.S. broker-dealers who sweep client cash to FDIC-insured deposits.
5. Deposits insured by the FDIC as of December 2015 and December 2014 were approximately $55.48 billion and $45.72 billion, respectively.

In August 2015, GS Bank USA entered into an agreement, subject to regulatory approval, to acquire GE Capital Bank's online deposit platform and to assume approximately $16 billion of deposits, consisting of approximately $8 billion in online deposit accounts and approximately $8 billion in brokered certificates of deposit.

Unsecured Short-Term Borrowings. A significant portion of our unsecured short-term borrowings was originally long-term debt that is scheduled to mature within one year of the reporting date. We use unsecured short-term borrowings to finance liquid assets and for other cash management purposes. We issue hybrid financial instruments, commercial paper and promissory notes. In light of regulatory developments, since the third quarter of 2015, Group Inc. has not issued debt with an original maturity of less than one year and currently does not expect to issue short-term debt in the future.

As of December 2015 and December 2014, our unsecured short-term borrowings, including the current portion of unsecured long-term borrowings, were $42.79 billion and $44.54 billion, respectively. See Note 15 to the consolidated financial statements for further information about our unsecured short-term borrowings.

Equity Capital Management and Regulatory Capital

Capital adequacy is of critical importance to us. We have in place a comprehensive capital management policy that provides a framework, defines objectives and establishes guidelines to assist us in maintaining the appropriate level and composition of capital in both business-as-usual and stressed conditions.

Equity Capital Management

We determine the appropriate level and composition of our equity capital by considering multiple factors including our current and future consolidated regulatory capital requirements, the results of our capital planning and stress testing process and other factors such as rating agency guidelines, subsidiary capital requirements, the business environment and conditions in the financial markets. We manage our capital requirements and the levels of our capital usage principally by setting limits on balance sheet assets and/or limits on risk, in each case at both the consolidated and business levels.

We principally manage the level and composition of our equity capital through issuances and repurchases of our common stock. We may also, from time to time, issue or repurchase our preferred stock, junior subordinated debt issued to trusts, and other subordinated debt or other forms of capital as business conditions warrant. Prior to any repurchases, we must receive confirmation that the Board of Governors of the Federal Reserve System (Federal Reserve Board) does not object to such capital actions. See Notes 16 and 19 to the consolidated financial statements for further information about our preferred stock, junior subordinated debt issued to trusts and other subordinated debt.

Capital Planning and Stress Testing Process. As part of capital planning, we project sources and uses of capital given a range of business environments, including stressed conditions. Our stress testing process is designed to identify and measure material risks associated with our business activities including market risk, credit risk and operational risk, as well as our ability to generate revenues.

The following is a description of our capital planning and stress testing process:

- **Capital Planning.** Our capital planning process incorporates an internal capital adequacy assessment with the objective of ensuring that we are appropriately capitalized relative to the risks in our business. We incorporate stress scenarios into our capital planning process with a goal of holding sufficient capital to ensure we remain adequately capitalized after experiencing a severe stress event. Our assessment of capital adequacy is viewed in tandem with our assessment of liquidity adequacy and is integrated into our overall risk management structure, governance and policy framework.

  Our capital planning process also includes an internal risk-based capital assessment. This assessment incorporates market risk, credit risk and operational risk. Market risk is calculated by using Value-at-Risk (VaR) calculations supplemented by risk-based add-ons which include risks related to rare events (tail risks). Credit risk utilizes assumptions about our counterparties' probability of default and the size of our losses in the event of a default. Operational risk is calculated based on scenarios incorporating multiple types of operational failures as well as incorporating internal and external actual loss experience. Backtesting is used to gauge the effectiveness of models at capturing and measuring relevant risks.

- **Stress Testing.** Our stress tests incorporate our internally designed stress scenarios, including our internally developed severely adverse scenario, and those required under CCAR and DFAST, and are designed to capture our specific vulnerabilities and risks. We provide additional information about our stress test processes and a summary of the results on our web site as described under "Business — Available Information" in Part I, Item 1 of the 2015 Form 10-K.

As required by the Federal Reserve Board's annual CCAR rules, we submit a capital plan for review by the Federal Reserve Board. The purpose of the Federal Reserve Board's review is to ensure that we have a robust, forward-looking capital planning process that accounts for our unique risks and that permits continued operation during times of economic and financial stress.

The Federal Reserve Board evaluates us based, in part, on whether we have the capital necessary to continue operating under the baseline and stress scenarios provided by the Federal Reserve Board and those developed internally. This evaluation also takes into account our process for identifying risk, our controls and governance for capital planning, and our guidelines for making capital planning decisions. In addition, the Federal Reserve Board evaluates our plan to make capital distributions (i.e., dividend payments and repurchases or redemptions of stock, subordinated debt or other capital securities) and issue capital, across a range of macroeconomic scenarios and firm-specific assumptions.

In addition, the DFAST rules require us to conduct stress tests on a semi-annual basis and publish a summary of certain results. The Federal Reserve Board also conducts its own annual stress tests and publishes a summary of certain results.

We submitted our initial 2015 CCAR to the Federal Reserve Board in January 2015 and, based on the Federal Reserve Board feedback, we submitted revised capital actions in March 2015. The Federal Reserve Board informed us that it did not object to our revised capital actions, including the repurchase of outstanding common stock, an increase in our quarterly common stock dividend and the possible issuance, redemption and modification of other capital securities from the second quarter of 2015 through the second quarter of 2016. We published a summary of our annual DFAST results in March 2015. See "Business — Available Information" in Part I, Item 1 of the 2015 Form 10-K.

In July 2015, we submitted the results of our semi-annual DFAST to the Federal Reserve Board and published a summary of our internally developed severely adverse scenario results. See "Business — Available Information" in Part I, Item 1 of the 2015 Form 10-K.

In accordance with the Federal Reserve Board requirements, we plan to submit our 2016 CCAR in April 2016.

In addition, the rules adopted by the Federal Reserve Board under the Dodd-Frank Act require GS Bank USA to conduct stress tests on an annual basis and publish a summary of certain results. GS Bank USA submitted its 2015 annual DFAST stress results to the Federal Reserve Board in January 2015 and published a summary of its results in March 2015. See "Business — Available Information" in Part I, Item 1 of the 2015 Form 10-K.

Goldman Sachs International (GSI) also has its own capital planning and stress testing process, which incorporates internally designed stress tests and those required under the Prudential Regulation Authority's (PRA) Internal Capital Adequacy Assessment Process.

Contingency Capital Plan. As part of our comprehensive capital management policy, we maintain a contingency capital plan. Our contingency capital plan provides a framework for analyzing and responding to a perceived or actual capital deficiency, including, but not limited to, identification of drivers of a capital deficiency, as well as mitigants and potential actions. It outlines the appropriate communication procedures to follow during a crisis period, including internal dissemination of information as well as timely communication with external stakeholders.

Capital Attribution. We assess each of our businesses' capital usage based upon our internal assessment of risks, which incorporates an attribution of all of our relevant regulatory capital requirements. These regulatory capital requirements are allocated using our attributed equity framework, which takes into consideration our binding capital constraints. We also attribute risk-weighted assets (RWAs) to our business segments. As of December 2015, approximately two-thirds of RWAs calculated in accordance with the Standardized Capital Rules and the Basel III Advanced Rules, subject to transitional provisions, were attributed to our Institutional Client Services segment and substantially all of the remaining RWAs were attributed to our Investing & Lending segment. We manage the levels of our capital usage based upon balance sheet and risk limits, as well as capital return analyses of our businesses based on our capital attribution.

Share Repurchase Program. We use our share repurchase program to help maintain the appropriate level of common equity. The repurchase program is effected primarily through regular open-market purchases (which may include repurchase plans designed to comply with Rule 10b5-1), the amounts and timing of which are determined primarily by our current and projected capital position and our capital plan submitted to the Federal Reserve Board as part of CCAR. The amounts and timing of the repurchases may also be influenced by general market conditions and the prevailing price and trading volumes of our common stock.

On October 14, 2015, the Board of Directors of Group Inc. (Board) authorized the repurchase of an additional 60.0 million shares of common stock pursuant to our existing share repurchase program. As of December 2015, the remaining share authorization under our existing repurchase program was 63.2 million shares; however, we are only permitted to make repurchases to the extent that such repurchases have not been objected to by the Federal Reserve Board. See "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" in Part II, Item 5 of the 2015 Form 10-K and Note 19 to the consolidated financial statements for additional information about our share repurchase program and see above for information about our capital planning and stress testing process.

Resolution and Recovery Plans

We are required by the Federal Reserve Board and the FDIC to submit an annual plan that describes our strategy for a rapid and orderly resolution in the event of material financial distress or failure (resolution plan). We are also required by the Federal Reserve Board to submit and have submitted, on an annual basis, a global recovery plan that outlines the steps that management could take to reduce risk, maintain sufficient liquidity, and conserve capital in times of prolonged stress. In August 2014, the Federal Reserve Board and the FDIC indicated that we and other large industry participants had certain shortcomings in the 2013 resolution plans that must be addressed in the 2015 resolution plans. We submitted our 2015 resolution plan on June 30, 2015. See "Risk Factors" in Part 1, Item 1A of the 2015 Form 10-K for information about the potential consequences to us if we failed to address the identified shortcomings in our 2015 resolution plan.

In addition, GS Bank USA is required by the FDIC to submit a resolution plan. As required, GS Bank USA's 2015 resolution plan was submitted on September 1, 2015.

Rating Agency Guidelines

The credit rating agencies assign credit ratings to the obligations of Group Inc., which directly issues or guarantees substantially all of the firm's senior unsecured obligations. Goldman, Sachs & Co. (GS&Co.) and GSI have been assigned long- and short-term issuer ratings by certain credit rating agencies. GS Bank USA and GSIB have also been assigned long- and short-term issuer ratings, as well as ratings on their long-term and short-term bank deposits. In addition, credit rating agencies have assigned ratings to debt obligations of certain other subsidiaries of Group Inc.

The level and composition of our equity capital are among the many factors considered in determining our credit ratings. Each agency has its own definition of eligible capital and methodology for evaluating capital adequacy, and assessments are generally based on a combination of factors rather than a single calculation. See "Liquidity Risk Management — Credit Ratings" for further information about credit ratings of Group Inc., GS Bank USA, GSIB, GS&Co. and GSI.

Consolidated Regulatory Capital

We are subject to the Federal Reserve Board's revised risk-based capital and leverage regulations, subject to certain transitional provisions (Revised Capital Framework). These regulations are largely based on the Basel Committee on Banking Supervision's (Basel Committee) final capital framework for strengthening international capital standards (Basel III) and also implement certain provisions of the Dodd-Frank Act. Under the Revised Capital Framework, we are an "Advanced approach" banking organization.

As of December 2015, we calculated our Common Equity Tier 1 (CET1), Tier 1 capital and Total capital ratios in accordance with (i) the Standardized approach and market risk rules set out in the Revised Capital Framework (together, the Standardized Capital Rules) and (ii) the Advanced approach and market risk rules set out in the Revised Capital Framework (together, the Basel III Advanced Rules) as described in Note 20 to the consolidated financial statements. The lower of each ratio calculated in (i) and (ii) is the ratio against which our compliance with minimum ratio requirements is assessed. Each of the ratios calculated in accordance with the Basel III Advanced Rules was lower than that calculated in accordance with the Standardized Capital Rules and therefore the Basel III Advanced ratios were the ratios that applied to us as of December 2015.

As of December 2014, we calculated our CET1, Tier 1 capital and Total capital ratios using the Revised Capital Framework for regulatory capital, but RWAs were calculated in accordance with (i) the Basel I Capital Accord of the Basel Committee, incorporating the market risk requirements set out in the Revised Capital Framework, and adjusted for certain items related to capital deductions and for the phase-in of capital deductions (Hybrid Capital Rules), and (ii) the Basel III Advanced Rules. The lower of each ratio calculated in (i) and (ii) was the ratio against which our compliance with minimum ratio requirements was assessed. Each of the ratios calculated in accordance with the Basel III Advanced Rules was lower than that calculated in accordance with the Hybrid Capital Rules and therefore the Basel III Advanced ratios were the ratios that applied to us as of December 2014.

See Note 20 to the consolidated financial statements for further information about our capital ratios as of December 2015 and December 2014, and for additional information about the Revised Capital Framework.

Minimum Capital Ratios and Capital Buffers

The table below presents our minimum required ratios as of December 2015, as well as the minimum ratios that we expect will apply at the end of the transitional provisions beginning January 2019.

	December 2015 Minimum Ratio [1]	January 2019 Minimum Ratio
CET1 ratio	**4.5%**	**10.0%** [4]
Tier 1 capital ratio	**6.0%**	**11.5%** [4]
Total capital ratio	**8.0%** [3]	**13.5%** [4]
Tier 1 leverage ratio [2]	**4.0%**	**4.0%**

1. Does not reflect the capital conservation buffer or Global Systemically Important Banks (G-SIBs) surcharge described below.
2. Tier 1 leverage ratio is defined as Tier 1 capital divided by quarterly average adjusted total assets (which includes adjustments for goodwill and identifiable intangible assets, and certain investments in nonconsolidated financial institutions).
3. In order to meet the quantitative requirements for being "well-capitalized" under the Federal Reserve Board's regulations, we must meet a higher required minimum Total capital ratio of 10.0%.
4. Includes the capital conservation buffer of 2.5% and a preliminary G-SIB surcharge of 3.0% estimated by the Federal Reserve Board under the methodology described below.

Under the Revised Capital Framework, the minimum CET1, Tier 1 capital, and Total capital ratios will be supplemented by a capital conservation buffer, consisting entirely of capital that qualifies as CET1, that phases in beginning on January 1, 2016, in increments of 0.625% per year until it reaches 2.5% of RWAs on January 1, 2019.

In July 2015, the Federal Reserve Board approved a final rule establishing a capital surcharge for U.S. G-SIBs (generally higher than that required by the Basel Committee) to be implemented as an extension of the U.S. capital conservation buffer. This surcharge will be phased-in ratably, beginning in 2016, becoming fully effective on January 1, 2019, and must consist entirely of capital that qualifies as CET1. The surcharge must be calculated using two methodologies, the higher of which will be reflected in our minimum risk-based capital ratios. The first calculation is based upon the Basel Committee's methodology which, among other factors, relies upon measures of the size, activity and complexity of each G-SIB (Method One). The second calculation uses similar inputs, but it includes a measure of each firm's reliance on short-term wholesale funding (Method Two). The Federal Reserve Board has indicated that its preliminary estimate of our G-SIB surcharge is 3.0%, based on the Method Two calculation using financial data as of December 2014. The surcharge becomes applicable to us beginning in 2016 on a phased-in basis, and will be updated annually based on financial data as of the end of the prior year. We currently estimate that, based on information as of December 2015, we are at or near the threshold for a lower G-SIB surcharge. However, the surcharge in the future may differ from the estimate above due to additional guidance from our regulators and/or positional changes.

The Revised Capital Framework also provides a counter-cyclical capital buffer of up to 2.5% (and also consisting entirely of CET1) in order to counteract excessive credit growth. The Federal Reserve Board has not finalized all of the regulations with respect to this buffer and the table above does not reflect this buffer.

Our regulators could change these buffers in the future. As a result, the minimum ratios we are subject to as of January 1, 2019 could be higher than the amounts presented in the table above.

Our minimum required supplementary leverage ratio will be 5.0% on January 1, 2018. See "Supplementary Leverage Ratio" below for further information.

Fully Phased-in Capital Ratios

The table below presents our capital ratios calculated in accordance with the Standardized Capital Rules and the Basel III Advanced Rules on a fully phased-in basis.

	As of December	
$ in millions	**2015**	2014
Common shareholders' equity	**$ 75,528**	$ 73,597
Deductions for goodwill and identifiable intangible assets, net of deferred tax liabilities	**(3,044)**	(3,196)
Deductions for investments in nonconsolidated financial institutions	**(2,274)**	(4,928)
Other adjustments	**(1,409)**	(1,213)
Total Common Equity Tier 1	**68,801**	64,260
Perpetual non-cumulative preferred stock	**11,200**	9,200
Deduction for investments in covered funds	**(413)**	—
Other adjustments	**(128)**	(286)
Tier 1 capital	**$ 79,460**	$ 73,174
Standardized Tier 2 and total capital		
Tier 1 capital	**$ 79,460**	$ 73,174
Qualifying subordinated debt	**15,132**	11,894
Allowance for losses on loans and lending commitments	**602**	316
Other adjustments	**(19)**	(9)
Standardized Tier 2 capital	**15,715**	12,201
Standardized total capital	**$ 95,175**	$ 85,375
Basel III Advanced Tier 2 and total capital		
Tier 1 capital	**$ 79,460**	$ 73,174
Standardized Tier 2 capital	**15,715**	12,201
Allowance for losses on loans and lending commitments	**(602)**	(316)
Basel III Advanced Tier 2 capital	**15,113**	11,885
Basel III Advanced total capital	**$ 94,573**	$ 85,059
RWAs		
Standardized	**$534,135**	$627,444
Basel III Advanced	**587,319**	577,869
CET1 ratio		
Standardized	**12.9%**	10.2%
Basel III Advanced	**11.7%**	11.1%
Tier 1 capital ratio		
Standardized	**14.9%**	11.7%
Basel III Advanced	**13.5%**	12.7%
Total capital ratio		
Standardized	**17.8%**	13.6%
Basel III Advanced	**16.1%**	14.7%

Although the fully phased-in capital ratios are not applicable until 2019, we believe that the ratios in the table above are meaningful because they are measures that we, our regulators and investors use to assess our ability to meet future regulatory capital requirements. The fully phased-in Basel III Advanced and Standardized capital ratios are non-GAAP measures as of both December 2015 and December 2014 and may not be comparable to similar non-GAAP measures used by other companies as of those dates. These ratios are based on our current interpretation, expectations and understanding of the Revised Capital Framework and may evolve as we discuss its interpretation and application with our regulators.

In the table above:

- The deductions for goodwill and identifiable intangible assets, net of deferred tax liabilities, include goodwill of $3.66 billion and $3.65 billion as of December 2015 and December 2014, respectively, and identifiable intangible assets of $491 million and $515 million as of December 2015 and December 2014, respectively, net of associated deferred tax liabilities of $1.10 billion and $964 million as of December 2015 and December 2014, respectively.
- The deductions for investments in nonconsolidated financial institutions represent the amount by which our investments in the capital of nonconsolidated financial institutions exceed certain prescribed thresholds. The decrease from December 2014 to December 2015 primarily reflects reductions in our fund investments.
- The deduction for investments in covered funds represents our aggregate investments in applicable covered funds, as permitted by the Volcker Rule, that were purchased after December 2013. Substantially all of these investments in covered funds were purchased in connection with our market-making activities. This deduction became effective in July 2015 and is not subject to a transition period. See "Regulatory Developments" below for further information about the Volcker Rule.
- Other adjustments within CET1 and Tier 1 capital primarily include the overfunded portion of our defined benefit pension plan obligation net of associated deferred tax liabilities, disallowed deferred tax assets, credit valuation adjustments on derivative liabilities, debt valuation adjustments and other required credit risk-based deductions.
- Qualifying subordinated debt represents subordinated debt issued by Group Inc. with an original term to maturity of five years or greater. The outstanding amount of subordinated debt qualifying for Tier 2 capital is reduced upon reaching a remaining maturity of five years. See Note 16 to the consolidated financial statements for additional information about our subordinated debt.

See Note 20 to the consolidated financial statements for information about our transitional capital ratios, which represent the ratios that are applicable to us as of December 2015 and December 2014.

Supplementary Leverage Ratio

The Revised Capital Framework includes a supplementary leverage ratio requirement for Advanced approach banking organizations. Under amendments to the Revised Capital Framework, the U.S. federal bank regulatory agencies approved a final rule that implements the supplementary leverage ratio aligned with the definition of leverage established by the Basel Committee. The supplementary leverage ratio compares Tier 1 capital to a measure of leverage exposure, defined as total daily average assets for the quarter less certain deductions plus certain off-balance-sheet exposures, including a measure of derivatives exposures and commitments. The Revised Capital Framework requires a minimum supplementary leverage ratio of 5.0% (comprised of the minimum requirement of 3.0% and a 2.0% buffer) for U.S. bank holding companies deemed to be G-SIBs, effective on January 1, 2018.

As of December 2015 and December 2014, our supplementary leverage ratio was 5.9% and 5.0%, respectively, based on Tier 1 capital on a fully phased-in basis of $79.46 billion and $73.17 billion, respectively, divided by total leverage exposure of $1.34 trillion (total daily average assets for the quarter of $878 billion plus adjustments of $465 billion) and $1.45 trillion (total daily average assets for the quarter of $873 billion plus adjustments of $579 billion), respectively. Within total leverage exposure, the adjustments to quarterly average assets in both periods were primarily comprised of off-balance-sheet exposures related to derivatives, secured financing transactions, commitments and guarantees.

The supplementary leverage ratio was not a required regulatory disclosure as of December 2014. Therefore, it was a non-GAAP measure as of December 2014 and may not be comparable to similar non-GAAP measures used by other companies as of that date.

This supplementary leverage ratio is based on our current interpretation and understanding of the U.S. federal bank regulatory agencies' final rule and may evolve as we discuss its interpretation and application with our regulators.

Subsidiary Capital Requirements

Many of our subsidiaries, including GS Bank USA and our broker-dealer subsidiaries, are subject to separate regulation and capital requirements of the jurisdictions in which they operate.

GS Bank USA. GS Bank USA is subject to regulatory capital requirements that are calculated in substantially the same manner as those applicable to bank holding companies and calculates its capital ratios in accordance with the risk-based capital and leverage requirements applicable to state member banks, which are based on the Revised Capital Framework. See Note 20 to the consolidated financial statements for further information about the Revised Capital Framework as it relates to GS Bank USA, including GS Bank USA's capital ratios and required minimum ratios.

In addition, under Federal Reserve Board rules, commencing on January 1, 2018, in order to be considered a "well-capitalized" depository institution, GS Bank USA must have a supplementary leverage ratio of 6.0% or greater. The supplementary leverage ratio compares Tier 1 capital to a measure of leverage exposure, defined as total daily average assets for the quarter less certain deductions plus certain off-balance-sheet exposures, including a measure of derivatives exposures and commitments. As of December 2015, GS Bank USA's supplementary leverage ratio was 7.1%, based on Tier 1 capital on a fully phased-in basis of $23.02 billion, divided by total leverage exposure of $324 billion (total daily average assets for the quarter of $134 billion plus adjustments of $190 billion). As of December 2014, GS Bank USA would also have met the "well-capitalized" minimum. This supplementary leverage ratio is based on our current interpretation and understanding of this rule and may evolve as we discuss their interpretation and application with our regulators.

GSI. Our regulated U.K. broker-dealer, GSI, is one of our principal non-U.S. regulated subsidiaries and is regulated by the PRA and the Financial Conduct Authority. GSI is subject to the revised capital framework for European Union (EU)-regulated financial institutions (the fourth EU Capital Requirements Directive and EU Capital Requirements Regulation, collectively known as "CRD IV"). These capital regulations are largely based on Basel III.

The table below presents GSI's minimum required ratios as of December 2015, as well as the minimum required ratios that became effective in January 2016.

	December 2015 Minimum Ratio	January 2016 Minimum Ratio
CET1 ratio	**6.1%**	**6.6%**
Tier 1 capital ratio	**8.2%**	**8.5%**
Total capital ratio	**10.9%**	**11.2%**

The minimum ratios in the table above incorporate capital guidance received from the PRA and could change in the future. GSI's future capital requirements may also be impacted by developments such as the introduction of capital buffers as described above in "Minimum Capital Ratios and Capital Buffers."

As of December 2015, GSI had a CET1 ratio of 12.9%, a Tier 1 capital ratio of 12.9% and a Total capital ratio of 17.6%. Each of these ratios includes approximately 70 bps attributable to unaudited results for the year ended December 2015. These ratios will be finalized upon the completion of the 2015 GSI audit. As of December 2014, GSI had a CET1 ratio of 9.7%, a Tier 1 capital ratio of 9.7% and a Total capital ratio of 12.7%. The ratios for both December 2015 and December 2014 reflect the applicable transitional provisions.

CRD IV, as amended by the European Commission Delegated Act (the Delegated Act), introduced a new leverage ratio, which compares CRD IV's definition of Tier 1 capital to a measure of leverage exposure, defined as the sum of assets less Tier 1 capital deductions plus certain off-balance-sheet exposures, including a measure of derivatives exposures, securities financing transactions and commitments. The Delegated Act does not currently include a minimum leverage ratio requirement; however, the Basel Committee has proposed a minimum requirement of 3%. Any required minimum ratio is expected to become effective for GSI on January 1, 2018. As of December 2015, GSI had a leverage ratio of 3.6%. This leverage ratio is based on our current interpretation and understanding of this rule and may evolve as we discuss its interpretation and application with GSI's regulators.

Other Subsidiaries. We expect that the capital requirements of several of our subsidiaries are likely to increase in the future due to the various developments arising from the Basel Committee, the Dodd-Frank Act, and other governmental entities and regulators. See Note 20 to the consolidated financial statements for information about the capital requirements of our other regulated subsidiaries.

Subsidiaries not subject to separate regulatory capital requirements may hold capital to satisfy local tax and legal guidelines, rating agency requirements (for entities with assigned credit ratings) or internal policies, including policies concerning the minimum amount of capital a subsidiary should hold based on its underlying level of risk. In certain instances, Group Inc. may be limited in its ability to access capital held at certain subsidiaries as a result of regulatory, tax or other constraints. As of December 2015 and December 2014, Group Inc.'s equity investment in subsidiaries was $85.52 billion and $79.70 billion, respectively, compared with its total shareholders' equity of $86.73 billion and $82.80 billion, respectively.

Our capital invested in non-U.S. subsidiaries is generally exposed to foreign exchange risk, substantially all of which is managed through a combination of derivatives and non-U.S. denominated debt. See Note 7 to the consolidated financial statements for information about our net investment hedges, which are used to hedge this risk.

Guarantees of Subsidiaries. Group Inc. has guaranteed the payment obligations of GS&Co., GS Bank USA, and Goldman Sachs Execution & Clearing, L.P. (GSEC), in each case subject to certain exceptions. In November 2008, Group Inc. contributed subsidiaries into GS Bank USA, and Group Inc. agreed to guarantee certain losses, including credit-related losses, relating to assets held by the contributed entities.

Regulatory Developments

Our businesses are subject to significant and evolving regulation. The Dodd-Frank Act, enacted in July 2010, significantly altered the financial regulatory regime within which we operate. In addition, other reforms have been adopted or are being considered by regulators and policy makers worldwide. We expect that the principal areas of impact from regulatory reform for us will be increased regulatory capital requirements and increased regulation and restriction on certain activities. However, given that many of the new and proposed rules are highly complex, the full impact of regulatory reform will not be known until the rules are implemented and market practices develop under the final regulations.

There has been increased regulation of, and limitations on, our activities, including the Dodd-Frank Act prohibition on "proprietary trading" and the limitation on the sponsorship of, and investment in, "covered funds" (as defined in the Volcker Rule). In addition, there is increased regulation of, and restrictions on, OTC derivatives markets and transactions, particularly related to swaps and security-based swaps.

See "Business — Regulation" in Part I, Item 1 of the 2015 Form 10-K for more information about the laws, rules and regulations and proposed laws, rules and regulations that apply to us and our operations. In addition, see Note 20 to the consolidated financial statements for information about regulatory developments as they relate to our regulatory capital and leverage ratios.

Volcker Rule

The provisions of the Dodd-Frank Act referred to as the "Volcker Rule," became effective in July 2015 (subject to a conformance period, as applicable). The Volcker Rule prohibits "proprietary trading," but permits activities such as underwriting, market making and risk-mitigation hedging, requires an extensive compliance program and includes additional reporting and record keeping requirements. The initial implementation of these rules did not have a material impact on our financial condition, results of operations or cash flows. However, the rule is highly complex, and its impact may change as market practices further develop.

In addition to the prohibition on proprietary trading, the Volcker Rule limits the sponsorship of, and investment in, covered funds by banking entities, including Group Inc. and its subsidiaries. It also limits certain types of transactions between us and our sponsored funds, similar to the limitations on transactions between depository institutions and their affiliates as described in "Business — Regulation" in Part I, Item 1 of the 2015 Form 10-K. Covered funds include our private equity funds, certain of our credit and real estate funds, our hedge funds and certain other investment structures. The limitation on investments in covered funds requires us to reduce our investment in each such fund to 3% or less of the fund's net asset value, and to reduce our aggregate investment in all such funds to 3% or less of our Tier 1 capital.

Beginning in July 2015, our investments in applicable covered funds purchased after December 2013 are required to be deducted from Tier 1 capital. See "Fully Phased-in Capital Ratios" above for further information about our Tier 1 capital and the deduction for investments in covered funds.

We continue to manage our existing interests in such funds, taking into account the conformance period under the Volcker Rule. We plan to continue to conduct our investing and lending activities in ways that are permissible under the Volcker Rule.

Our current investment in funds that are measured at NAV is $7.76 billion. In order to be compliant with the Volcker Rule, we will be required to reduce most of our interests in these funds by the end of the conformance period. See Note 6 to the consolidated financial statements for further information about our investment in funds measured at NAV and the conformance period for covered funds.

Although our net revenues from our interests in private equity, credit, real estate and hedge funds may vary from period to period, our aggregate net revenues from these investments were approximately 3% and 5% of our aggregate total net revenues over the last 10 years and 5 years, respectively.

Total Loss-Absorbing Capacity

In October 2015, the Federal Reserve Board issued a proposed rule which would establish a new total loss-absorbing capacity (TLAC) requirement for U.S. bank holding companies designated as G-SIBs. The TLAC proposal has been designed so that, in the event of a G-SIB's failure, there will be sufficient external loss-absorbing capacity available in order for authorities to implement an orderly resolution of the G-SIB. The proposal would require G-SIBs to maintain an amount of regulatory capital and eligible long-term debt (i.e., debt that is unsecured, has a maturity greater than one year from issuance and satisfies certain additional criteria) to cover a percentage of RWAs and/or leverage exposure (the denominator in the supplementary leverage ratio).

Under the proposed rule, eligible long-term debt would exclude, among other instruments, debt securities that permit acceleration for reasons other than insolvency or payment default, as well as structured notes, as defined in the TLAC proposal, and debt securities not governed by U.S. law. The senior long-term debt of U.S. G-SIBs, including Group Inc., typically permits acceleration for reasons other than insolvency or payment default, and therefore would not qualify as eligible long-term debt under the proposed rule.

The proposed rule would prohibit Group Inc., as a U.S. G-SIB, from (i) guaranteeing liabilities of subsidiaries that are subject to early termination provisions under certain conditions, (ii) incurring liabilities guaranteed by subsidiaries, (iii) issuing short-term debt, or (iv) entering into derivatives and certain other financial contracts with external counterparties. Additionally, the proposed rule would cap the amount of certain liabilities of a U.S. G-SIB that are not eligible long-term debt. Finally, the proposed rule would require U.S. G-SIBs and other large banking entities to deduct from their own Tier 2 capital certain holdings in unsecured debt of other U.S. G-SIBs, as well as holdings of their own unsecured debt securities.

Under the proposal, the TLAC requirements would phase in between 2019 and 2022. We are currently evaluating the impact of the proposed TLAC requirements. See "Business — Regulation" in Part I, Item 1 of the 2015 Form 10-K for further information on the Federal Reserve Board's proposed TLAC rule.

Other Developments

In January 2016, the Basel Committee finalized a revised framework for calculating minimum capital requirements for market risk. The revisions constitute a fundamental change to the calculation of both model-based and non-model-based components of market risk capital. The Basel Committee has set an effective date for first reporting under the revised framework of December 31, 2019. The U.S. federal bank regulatory agencies have not yet proposed rules implementing these revisions for U.S. banking organizations. We are currently evaluating the potential impact of the Basel Committee's revised framework.

See "Business — Regulation" in Part I, Item 1 of the 2015 Form 10-K for further information on regulations that may impact us in the future.

Off-Balance-Sheet Arrangements and Contractual Obligations

Off-Balance-Sheet Arrangements

We have various types of off-balance-sheet arrangements that we enter into in the ordinary course of business. Our involvement in these arrangements can take many different forms, including:

- Purchasing or retaining residual and other interests in special purpose entities such as mortgage-backed and other asset-backed securitization vehicles;
- Holding senior and subordinated debt, interests in limited and general partnerships, and preferred and common stock in other nonconsolidated vehicles;
- Entering into interest rate, foreign currency, equity, commodity and credit derivatives, including total return swaps;
- Entering into operating leases; and
- Providing guarantees, indemnifications, loan commitments, letters of credit and representations and warranties.

We enter into these arrangements for a variety of business purposes, including securitizations. The securitization vehicles that purchase mortgages, corporate bonds, and other types of financial assets are critical to the functioning of several significant investor markets, including the mortgage-backed and other asset-backed securities markets, since they offer investors access to specific cash flows and risks created through the securitization process.

We also enter into these arrangements to underwrite client securitization transactions; provide secondary market liquidity; make investments in performing and nonperforming debt, equity, real estate and other assets; provide investors with credit-linked and asset-repackaged notes; and receive or provide letters of credit to satisfy margin requirements and to facilitate the clearance and settlement process.

Our financial interests in, and derivative transactions with, such nonconsolidated entities are generally accounted for at fair value, in the same manner as our other financial instruments, except in cases where we apply the equity method of accounting.

The table below presents where information about our various off-balance-sheet arrangements may be found in the 2015 Form 10-K. In addition, see Note 3 to the consolidated financial statements for information about our consolidation policies.

Type of Off-Balance-Sheet Arrangement	Disclosure in Form 10-K
Variable interests and other obligations, including contingent obligations, arising from variable interests in nonconsolidated VIEs	See Note 12 to the consolidated financial statements.
Leases, letters of credit, and lending and other commitments	See "Contractual Obligations" below and Note 18 to the consolidated financial statements.
Guarantees	See "Contractual Obligations" below and Note 18 to the consolidated financial statements.
Derivatives	See "Credit Risk Management — Credit Exposures — OTC Derivatives" below and Notes 4, 5, 7 and 18 to the consolidated financial statements.

Contractual Obligations

We have certain contractual obligations which require us to make future cash payments. These contractual obligations include our unsecured long-term borrowings, secured long-term financings, time deposits and contractual interest payments, all of which are included in our consolidated statements of financial condition.

Our obligations to make future cash payments also include certain off-balance-sheet contractual obligations such as purchase obligations, minimum rental payments under noncancelable leases and commitments and guarantees.

The table below presents our contractual obligations, commitments and guarantees by type.

	As of December	
$ in millions	**2015**	2014
Amounts related to on-balance-sheet obligations		
Time deposits	**$ 25,748**	$ 18,719
Secured long-term financings	**10,520**	7,249
Unsecured long-term borrowings	**175,422**	167,302
Contractual interest payments	**59,327**	61,416
Subordinated liabilities issued by consolidated VIEs	**501**	843
Amounts related to off-balance-sheet arrangements		
Commitments to extend credit	**117,158**	95,949
Contingent and forward starting resale and securities borrowing agreements	**28,874**	35,225
Forward starting repurchase and secured lending agreements	**5,878**	8,180
Letters of credit	**249**	308
Investment commitments	**6,054**	5,164
Other commitments	**6,944**	6,321
Minimum rental payments	**2,575**	2,173
Derivative guarantees	**926,443**	612,735
Securities lending indemnifications	**31,902**	27,567
Other financial guarantees	**4,461**	4,486

The table below presents our contractual obligations, commitments and guarantees by period of expiration.

	Contractual Obligations, Commitments and Guarantees Amount by Period of Expiration as of December 2015			
$ in millions	**2016**	**2017 - 2018**	**2019 - 2020**	**2021 - Thereafter**
Amounts related to on-balance-sheet obligations				
Time deposits	**$ —**	**$ 10,314**	**$ 7,122**	**$ 8,312**
Secured long-term financings	**—**	**8,465**	**1,435**	**620**
Unsecured long-term borrowings	**—**	**50,493**	**33,990**	**90,939**
Contractual interest payments	**6,613**	**11,742**	**8,381**	**32,591**
Subordinated liabilities issued by consolidated VIEs	**—**	**—**	**—**	**501**
Amounts related to off-balance-sheet arrangements				
Commitments to extend credit	**28,404**	**24,956**	**53,822**	**9,976**
Contingent and forward starting resale and securities borrowing agreements	**28,839**	**35**	**—**	**—**
Forward starting repurchase and secured lending agreements	**5,878**	**—**	**—**	**—**
Letters of credit	**217**	**25**	**3**	**4**
Investment commitments	**4,600**	**336**	**24**	**1,094**
Other commitments	**6,484**	**339**	**70**	**51**
Minimum rental payments	**317**	**614**	**484**	**1,160**
Derivative guarantees	**640,288**	**168,784**	**67,643**	**49,728**
Securities lending indemnifications	**31,902**	**—**	**—**	**—**
Other financial guarantees	**611**	**1,402**	**1,772**	**676**

In the table above:

- The "2016" column includes $2.53 billion of investment commitments to covered funds (as defined by the Volcker Rule). We expect that substantially all of these commitments will not be called.
- Obligations maturing within one year of our financial statement date or redeemable within one year of our financial statement date at the option of the holders are excluded as they are treated as short-term obligations.
- Obligations that are repayable prior to maturity at our option are reflected at their contractual maturity dates and obligations that are redeemable prior to maturity at the option of the holders are reflected at the earliest dates such options become exercisable.
- Amounts included in the table do not necessarily reflect the actual future cash flow requirements for these arrangements because commitments and guarantees represent notional amounts and may expire unused or be reduced or cancelled at the counterparty's request.
- Due to the uncertainty of the timing and amounts that will ultimately be paid, our liability for unrecognized tax benefits has been excluded. See Note 24 to the consolidated financial statements for further information about our unrecognized tax benefits.
- Unsecured long-term borrowings includes $8.34 billion of adjustments to the carrying value of certain unsecured long-term borrowings resulting from the application of hedge accounting.
- The aggregate contractual principal amount of secured long-term financings and unsecured long-term borrowings for which the fair value option was elected exceeded the related fair value by $362 million and $1.12 billion, respectively.
- Contractual interest payments represents estimated future interest payments related to unsecured long-term borrowings, secured long-term financings and time deposits based on applicable interest rates as of December 2015, and includes stated coupons, if any, on structured notes.

See Notes 15 and 18 to the consolidated financial statements for further information about our short-term borrowings and commitments and guarantees, respectively.

As of December 2015, our unsecured long-term borrowings were $175.42 billion, with maturities extending to 2061, and consisted principally of senior borrowings. See Note 16 to the consolidated financial statements for further information about our unsecured long-term borrowings.

As of December 2015, our future minimum rental payments, net of minimum sublease rentals under noncancelable leases, were $2.58 billion. These lease commitments for office space expire on various dates through 2069. Certain agreements are subject to periodic escalation provisions for increases in real estate taxes and other charges. See Note 18 to the consolidated financial statements for further information about our leases.

Our occupancy expenses include costs associated with office space held in excess of our current requirements. This excess space, the cost of which is charged to earnings as incurred, is being held for potential growth or to replace currently occupied space that we may exit in the future. We regularly evaluate our current and future space capacity in relation to current and projected staffing levels. For 2015, total occupancy expenses for space held in excess of our current requirements and exit costs related to our office space were not material. We may incur exit costs in the future to the extent we (i) reduce our space capacity or (ii) commit to, or occupy, new properties in the locations in which we operate and, consequently, dispose of existing space that had been held for potential growth. These exit costs may be material to our results of operations in a given period.

Risk Management

Risks are inherent in our business and include liquidity, market, credit, operational, legal, regulatory and reputational risks. For further information about our risk management processes, see "— Overview and Structure of Risk Management" below. Our risks include the risks across our risk categories, regions or global businesses, as well as those which have uncertain outcomes and have the potential to materially impact our financial results, our liquidity and our reputation. For further information about our areas of risk, see "— Liquidity Risk Management," "— Market Risk Management," "— Credit Risk Management," "— Operational Risk Management," "— Model Risk Management" and "Risk Factors" in Part I, Item 1A of the 2015 Form 10-K.

Overview and Structure of Risk Management

Overview

We believe that effective risk management is of primary importance to the success of the firm. Accordingly, we have comprehensive risk management processes through which we monitor, evaluate and manage the risks we assume in conducting our activities. These include market, credit, liquidity, operational, model, legal, regulatory and reputational risk exposures. Our risk management framework is built around three core components: governance, processes and people.

Governance. Risk management governance starts with our Board, which plays an important role in reviewing and approving risk management policies and practices, both directly and through its committees, including its Risk Committee. The Board also receives regular briefings on firmwide risks, including market risk, liquidity risk, credit risk, operational risk and model risk from our independent control and support functions, including the chief risk officer, and on matters impacting our reputation from the chair of our Firmwide Client and Business Standards Committee. The chief risk officer, as part of the review of the firmwide risk portfolio, regularly advises the Risk Committee of the Board of relevant risk metrics and material exposures. Next, at the most senior levels of the firm, our leaders are experienced risk managers, with a sophisticated and detailed understanding of the risks we take. Our senior management, and senior managers in our revenue-producing units and independent control and support functions, lead and participate in risk-oriented committees. Independent control and support functions include Business Selection and Conflicts Resolution (Conflicts), Compliance, Controllers, Credit Risk Management and Advisory (Credit Risk Management), Human Capital Management, Legal, Liquidity Risk Management and Analysis (Liquidity Risk Management), Market Risk Management and Analysis (Market Risk Management), Model Risk Management, Operations, Operational Risk Management and Analysis (Operational Risk Management), Tax, Technology and Treasury.

Our governance structure provides the protocol and responsibility for decision-making on risk management issues and ensures implementation of those decisions. We make extensive use of risk-related committees that meet regularly and serve as an important means to facilitate and foster ongoing discussions to identify, manage and mitigate risks.

We maintain strong communication about risk and we have a culture of collaboration in decision-making among the revenue-producing units, independent control and support functions, committees and senior management. While we believe that the first line of defense in managing risk rests with the managers in our revenue-producing units, we dedicate extensive resources to independent control and support functions in order to ensure a strong oversight structure and an appropriate segregation of duties. We regularly reinforce our strong culture of escalation and accountability across all divisions and functions.

Processes. We maintain various processes and procedures that are critical components of our risk management. First and foremost is our daily discipline of marking substantially all of our inventory to current market levels. Goldman Sachs carries its inventory at fair value, with changes in valuation reflected immediately in our risk management systems and in net revenues. We do so because we believe this discipline is one of the most effective tools for assessing and managing risk and that it provides transparent and realistic insight into our financial exposures.

We also apply a rigorous framework of limits to control risk across multiple transactions, products, businesses and markets. This includes approval of limits at both firmwide and business levels by the Risk Committee of the Board. In addition, the Firmwide Risk Committee is responsible for approving limits, subject to the overall limits approved by the Risk Committee of the Board, at a variety of levels and monitoring these limits on a daily basis. Divisional risk committees are responsible for setting sub-limits below the overall business-level limits approved by the Firmwide Risk Committee. Limits are typically set at levels that will be periodically exceeded, rather than at levels which reflect our maximum risk appetite. This fosters an ongoing dialogue on risk among revenue-producing units, independent control and support functions, committees and senior management, as well as rapid escalation of risk-related matters. See "Liquidity Risk Management," "Market Risk Management" and "Credit Risk Management" for further information about our risk limits.

Active management of our positions is another important process. Proactive mitigation of our market and credit exposures minimizes the risk that we will be required to take outsized actions during periods of stress.

We also focus on the rigor and effectiveness of our risk systems. The goal of our risk management technology is to get the right information to the right people at the right time, which requires systems that are comprehensive, reliable and timely. We devote significant time and resources to our risk management technology to ensure that it consistently provides us with complete, accurate and timely information.

People. Even the best technology serves only as a tool for helping to make informed decisions in real time about the risks we are taking. Ultimately, effective risk management requires our people to interpret our risk data on an ongoing and timely basis and adjust risk positions accordingly. In both our revenue-producing units and our independent control and support functions, the experience of our professionals, and their understanding of the nuances and limitations of each risk measure, guide us in assessing exposures and maintaining them within prudent levels.

We reinforce a culture of effective risk management in our training and development programs as well as the way we evaluate performance, and recognize and reward our people. Our training and development programs, including certain sessions led by our most senior leaders, are focused on the importance of risk management, client relationships and reputational excellence. As part of our annual performance review process, we assess reputational excellence including how an employee exercises good risk management and reputational judgment, and adheres to our code of conduct and compliance policies. Our review and reward processes are designed to communicate and reinforce to our professionals the link between behavior and how people are recognized, the need to focus on our clients and our reputation, and the need to always act in accordance with the highest standards of the firm.

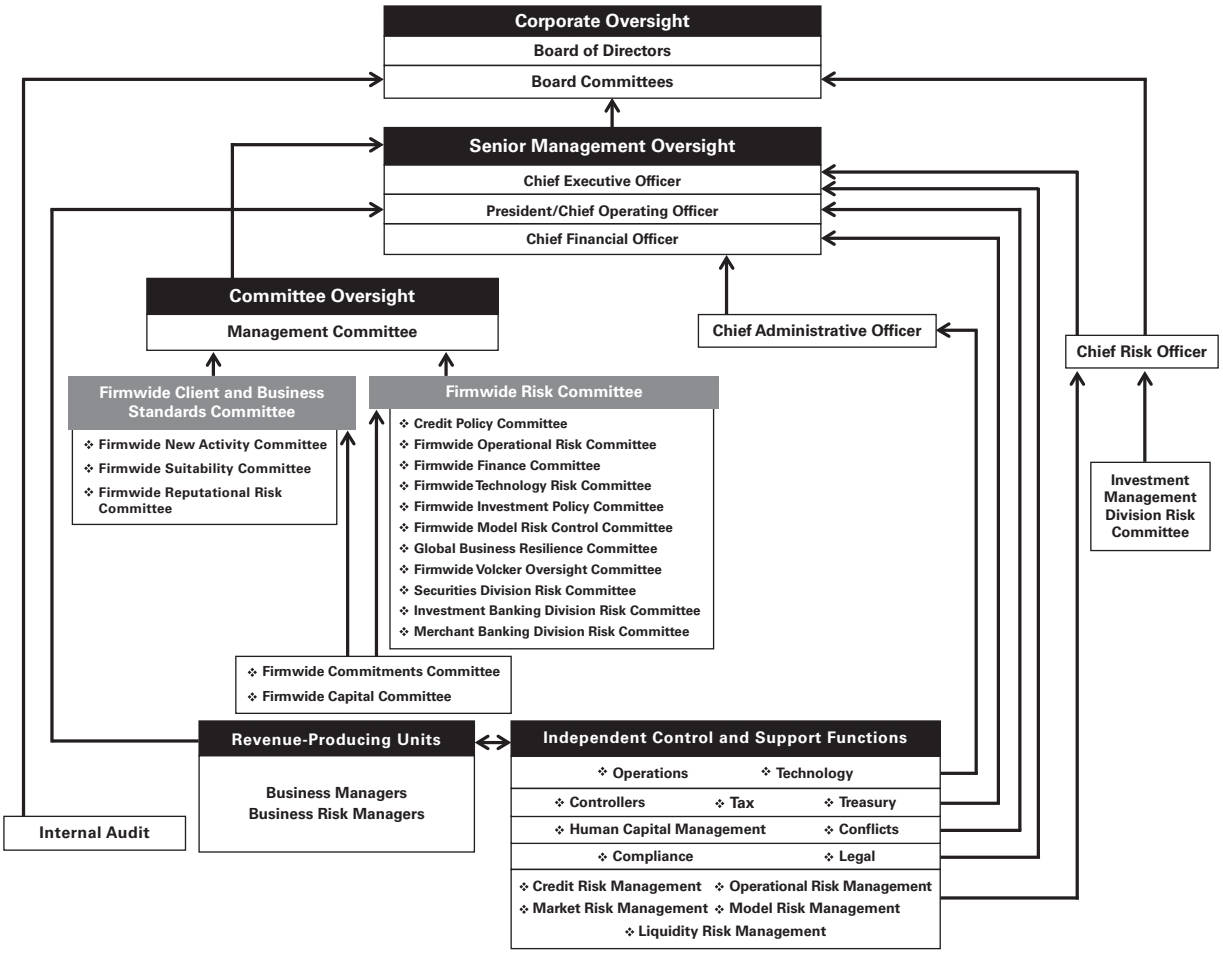
Structure

Ultimate oversight of risk is the responsibility of our Board. The Board oversees risk both directly and through its committees, including its Risk Committee. Within the firm, a series of committees with specific risk management mandates have oversight or decision-making responsibilities for risk management activities. Committee membership generally consists of senior managers from both our revenue-producing units and our independent control and support functions. We have established procedures for these committees to ensure that appropriate information barriers are in place. Our primary risk committees, most of which also have additional sub-committees or working groups, are described below. In addition to these committees, we have other risk-oriented committees which provide oversight for different businesses, activities, products, regions and legal entities. All of our firmwide, regional and divisional committees have responsibility for considering the impact of transactions and activities which they oversee on our reputation.

Membership of our risk committees is reviewed regularly and updated to reflect changes in the responsibilities of the committee members. Accordingly, the length of time that members serve on the respective committees varies as determined by the committee chairs and based on the responsibilities of the members within the firm.

In addition, independent control and support functions, which report to the chief executive officer, the president and chief operating officer, the chief financial officer, the chief risk officer and the chief administrative officer, are responsible for day-to-day oversight or monitoring of risk, as illustrated in the chart below and as described in greater detail in the following sections. Internal Audit, which reports to the Audit Committee of the Board and includes professionals with a broad range of audit and industry experience, including risk management expertise, is responsible for independently assessing and validating key controls within the risk management framework.

The chart below presents an overview of our risk management governance structure, highlighting the oversight of our Board, our key risk-related committees and the independence of our key control and support functions.



Management Committee. The Management Committee oversees our global activities, including all of our independent control and support functions. It provides this oversight directly and through authority delegated to committees it has established. This committee is comprised of our most senior leaders, and is chaired by our chief executive officer. The Management Committee has established various committees with delegated authority and the chair of the Management Committee appoints the chairs of these committees. Most members of the Management Committee are also members of other firmwide, divisional and regional committees. The following are the committees that are principally involved in firmwide risk management.

Firmwide Client and Business Standards Committee. The Firmwide Client and Business Standards Committee assesses and makes determinations regarding business standards and practices, reputational risk management, client relationships and client service, is chaired by our president and chief operating officer, and reports to the Management Committee. This committee also has responsibility for overseeing recommendations of the Business Standards Committee. This committee periodically updates and receives guidance from the Public Responsibilities Committee of the Board. This committee has also established certain committees that report to it, including divisional Client and Business Standards Committees and risk-related committees. The following are the risk-related committees that report to the Firmwide Client and Business Standards Committee:

- **Firmwide New Activity Committee.** The Firmwide New Activity Committee is responsible for reviewing new activities and for establishing a process to identify and review previously approved activities that are significant and that have changed in complexity and/or structure or present different reputational and suitability concerns over time to consider whether these activities remain appropriate. This committee is co-chaired by our global treasurer and the chief administrative officer of our Investment Management Division, who are appointed as co-chairs by the chair of the Firmwide Client and Business Standards Committee.
- **Firmwide Suitability Committee.** The Firmwide Suitability Committee is responsible for setting standards and policies for product, transaction and client suitability and providing a forum for consistency across divisions, regions and products on suitability assessments. This committee also reviews suitability matters escalated from other committees. This committee is co-chaired by the deputy head of Compliance and the co-head of Fixed Income, Currency and Commodities Sales, who are appointed as co-chairs by the chair of the Firmwide Client and Business Standards Committee.
- **Firmwide Reputational Risk Committee.** The Firmwide Reputational Risk Committee is responsible for assessing reputational risks arising from transactions that have been identified as presenting heightened reputational risk, and other situations where the facts and circumstances warrant escalation. This committee is co-chaired by the head of Compliance and the head of Conflicts, who are appointed as co-chairs by the Firmwide Client and Business Standards Committee.

Firmwide Risk Committee. The Firmwide Risk Committee is globally responsible for the ongoing monitoring and management of our financial risks. Through both direct and delegated authority, the Firmwide Risk Committee approves firmwide and business-level limits for both market and credit risks, approves sovereign credit risk limits, reviews results of stress tests and scenario analyses, and provides oversight over model risk. This committee is co-chaired by our chief financial officer and our chief risk officer, and reports to the Management Committee. The following are the primary committees that report to the Firmwide Risk Committee:

- **Credit Policy Committee.** The Credit Policy Committee establishes and reviews broad firmwide credit policies and parameters that are implemented by Credit Risk Management. This committee is co-chaired by a deputy chief risk officer and the head of Credit Risk Management for our Securities Division, who are appointed as co-chairs by our chief risk officer.
- **Firmwide Operational Risk Committee.** The Firmwide Operational Risk Committee provides oversight of the ongoing development and implementation of our operational risk policies, framework and methodologies, and monitors the effectiveness of operational risk management. This committee is co-chaired by a managing director in Credit Risk Management and the head of Operational Risk Management, who are appointed as co-chairs by our chief risk officer.
- **Firmwide Finance Committee.** The Firmwide Finance Committee has oversight responsibility for liquidity risk, the size and composition of our balance sheet and capital base, and credit ratings. This committee regularly reviews our liquidity, balance sheet, funding position and capitalization, approves related policies, and makes recommendations as to any adjustments to be made in light of current events, risks, exposures and regulatory requirements. As a part of such oversight, among other things, this committee reviews and approves balance sheet limits and the size of our GCLA. This committee is co-chaired by our chief financial officer and our global treasurer, who are appointed as co-chairs by the Firmwide Risk Committee.

- **Firmwide Technology Risk Committee.** The Firmwide Technology Risk Committee reviews matters related to the design, development, deployment and use of technology. This committee oversees cyber security matters, as well as technology risk management frameworks and methodologies, and monitors their effectiveness. This committee is co-chaired by our chief information officer and the head of Global Investment Research, who are appointed as co-chairs by the Firmwide Risk Committee.
- **Firmwide Investment Policy Committee.** The Firmwide Investment Policy Committee reviews, approves, sets policies, and provides oversight for certain illiquid principal investments, including review of risk management and controls for these types of investments. This committee is co-chaired by the head of our Merchant Banking Division and a co-head of our Securities Division, who are appointed as co-chairs by our president and chief operating officer and our chief financial officer.
- **Firmwide Model Risk Control Committee.** The Firmwide Model Risk Control Committee is responsible for oversight of the development and implementation of model risk controls, which includes governance, policies and procedures related to our reliance on financial models. This committee is chaired by a deputy chief risk officer, who is appointed as chair by the Firmwide Risk Committee.
- **Global Business Resilience Committee.** The Global Business Resilience Committee is responsible for oversight of business resilience initiatives, promoting increased levels of security and resilience, and reviewing certain operating risks related to business resilience. This committee is chaired by our chief administrative officer, who is appointed as chair by the Firmwide Risk Committee.
- **Firmwide Volcker Oversight Committee.** The Firmwide Volcker Oversight Committee is responsible for the oversight and periodic review of the implementation of our Volcker Rule compliance program, as approved by the Board, and other Volcker Rule-related matters. This committee is co-chaired by our chief risk officer and a deputy general counsel, who are appointed as co-chairs by the Firmwide Risk Committee.
- **Securities Division Risk Committee.** The Securities Division Risk Committee sets market risk limits, subject to business-level risk limits approved by the Firmwide Risk Committee, for the Securities Division based on a number of risk measures, including but not limited to VaR, stress tests and scenario analyses. This committee is chaired by the Securities Division's chief risk officer, who is appointed as chair by the co-chairs of the Firmwide Risk Committee.
- **Investment Banking Division Risk Committee.** The Investment Banking Division Risk Committee is responsible for the ongoing monitoring and control of financial risks for the Investment Banking Division, including setting risk limits, subject to business-level risk limits approved by the Firmwide Risk Committee, reviewing established risk limits and monitoring risk exposures. This committee is co-chaired by the co-head of the Global Financing Group in our Investment Banking Division and the head of Credit Risk Management for our Investment Banking Division and our Merchant Banking Division. The co-chairs of the Investment Banking Division Risk Committee are appointed by the co-chairs of the Firmwide Risk Committee.
- **Merchant Banking Division Risk Committee.** The Merchant Banking Division Risk Committee is responsible for the ongoing monitoring and control of financial risks for the Merchant Banking Division. This committee is chaired by a managing director in the Merchant Banking Division, who is appointed as chair by the co-chairs of the Firmwide Risk Committee.

The following committees report jointly to the Firmwide Risk Committee and the Firmwide Client and Business Standards Committee:

- **Firmwide Commitments Committee.** The Firmwide Commitments Committee reviews our underwriting and distribution activities with respect to equity and equity-related product offerings, and sets and maintains policies and procedures designed to ensure that legal, reputational, regulatory and business standards are maintained on a global basis. In addition to reviewing specific transactions, this committee periodically conducts general strategic reviews of sectors and products and establishes policies in connection with transaction practices. This committee is co-chaired by the co-head of the Financial Institutions Group in our Investment Banking Division and an advisory director to the firm, who are appointed as co-chairs by the chair of the Firmwide Client and Business Standards Committee.
- **Firmwide Capital Committee.** The Firmwide Capital Committee provides approval and oversight of debt-related transactions, including principal commitments of our capital. This committee aims to ensure that business and reputational standards for underwritings and capital commitments are maintained on a global basis. This committee is co-chaired by the head of Credit Risk Management for our Investment Banking Division and our Merchant Banking Division and the head of credit finance for Europe, Middle East and Africa (EMEA). The co-chairs of the Firmwide Capital Committee are appointed by the co-chairs of the Firmwide Risk Committee.

Investment Management Division Risk Committee. The Investment Management Division Risk Committee is responsible for the ongoing monitoring and control of global market, counterparty credit and liquidity risks associated with the activities of our investment management businesses and reports to our chief risk officer. This committee is chaired by the Investment Management Division's chief risk officer, who is appointed as chair by our chief risk officer.

Conflicts Management

Conflicts of interest and our approach to dealing with them are fundamental to our client relationships, our reputation and our long-term success. The term "conflict of interest" does not have a universally accepted meaning, and conflicts can arise in many forms within a business or between businesses. The responsibility for identifying potential conflicts, as well as complying with our policies and procedures, is shared by the entire firm.

We have a multilayered approach to resolving conflicts and addressing reputational risk. Our senior management oversees policies related to conflicts resolution, and, in conjunction with Conflicts, Legal and Compliance, the Firmwide Client and Business Standards Committee, and other internal committees, formulates policies, standards and principles, and assists in making judgments regarding the appropriate resolution of particular conflicts. Resolving potential conflicts necessarily depends on the facts and circumstances of a particular situation and the application of experienced and informed judgment.

As a general matter, Conflicts reviews all financing and advisory assignments in Investment Banking and certain investing, lending and other activities of the firm. In addition, we have various transaction oversight committees, such as the Firmwide Capital, Commitments and Suitability Committees and other committees across the firm that also review new underwritings, loans, investments and structured products. These groups and committees work with internal and external counsel and Compliance to evaluate and address any actual or potential conflicts.

We regularly assess our policies and procedures that address conflicts of interest in an effort to conduct our business in accordance with the highest ethical standards and in compliance with all applicable laws, rules, and regulations.

Liquidity Risk Management

Overview

Liquidity risk is the risk that we will be unable to fund the firm or meet our liquidity needs in the event of firm-specific, broader industry, or market liquidity stress events. Liquidity is of critical importance to us, as most of the failures of financial institutions have occurred in large part due to insufficient liquidity. Accordingly, we have in place a comprehensive and conservative set of liquidity and funding policies. Our principal objective is to be able to fund the firm and to enable our core businesses to continue to serve clients and generate revenues, even under adverse circumstances.

Treasury has the primary responsibility for assessing, monitoring and managing our liquidity and funding strategy. Treasury is independent of the revenue-producing units and reports to our chief financial officer.

Liquidity Risk Management is an independent risk management function responsible for control and oversight of the firm's liquidity risk management framework, including stress testing and limit governance. Liquidity Risk Management is independent of the revenue-producing units and Treasury, and reports to our chief risk officer.

Liquidity Risk Management Principles

We manage liquidity risk according to three principles (i) hold sufficient excess liquidity in the form of Global Core Liquid Assets (GCLA) to cover outflows during a stressed period, (ii) maintain appropriate Asset-Liability Management and (iii) maintain a viable Contingency Funding Plan.

Global Core Liquid Assets. GCLA is liquidity that we maintain to meet a broad range of potential cash outflows and collateral needs in a stressed environment. Our most important liquidity policy is to pre-fund our estimated potential cash and collateral needs during a liquidity crisis and hold this liquidity in the form of unencumbered, highly liquid securities and cash. We believe that the securities held in our GCLA would be readily convertible to cash in a matter of days, through liquidation, by entering into repurchase agreements or from maturities of resale agreements, and that this cash would allow us to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

Our GCLA reflects the following principles:

- The first days or weeks of a liquidity crisis are the most critical to a company's survival;
- Focus must be maintained on all potential cash and collateral outflows, not just disruptions to financing flows. Our businesses are diverse, and our liquidity needs are determined by many factors, including market movements, collateral requirements and client commitments, all of which can change dramatically in a difficult funding environment;
- During a liquidity crisis, credit-sensitive funding, including unsecured debt and some types of secured financing agreements, may be unavailable, and the terms (e.g., interest rates, collateral provisions and tenor) or availability of other types of secured financing may change; and
- As a result of our policy to pre-fund liquidity that we estimate may be needed in a crisis, we hold more unencumbered securities and have larger debt balances than our businesses would otherwise require. We believe that our liquidity is stronger with greater balances of highly liquid unencumbered securities, even though it increases our total assets and our funding costs.

We maintain our GCLA across major broker-dealer and bank subsidiaries, asset types, and clearing agents to provide us with sufficient operating liquidity to ensure timely settlement in all major markets, even in a difficult funding environment. In addition to the GCLA, we maintain cash balances in several of our other entities, primarily for use in specific currencies, entities, or jurisdictions where we do not have immediate access to parent company liquidity.

We believe that our GCLA provides us with a resilient source of funds that would be available in advance of potential cash and collateral outflows and gives us significant flexibility in managing through a difficult funding environment.

Asset-Liability Management. Our liquidity risk management policies are designed to ensure we have a sufficient amount of financing, even when funding markets experience persistent stress. We manage the maturities and diversity of our funding across markets, products and counterparties, and seek to maintain a long-dated and diversified funding profile, taking into consideration the characteristics and liquidity profile of our assets.

Our approach to asset-liability management includes:

- Conservatively managing the overall characteristics of our funding book, with a focus on maintaining long-term, diversified sources of funding in excess of our current requirements. See "Balance Sheet and Funding Sources — Funding Sources" for additional details;
- Actively managing and monitoring our asset base, with particular focus on the liquidity, holding period and our ability to fund assets on a secured basis. We assess our funding requirements and our ability to liquidate assets in a stressed environment while appropriately managing risk. This enables us to determine the most appropriate funding products and tenors. See "Balance Sheet and Funding Sources — Balance Sheet Management" for more detail on our balance sheet management process and "— Funding Sources — Secured Funding" for more detail on asset classes that may be harder to fund on a secured basis; and
- Raising secured and unsecured financing that has a long tenor relative to the liquidity profile of our assets. This reduces the risk that our liabilities will come due in advance of our ability to generate liquidity from the sale of our assets. Because we maintain a highly liquid balance sheet, the holding period of certain of our assets may be materially shorter than their contractual maturity dates.

Our goal is to ensure that we maintain sufficient liquidity to fund our assets and meet our contractual and contingent obligations in normal times as well as during periods of market stress. Through our dynamic balance sheet management process, we use actual and projected asset balances to determine secured and unsecured funding requirements. Funding plans are reviewed and approved by the Firmwide Finance Committee on a quarterly basis. In addition, senior managers in our independent control and support functions regularly analyze, and the Firmwide Finance Committee reviews, our consolidated total capital position (unsecured long-term borrowings plus total shareholders' equity) so that we maintain a level of long-term funding that is sufficient to meet our long-term financing requirements. In a liquidity crisis, we would first use our GCLA in order to avoid reliance on asset sales (other than our GCLA). However, we recognize that orderly asset sales may be prudent or necessary in a severe or persistent liquidity crisis.

Subsidiary Funding Policies

The majority of our unsecured funding is raised by Group Inc. which lends the necessary funds to its subsidiaries, some of which are regulated, to meet their asset financing, liquidity and capital requirements. In addition, Group Inc. provides its regulated subsidiaries with the necessary capital to meet their regulatory requirements. The benefits of this approach to subsidiary funding are enhanced control and greater flexibility to meet the funding requirements of our subsidiaries. Funding is also raised at the subsidiary level through a variety of products, including secured funding, unsecured borrowings and deposits.

Our intercompany funding policies assume that, unless legally provided for, a subsidiary's funds or securities are not freely available to its parent or other subsidiaries. In particular, many of our subsidiaries are subject to laws that authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to Group Inc. Regulatory action of that kind could impede access to funds that Group Inc. needs to make payments on its obligations. Accordingly, we assume that the capital provided to our regulated subsidiaries is not available to Group Inc. or other subsidiaries and any other financing provided to our regulated subsidiaries is not available until the maturity of such financing.

Group Inc. has provided substantial amounts of equity and subordinated indebtedness, directly or indirectly, to its regulated subsidiaries. For example, as of December 2015, Group Inc. had $28.39 billion of equity and subordinated indebtedness invested in GS&Co., its principal U.S. registered broker-dealer; $32.88 billion invested in GSI, a regulated U.K. broker-dealer; $2.30 billion invested in GSEC, a U.S. registered broker-dealer; $2.58 billion invested in Goldman Sachs Japan Co., Ltd. (GSJCL), a regulated Japanese broker-dealer; $25.20 billion invested in GS Bank USA, a regulated New York State-chartered bank; and $3.64 billion invested in GSIB, a regulated U.K. bank. Group Inc. also provided, directly or indirectly, $91.97 billion of unsubordinated loans and $8.81 billion of collateral to these entities, substantially all of which was to GS&Co., GSI, GSJCL and GS Bank USA, as of December 2015. In addition, as of December 2015, Group Inc. had significant amounts of capital invested in and loans to its other regulated subsidiaries.

Contingency Funding Plan. We maintain a contingency funding plan to provide a framework for analyzing and responding to a liquidity crisis situation or periods of market stress. Our contingency funding plan outlines a list of potential risk factors, key reports and metrics that are reviewed on an ongoing basis to assist in assessing the severity of, and managing through, a liquidity crisis and/or market dislocation. The contingency funding plan also describes in detail our potential responses if our assessments indicate that we have entered a liquidity crisis, which include pre-funding for what we estimate will be our potential cash and collateral needs as well as utilizing secondary sources of liquidity. Mitigants and action items to address specific risks which may arise are also described and assigned to individuals responsible for execution.

The contingency funding plan identifies key groups of individuals to foster effective coordination, control and distribution of information, all of which are critical in the management of a crisis or period of market stress. The contingency funding plan also details the responsibilities of these groups and individuals, which include making and disseminating key decisions, coordinating all contingency activities throughout the duration of the crisis or period of market stress, implementing liquidity maintenance activities and managing internal and external communication.

Liquidity Stress Tests

In order to determine the appropriate size of our GCLA, we use an internal liquidity model, referred to as the Modeled Liquidity Outflow, which captures and quantifies our liquidity risks. We also consider other factors including, but not limited to, an assessment of our potential intraday liquidity needs through an additional internal liquidity model, referred to as the Intraday Liquidity Model, the results of our long-term stress testing models, applicable regulatory requirements and a qualitative assessment of the condition of the financial markets and the firm. The results of the Modeled Liquidity Outflow, the Intraday Liquidity Model and the long-term stress testing models are reported to senior management on a regular basis.

Modeled Liquidity Outflow. Our Modeled Liquidity Outflow is based on conducting multiple scenarios that include combinations of market-wide and firm-specific stress. These scenarios are characterized by the following qualitative elements:

- Severely challenged market environments, including low consumer and corporate confidence, financial and political instability, adverse changes in market values, including potential declines in equity markets and widening of credit spreads; and
- A firm-specific crisis potentially triggered by material losses, reputational damage, litigation, executive departure, and/or a ratings downgrade.

The following are the critical modeling parameters of the Modeled Liquidity Outflow:

- Liquidity needs over a 30-day scenario;
- A two-notch downgrade of our long-term senior unsecured credit ratings;
- A combination of contractual outflows, such as upcoming maturities of unsecured debt, and contingent outflows (e.g., actions though not contractually required, we may deem necessary in a crisis). We assume that most contingent outflows will occur within the initial days and weeks of a crisis;
- No issuance of equity or unsecured debt;
- No support from additional government funding facilities. Although we have access to various central bank funding programs, we do not assume reliance on additional sources of funding in a liquidity crisis; and
- No asset liquidation, other than the GCLA.

The potential contractual and contingent cash and collateral outflows covered in our Modeled Liquidity Outflow include:

Unsecured Funding

- Contractual: All upcoming maturities of unsecured long-term debt, commercial paper, promissory notes and other unsecured funding products. We assume that we will be unable to issue new unsecured debt or rollover any maturing debt.
- Contingent: Repurchases of our outstanding long-term debt, commercial paper and hybrid financial instruments in the ordinary course of business as a market maker.

Deposits

- Contractual: All upcoming maturities of term deposits. We assume that we will be unable to raise new term deposits or rollover any maturing term deposits.
- Contingent: Withdrawals of bank deposits that have no contractual maturity. The withdrawal assumptions reflect, among other factors, the type of deposit, whether the deposit is insured or uninsured, and our relationship with the depositor.

Secured Funding

- Contractual: A portion of upcoming contractual maturities of secured funding due to either the inability to refinance or the ability to refinance only at wider haircuts (i.e., on terms which require us to post additional collateral). Our assumptions reflect, among other factors, the quality of the underlying collateral, counterparty roll probabilities (our assessment of the counterparty's likelihood of continuing to provide funding on a secured basis at the maturity of the trade) and counterparty concentration.
- Contingent: Adverse changes in value of financial assets pledged as collateral for financing transactions, which would necessitate additional collateral postings under those transactions.

OTC Derivatives

- Contingent: Collateral postings to counterparties due to adverse changes in the value of our OTC derivatives, excluding those that are cleared and settled through central counterparties (OTC-cleared).
- Contingent: Other outflows of cash or collateral related to OTC derivatives, excluding OTC-cleared, including the impact of trade terminations, collateral substitutions, collateral disputes, loss of rehypothecation rights, collateral calls or termination payments required by a two-notch downgrade in our credit ratings, and collateral that has not been called by counterparties, but is available to them.

Exchange-Traded and OTC-cleared Derivatives

- Contingent: Variation margin postings required due to adverse changes in the value of our outstanding exchange-traded and OTC-cleared derivatives.
- Contingent: An increase in initial margin and guaranty fund requirements by derivative clearing houses.

Customer Cash and Securities

- Contingent: Liquidity outflows associated with our prime brokerage business, including withdrawals of customer credit balances, and a reduction in customer short positions, which may serve as a funding source for long positions.

Firm Securities

- Contingent: Liquidity outflows associated with a reduction or composition change in firm short positions, which may serve as a funding source for long positions.

Unfunded Commitments

- Contingent: Draws on our unfunded commitments. Draw assumptions reflect, among other things, the type of commitment and counterparty.

Other

- Other upcoming large cash outflows, such as tax payments.

Intraday Liquidity Model. Our Intraday Liquidity Model measures our intraday liquidity needs using a scenario analysis characterized by the same qualitative elements as our Modeled Liquidity Outflow. The model assesses the risk of increased intraday liquidity requirements during a scenario where access to sources of intraday liquidity may become constrained.

The following are key modeling elements of the Intraday Liquidity Model:

- Liquidity needs over a one-day settlement period;
- Delays in receipt of counterparty cash payments;
- A reduction in the availability of intraday credit lines at our third-party clearing agents; and
- Higher settlement volumes due to an increase in activity.

Long-Term Stress Testing. We utilize a longer-term stress test to take a forward view on our liquidity position through a prolonged stress period in which the firm experiences a severe liquidity stress and recovers in an environment that continues to be challenging. We are focused on ensuring conservative asset-liability management to prepare for a prolonged period of potential stress, seeking to maintain a long-dated and diversified funding profile, taking into consideration the characteristics and liquidity profile of our assets.

We also run stress tests on a regular basis as part of our routine risk management processes and conduct tailored stress tests on an ad hoc or product-specific basis in response to market developments.

Model Review and Validation

Treasury regularly refines our Modeled Liquidity Outflow, Intraday Liquidity Model and our stress testing models to reflect changes in market or economic conditions and our business mix. Any changes, including model assumptions, are assessed and approved by Liquidity Risk Management.

Model Risk Management is responsible for the independent review and validation of our liquidity models. See "Model Risk Management" for further information about the review and validation of these models.

Limits

We use liquidity limits at various levels and across liquidity risk types to control the size of our liquidity exposures. Limits are measured relative to acceptable levels of risk given the liquidity risk tolerance of the firm. The purpose of the firmwide limits is to assist senior management in monitoring and controlling our overall liquidity profile.

The Risk Committee of the Board and the Firmwide Finance Committee approve liquidity risk limits at the firmwide level. Limits are reviewed frequently and amended, with required approvals, on a permanent and temporary basis, as appropriate, to reflect changing market or business conditions.

Our liquidity risk limits are monitored by Treasury and Liquidity Risk Management. Treasury is responsible for identifying and escalating, on a timely basis, instances where limits have been exceeded.

GCLA and Unencumbered Metrics

GCLA. Based on the results of our internal liquidity risk models, described above, as well as our consideration of other factors including, but not limited to, an assessment of our potential intraday liquidity needs and a qualitative assessment of the condition of the financial markets and the firm, we believe our liquidity position as of both December 2015 and December 2014 was appropriate. As of December 2015 and December 2014, the fair value of the securities and certain overnight cash deposits included in our GCLA totaled $199.12 billion and $182.95 billion, respectively, and the fair value of these assets averaged $187.75 billion for 2015 and $179.63 billion for 2014.

The table below presents the fair value of the securities and certain overnight cash deposits that are included in our GCLA.

	Average for the Year Ended December	
$ in millions	**2015**	2014
U.S. dollar-denominated	**$132,415**	$134,223
Non-U.S. dollar-denominated	**55,333**	45,410
Total	**$187,748**	$179,633

The U.S. dollar-denominated GCLA is composed of (i) unencumbered U.S. government and federal agency obligations (including highly liquid U.S. federal agency mortgage-backed obligations), all of which are eligible as collateral in Federal Reserve open market operations and (ii) certain overnight U.S. dollar cash deposits. The non-U.S. dollar-denominated GCLA is composed of only unencumbered German, French, Japanese and United Kingdom government obligations and certain overnight cash deposits in highly liquid currencies. We strictly limit our GCLA to this narrowly defined list of securities and cash because they are highly liquid, even in a difficult funding environment. We do not include other potential sources of excess liquidity in our GCLA, such as less liquid unencumbered securities or committed credit facilities.

The table below presents the fair value of our GCLA by asset class.

	Average for the Year Ended December	
$ in millions	**2015**	2014
Overnight cash deposits	**$ 61,407**	$ 57,177
U.S. government obligations	**69,562**	62,838
U.S. federal agency obligations, including highly liquid U.S. federal agency mortgage-backed obligations	**11,413**	16,722
German, French, Japanese and United Kingdom government obligations	**45,366**	42,896
Total	**$187,748**	$179,633

We maintain our GCLA to enable us to meet current and potential liquidity requirements of our parent company, Group Inc., and its subsidiaries. Our Modeled Liquidity Outflow and Intraday Liquidity Model incorporate a consolidated requirement for Group Inc. as well as a standalone requirement for each of our major broker-dealer and bank subsidiaries. Liquidity held directly in each of these major subsidiaries is intended for use only by that subsidiary to meet its liquidity requirements and is assumed not to be available to Group Inc. unless (i) legally provided for and (ii) there are no additional regulatory, tax or other restrictions. In addition, the Modeled Liquidity Outflow and Intraday Liquidity Model also incorporate a broader assessment of standalone liquidity requirements for other subsidiaries and we hold a portion of our GCLA directly at Group Inc. to support such requirements.

The table below presents the GCLA of Group Inc. and our major broker-dealer and bank subsidiaries.

	Average for the Year Ended December	
$ in millions	**2015**	2014
Group Inc.	**$ 41,284**	$ 37,699
Major broker-dealer subsidiaries	**89,510**	89,549
Major bank subsidiaries	**56,954**	52,385
Total	**$187,748**	$179,633

Other Unencumbered Assets. In addition to our GCLA, we have a significant amount of other unencumbered cash and "Financial instruments owned, at fair value," including other government obligations, high-grade money market securities, corporate obligations, marginable equities, loans and cash deposits not included in our GCLA. The fair value of these assets averaged $90.36 billion for 2015 and $94.52 billion for 2014. We do not consider these assets liquid enough to be eligible for our GCLA.

Liquidity Regulatory Framework

The Basel Committee's international framework for liquidity risk measurement, standards and monitoring calls for a liquidity coverage ratio (LCR) designed to ensure that banking organizations maintain an adequate level of unencumbered high-quality liquid assets (HQLA) based on expected net cash outflows under an acute short-term liquidity stress scenario.

The final rules on minimum liquidity standards approved by the U.S. federal bank regulatory agencies are generally consistent with the Basel Committee's framework as described above, but include accelerated transition provisions and more stringent requirements related to both the range of assets that qualify as HQLA and cash outflow assumptions for certain types of funding and other liquidity risks. Our GCLA is substantially the same in composition as the assets that qualify as HQLA under these rules. Under the accelerated transition timeline, the LCR became effective in the United States on January 1, 2015, with a phase-in period whereby firms have an 80% minimum in 2015, which will increase by 10% per year until 2017. In November 2015, the Federal Reserve Board proposed a rule that would require bank holding companies to disclose their LCR on a quarterly basis beginning in the quarter ended September 2016. These requirements include LCR averages over the prior quarter, detailed information on certain components of the LCR calculation and projected net cash outflows. For the three months ended December 2015, our average LCR exceeded the fully phased-in minimum requirement, based on our interpretation and understanding of the finalized framework, which may evolve as we review our interpretation and application with our regulators.

The Basel Committee's international framework for liquidity risk measurement, standards and monitoring also calls for a net stable funding ratio (NSFR) designed to promote more medium- and long-term stable funding of the assets and off-balance-sheet activities of banking organizations over a one-year time horizon. The Basel Committee's NSFR framework requires banking organizations to maintain a stable funding profile in relation to the composition of their assets and off-balance-sheet activities and will be effective on January 1, 2018. The U.S. federal bank regulatory agencies have not yet proposed rules implementing the NSFR for U.S. banks and bank holding companies. We are currently evaluating the impact of the Basel Committee's NSFR framework.

The following is information on our subsidiary liquidity regulatory requirements:

- **GS Bank USA.** GS Bank USA is subject to minimum liquidity standards under the LCR rule approved by the U.S. federal bank regulatory agencies that became effective on January 1, 2015, with the same phase-in through 2017 described above.
- **GSI.** The LCR rule issued by the U.K. regulatory authorities became effective in the United Kingdom on October 1, 2015, with a phase-in period whereby certain financial institutions, including GSI, must have an 80% minimum ratio initially, increasing to 90% on January 1, 2017 and 100% on January 1, 2018.
- **Other Subsidiaries.** We monitor the local regulatory liquidity requirements of our subsidiaries to ensure compliance. For many of our subsidiaries, these requirements either have changed or are likely to change in the future due to the implementation of the Basel Committee's framework for liquidity risk measurement, standards and monitoring, as well as other regulatory developments.

The implementation of these rules, and any amendments adopted by the applicable regulatory authorities, could impact our liquidity and funding requirements and practices in the future.

Credit Ratings

We rely on the short-term and long-term debt capital markets to fund a significant portion of our day-to-day operations and the cost and availability of debt financing is influenced by our credit ratings. Credit ratings are also important when we are competing in certain markets, such as OTC derivatives, and when we seek to engage in longer-term transactions. See "Risk Factors" in Part I, Item 1A of the 2015 Form 10-K for information about the risks associated with a reduction in our credit ratings.

During the fourth quarter of 2015, Standard & Poor's Ratings Services (S&P) downgraded the long-term debt ratings of Group Inc. from A- to BBB+ and the subordinated debt ratings of Group Inc. from BBB+ to BBB-, and changed the outlook of Group Inc. from negative to stable and the outlook for GS Bank USA, GSIB, GS&Co. and GSI from positive to watch positive. Additionally, Rating and Investment Information, Inc. (R&I) downgraded the long-term debt ratings of Group Inc. from A+ to A and the subordinated debt ratings for Group Inc. from A to A-, and changed the outlook for Group Inc. from negative to stable.

The table below presents the unsecured credit ratings and outlook of Group Inc. by DBRS, Inc. (DBRS), Fitch, Inc. (Fitch), Moody's Investors Service (Moody's), S&P, and R&I.

	As of December 2015				
	DBRS	Fitch	Moody's	S&P	R&I
Short-term Debt	**R-1 (middle)**	**F1**	**P-2**	**A-2**	**a-1**
Long-term Debt [1]	**A (high)**	**A**	**A3**	**BBB+**	**A**
Subordinated Debt	**A**	**A-**	**Baa2**	**BBB-**	**A-**
Trust Preferred [2]	**A**	**BBB-**	**Baa3**	**BB**	**N/A**
Preferred Stock [3]	**BBB (high)**	**BB+**	**Ba1**	**BB**	**N/A**
Ratings Outlook	**Stable**	**Stable**	**Stable**	**Stable**	**Stable**

1. Fitch, Moody's and S&P include the senior guaranteed trust securities issued by Murray Street Investment Trust I and Vesey Street Investment Trust I.
2. Trust preferred securities issued by Goldman Sachs Capital I.
3. DBRS, Fitch, Moody's and S&P include the APEX issued by Goldman Sachs Capital II and Goldman Sachs Capital III.

The table below presents the unsecured credit ratings and outlook of GS Bank USA, GSIB, GS&Co. and GSI, by Fitch, Moody's and S&P.

	As of December 2015		
	Fitch	Moody's	S&P
GS Bank USA			
Short-term Debt	**F1**	**P-1**	**A-1**
Long-term Debt	**A+**	**A1**	**A**
Short-term Bank Deposits	**F1+**	**P-1**	**N/A**
Long-term Bank Deposits	**AA-**	**A1**	**N/A**
Ratings Outlook	**Stable**	**Stable**	**Watch Positive**
GSIB			
Short-term Debt	**F1**	**P-1**	**A-1**
Long-term Debt	**A**	**A1**	**A**
Short-term Bank Deposits	**F1**	**P-1**	**N/A**
Long-term Bank Deposits	**A**	**A1**	**N/A**
Ratings Outlook	**Positive**	**Stable**	**Watch Positive**
GS&Co.			
Short-term Debt	**F1**	**N/A**	**A-1**
Long-term Debt	**A+**	**N/A**	**A**
Ratings Outlook	**Stable**	**N/A**	**Watch Positive**
GSI			
Short-term Debt	**F1**	**P-1**	**A-1**
Long-term Debt	**A**	**A1**	**A**
Ratings Outlook	**Positive**	**Stable**	**Watch Positive**

We believe our credit ratings are primarily based on the credit rating agencies' assessment of:

- Our liquidity, market, credit and operational risk management practices;
- The level and variability of our earnings;
- Our capital base;
- Our franchise, reputation and management;
- Our corporate governance; and
- The external operating environment, including, in some cases, the assumed level of government or other systemic support.

Certain of our derivatives have been transacted under bilateral agreements with counterparties who may require us to post collateral or terminate the transactions based on changes in our credit ratings. We assess the impact of these bilateral agreements by determining the collateral or termination payments that would occur assuming a downgrade by all rating agencies. A downgrade by any one rating agency, depending on the agency's relative ratings of us at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies. We allocate a portion of our GCLA to ensure we would be able to make the additional collateral or termination payments that may be required in the event of a two-notch reduction in our long-term credit ratings, as well as collateral that has not been called by counterparties, but is available to them. The table below presents the additional collateral or termination payments related to our net derivative liabilities under bilateral agreements that could have been called at the reporting date by counterparties in the event of a one-notch and two-notch downgrade in our credit ratings.

	As of December	
$ in millions	**2015**	2014
Additional collateral or termination payments for a one-notch downgrade	**$1,061**	$1,072
Additional collateral or termination payments for a two-notch downgrade	**2,689**	2,815

Cash Flows

As a global financial institution, our cash flows are complex and bear little relation to our net earnings and net assets. Consequently, we believe that traditional cash flow analysis is less meaningful in evaluating our liquidity position than the liquidity and asset-liability management policies described above. Cash flow analysis may, however, be helpful in highlighting certain macro trends and strategic initiatives in our businesses.

Year Ended December 2015. Our cash and cash equivalents increased by $17.51 billion to $75.11 billion at the end of 2015. We used $18.57 billion in net cash for investing activities, primarily due to funding of loans receivable. We generated $36.08 billion in net cash from financing activities and operating activities primarily from net issuances of long-term borrowings and bank deposits, partially offset by repurchases of common stock.

Year Ended December 2014. Our cash and cash equivalents decreased by $3.53 billion to $57.60 billion at the end of 2014. We used $22.53 billion in net cash for operating and investing activities, which reflects an initiative to reduce our balance sheet, and the funding of loans receivable. We generated $19.00 billion in net cash from financing activities from an increase in bank deposits and net proceeds from issuances of unsecured long-term borrowings, partially offset by repurchases of common stock.

Year Ended December 2013. Our cash and cash equivalents decreased by $11.54 billion to $61.13 billion at the end of 2013. We generated $4.54 billion in net cash from operating activities. We used net cash of $16.08 billion for investing and financing activities, primarily to fund loans receivable and repurchases of common stock.

Market Risk Management

Overview

Market risk is the risk of loss in the value of our inventory, as well as certain other financial assets and financial liabilities, due to changes in market conditions. We employ a variety of risk measures, each described in the respective sections below, to monitor market risk. We hold inventory primarily for market making for our clients and for our investing and lending activities. Our inventory therefore changes based on client demands and our investment opportunities. Our inventory is accounted for at fair value and therefore fluctuates on a daily basis, with the related gains and losses included in "Market making" and "Other principal transactions." Categories of market risk include the following:

- Interest rate risk: results from exposures to changes in the level, slope and curvature of yield curves, the volatilities of interest rates, mortgage prepayment speeds and credit spreads;
- Equity price risk: results from exposures to changes in prices and volatilities of individual equities, baskets of equities and equity indices;
- Currency rate risk: results from exposures to changes in spot prices, forward prices and volatilities of currency rates; and
- Commodity price risk: results from exposures to changes in spot prices, forward prices and volatilities of commodities, such as crude oil, petroleum products, natural gas, electricity, and precious and base metals.

Managers in revenue-producing units are accountable for managing risk within prescribed limits. These managers have in-depth knowledge of their positions, markets and the instruments available to hedge their exposures.

Market Risk Management, which is independent of the revenue-producing units and reports to our chief risk officer, has primary responsibility for assessing, monitoring and managing market risk at the firm. We monitor and control risks through strong firmwide oversight and independent control and support functions across our global businesses.

Managers in revenue-producing units and Market Risk Management discuss market information, positions and estimated risk and loss scenarios on an ongoing basis.

Market Risk Management Process

We manage our market risk by diversifying exposures, controlling position sizes and establishing economic hedges in related securities or derivatives. This process includes:

- Accurate and timely exposure information incorporating multiple risk metrics;
- A dynamic limit setting framework; and
- Constant communication among revenue-producing units, risk managers and senior management.

Risk Measures. Market Risk Management produces risk measures and monitors them against market risk limits set by our risk committees. These measures reflect an extensive range of scenarios and the results are aggregated at product, business and firmwide levels.

We use a variety of risk measures to estimate the size of potential losses for both moderate and more extreme market moves over both short-term and long-term time horizons. Our primary risk measures are VaR, which is used for shorter-term periods, and stress tests. Our risk reports detail key risks, drivers and changes for each desk and business, and are distributed daily to senior management of both our revenue-producing units and our independent control and support functions.

Value-at-Risk. VaR is the potential loss in value due to adverse market movements over a defined time horizon with a specified confidence level. For assets and liabilities included in VaR, see "Financial Statement Linkages to Market Risk Measures." We typically employ a one-day time horizon with a 95% confidence level. We use a single VaR model which captures risks including interest rates, equity prices, currency rates and commodity prices. As such, VaR facilitates comparison across portfolios of different risk characteristics. VaR also captures the diversification of aggregated risk at the firmwide level.

We are aware of the inherent limitations to VaR and therefore use a variety of risk measures in our market risk management process. Inherent limitations to VaR include:

- VaR does not estimate potential losses over longer time horizons where moves may be extreme;
- VaR does not take account of the relative liquidity of different risk positions; and
- Previous moves in market risk factors may not produce accurate predictions of all future market moves.

When calculating VaR, we use historical simulations with full valuation of approximately 70,000 market factors. VaR is calculated at a position level based on simultaneously shocking the relevant market risk factors for that position. We sample from five years of historical data to generate the scenarios for our VaR calculation. The historical data is weighted so that the relative importance of the data reduces over time. This gives greater importance to more recent observations and reflects current asset volatilities, which improves the accuracy of our estimates of potential loss. As a result, even if our positions included in VaR were unchanged, our VaR would increase with increasing market volatility and vice versa.

Given its reliance on historical data, VaR is most effective in estimating risk exposures in markets in which there are no sudden fundamental changes or shifts in market conditions.

Our VaR measure does not include:

- Positions that are best measured and monitored using sensitivity measures; and
- The impact of changes in counterparty and our own credit spreads on derivatives, as well as changes in our own credit spreads on unsecured borrowings for which the fair value option was elected.

We perform daily backtesting of our VaR model (i.e., comparing daily trading net revenues to the VaR measure calculated as of the prior business day) at the firmwide level and for each of our businesses and major regulated subsidiaries.

Stress Testing. Stress testing is a method of determining the effect of various hypothetical stress scenarios on the firm. We use stress testing to examine risks of specific portfolios as well as the potential impact of significant risk exposures across the firm. We use a variety of stress testing techniques to calculate the potential loss from a wide range of market moves on our portfolios, including sensitivity analysis, scenario analysis and firmwide stress tests. The results of our various stress tests are analyzed together for risk management purposes.

Sensitivity analysis is used to quantify the impact of a market move in a single risk factor across all positions (e.g., equity prices or credit spreads) using a variety of defined market shocks, ranging from those that could be expected over a one-day time horizon up to those that could take many months to occur. We also use sensitivity analysis to quantify the impact of the default of any single entity, which captures the risk of large or concentrated exposures.

Scenario analysis is used to quantify the impact of a specified event, including how the event impacts multiple risk factors simultaneously. For example, for sovereign stress testing we calculate potential direct exposure associated with our sovereign inventory as well as the corresponding debt, equity and currency exposures associated with our non-sovereign inventory that may be impacted by the sovereign distress. When conducting scenario analysis, we typically consider a number of possible outcomes for each scenario, ranging from moderate to severely adverse market impacts. In addition, these stress tests are constructed using both historical events and forward-looking hypothetical scenarios.

Firmwide stress testing combines market, credit, operational and liquidity risks into a single combined scenario. Firmwide stress tests are primarily used to assess capital adequacy as part of our capital planning and stress testing process; however, we also ensure that firmwide stress testing is integrated into our risk governance framework. This includes selecting appropriate scenarios to use for our capital planning and stress testing process. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" above for further information.

Unlike VaR measures, which have an implied probability because they are calculated at a specified confidence level, there is generally no implied probability that our stress test scenarios will occur. Instead, stress tests are used to model both moderate and more extreme moves in underlying market factors. When estimating potential loss, we generally assume that our positions cannot be reduced or hedged (although experience demonstrates that we are generally able to do so).

Stress test scenarios are conducted on a regular basis as part of our routine risk management process and on an ad hoc basis in response to market events or concerns. Stress testing is an important part of our risk management process because it allows us to quantify our exposure to tail risks, highlight potential loss concentrations, undertake risk/reward analysis, and assess and mitigate our risk positions.

Limits. We use risk limits at various levels in the firm (including firmwide, business and product) to govern risk appetite by controlling the size of our exposures to market risk. Limits are set based on VaR and on a range of stress tests relevant to our exposures. Limits are reviewed frequently and amended on a permanent or temporary basis to reflect changing market conditions, business conditions or tolerance for risk.

The Risk Committee of the Board and the Firmwide Risk Committee approve market risk limits at firmwide and business levels and our divisional risk committees set sub-limits below the approved business-level risk limits. The purpose of the firmwide limits is to assist senior management in controlling our overall risk profile. Sub-limits set the desired maximum amount of exposure that may be managed by any particular business on a day-to-day basis without additional levels of senior management approval, effectively leaving day-to-day decisions to individual desk managers and traders. Accordingly, sub-limits are a management tool designed to ensure appropriate escalation rather than to establish maximum risk tolerance. Sub-limits also distribute risk among various businesses in a manner that is consistent with their level of activity and client demand, taking into account the relative performance of each area.

Our market risk limits are monitored daily by Market Risk Management, which is responsible for identifying and escalating, on a timely basis, instances where limits have been exceeded. The business-level limits that are set by the divisional risk committees are subject to the same scrutiny and limit escalation policy as the firmwide limits.

When a risk limit has been exceeded (e.g., due to changes in market conditions, such as increased volatilities or changes in correlations), it is escalated to the appropriate risk committee and remediated by an inventory reduction and/or a temporary or permanent increase to the risk limit.

Model Review and Validation

Our VaR and stress testing models are regularly reviewed by Market Risk Management and enhanced in order to incorporate changes in the composition of positions included in our market risk measures, as well as variations in market conditions. Prior to implementing significant changes to our assumptions and/or models, Model Risk Management performs model validations. Significant changes to our VaR and stress testing models are reviewed with our chief risk officer and chief financial officer, and approved by the Firmwide Risk Committee.

See "Model Risk Management" for further information about the review and validation of these models.

Systems

We have made a significant investment in technology to monitor market risk including:

- An independent calculation of VaR and stress measures;
- Risk measures calculated at individual position levels;
- Attribution of risk measures to individual risk factors of each position;
- The ability to report many different views of the risk measures (e.g., by desk, business, product type or legal entity); and
- The ability to produce ad hoc analyses in a timely manner.

Metrics

We analyze VaR at the firmwide level and a variety of more detailed levels, including by risk category, business, and region. The tables below present, by risk category, average daily VaR and period-end VaR, as well as the high and low VaR for the period. Diversification effect in the tables below represents the difference between total VaR and the sum of the VaRs for the four risk categories. This effect arises because the four market risk categories are not perfectly correlated.

The table below presents average daily VaR.

$ in millions	Year Ended December		
Risk Categories	**2015**	2014	2013
Interest rates	**$ 47**	$ 51	$ 63
Equity prices	**26**	26	32
Currency rates	**30**	19	17
Commodity prices	**20**	21	19
Diversification effect	**(47)**	(45)	(51)
Total	**$ 76**	$ 72	$ 80

Our average daily VaR increased to $76 million in 2015 from $72 million in 2014, reflecting an increase in the currency rates category due to higher levels of volatility, partially offset by a decrease in the interest rates category due to decreased exposures.

Our average daily VaR decreased to $72 million in 2014 from $80 million in 2013, primarily reflecting a decrease in the interest rates category due to decreased exposures and lower levels of volatility, and a decrease in the equity prices category principally due to lower levels of volatility. These decreases were partially offset by a decrease in the diversification benefit across risk categories.

The table below presents period-end VaR, and high and low VaR.

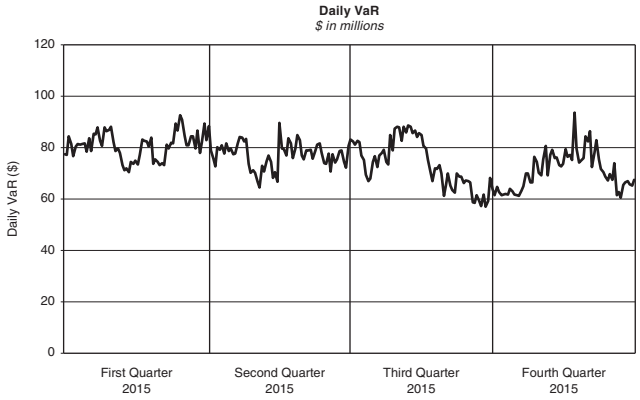
$ in millions	As of December		**Year Ended December 2015**	
Risk Categories	**2015**	2014	**High**	**Low**
Interest rates	**$ 43**	$ 53	**$62**	**$38**
Equity prices	**24**	19	**52**	**18**
Currency rates	**31**	24	**47**	**18**
Commodity prices	**17**	23	**38**	**13**
Diversification effect	**(48)**	(42)		
Total	**$ 67**	$ 77	**$94**	**$57**

Our daily VaR decreased to $67 million as of December 2015 from $77 million as of December 2014, primarily reflecting decreases in the interest rates and commodity prices categories due to decreased exposures, and an increase in the diversification benefit across risk categories. In addition, the currency rates and equity prices categories increased due to higher levels of volatility.

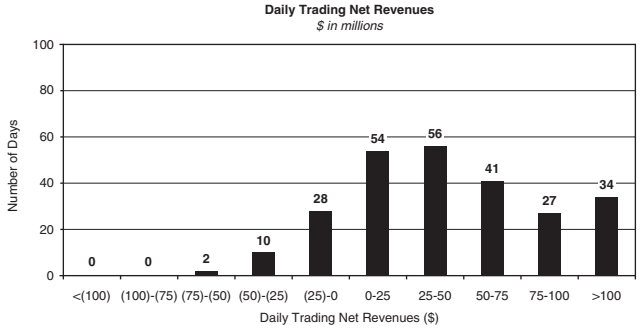
During 2015, the firmwide VaR risk limit was temporarily raised on two occasions in order to facilitate client transactions. Separately, in March 2015, the firmwide VaR risk limit was reduced, reflecting lower risk utilization over the last year.

During 2014, the firmwide VaR risk limit was not exceeded, raised or reduced.

The chart below reflects our daily VaR over the last four quarters.



The chart below presents the frequency distribution of our daily trading net revenues for substantially all positions included in VaR for 2015.



Daily trading net revenues are compared with VaR calculated as of the end of the prior business day. Trading losses incurred on a single day did not exceed our 95% one-day VaR during 2015 (i.e., a VaR exception). Trading losses incurred on a single day exceeded our 95% one-day VaR on one occasion during 2014.

During periods in which we have significantly more positive net revenue days than net revenue loss days, we expect to have fewer VaR exceptions because, under normal conditions, our business model generally produces positive net revenues. In periods in which our franchise revenues are adversely affected, we generally have more loss days, resulting in more VaR exceptions. The daily market-making revenues used to determine VaR exceptions reflect the impact of any intraday activity, including bid/offer net revenues, which are more likely than not to be positive by their nature.

Sensitivity Measures

Certain portfolios and individual positions are not included in VaR because VaR is not the most appropriate risk measure. Other sensitivity measures we use to analyze market risk are described below.

10% Sensitivity Measures. The table below presents market risk for inventory positions that are not included in VaR. The market risk of these positions is determined by estimating the potential reduction in net revenues of a 10% decline in the underlying asset value. Equity positions below relate to private and restricted public equity securities, including interests in funds that invest in corporate equities and real estate and interests in hedge funds, which are included in "Financial instruments owned, at fair value." Debt positions include interests in funds that invest in corporate mezzanine and senior debt instruments, loans backed by commercial and residential real estate, corporate bank loans and other corporate debt, including acquired portfolios of distressed loans. These debt positions are included in "Financial instruments owned, at fair value." See Note 6 to the consolidated financial statements for further information about cash instruments. These measures do not reflect diversification benefits across asset categories or across other market risk measures.

$ in millions	As of December	
Asset Categories	**2015**	2014
Equity	**$2,157**	$2,132
Debt	**1,479**	1,686
Total	**$3,636**	$3,818

Credit Spread Sensitivity on Derivatives and Borrowings. VaR excludes the impact of changes in counterparty and our own credit spreads on derivatives as well as changes in our own credit spreads on unsecured borrowings for which the fair value option was elected. The estimated sensitivity to a one basis point increase in credit spreads (counterparty and our own) on derivatives was a gain of $3 million (including hedges) as of both December 2015 and December 2014. In addition, the estimated sensitivity to a one basis point increase in our own credit spreads on unsecured borrowings for which the fair value option was elected was a gain of $17 million and $10 million (including hedges) as of December 2015 and December 2014, respectively. However, the actual net impact of a change in our own credit spreads is also affected by the liquidity, duration and convexity (as the sensitivity is not linear to changes in yields) of those unsecured borrowings for which the fair value option was elected, as well as the relative performance of any hedges undertaken.

Interest Rate Sensitivity. "Loans receivable" as of December 2015 and December 2014 were $45.41 billion and $28.94 billion, respectively, substantially all of which had floating interest rates. As of December 2015 and December 2014, the estimated sensitivity to a 100 basis point increase in interest rates on such loans was $396 million and $254 million, respectively, of additional interest income over a twelve-month period, which does not take into account the potential impact of an increase in costs to fund such loans. See Note 9 to the consolidated financial statements for further information about loans receivable.

Other Market Risk Considerations

In addition, as of December 2015 and December 2014, we had commitments and held loans for which we have obtained credit loss protection from Sumitomo Mitsui Financial Group, Inc. See Note 18 to the consolidated financial statements for further information about such lending commitments.

Additionally, we make investments accounted for under the equity method and we also make direct investments in real estate, both of which are included in "Other assets." Direct investments in real estate are accounted for at cost less accumulated depreciation. See Note 13 to the consolidated financial statements for information about "Other assets."

Financial Statement Linkages to Market Risk Measures

We employ a variety of risk measures, each described in the respective sections above, to monitor market risk across the consolidated statements of financial condition and consolidated statements of earnings. The related gains and losses on these positions are included in "Market making," "Other principal transactions," "Interest income" and "Interest expense."

The table below presents certain categories in our consolidated statements of financial condition and the market risk measures used to assess those assets and liabilities. Certain categories on the consolidated statements of financial condition are incorporated in more than one risk measure.

Categories on the Consolidated Statements of Financial Condition Included in Market Risk Measures	Market Risk Measures
Securities segregated for regulatory and other purposes, at fair value	• VaR
Collateralized agreements • Securities purchased under agreements to resell, at fair value • Securities borrowed, at fair value	• VaR
Receivables • Certain secured loans, at fair value • Loans receivable	• VaR • Interest Rate Sensitivity
Financial instruments owned, at fair value	• VaR • 10% Sensitivity Measures • Credit Spread Sensitivity — Derivatives
Collateralized financings • Securities sold under agreements to repurchase, at fair value • Securities loaned, at fair value • Other secured financings, at fair value	• VaR
Financial instruments sold, but not yet purchased, at fair value	• VaR • Credit Spread Sensitivity — Derivatives
Unsecured short-term borrowings and unsecured long-term borrowings, at fair value	• VaR • Credit Spread Sensitivity — Borrowings

Credit Risk Management

Overview

Credit risk represents the potential for loss due to the default or deterioration in credit quality of a counterparty (e.g., an OTC derivatives counterparty or a borrower) or an issuer of securities or other instruments we hold. Our exposure to credit risk comes mostly from client transactions in OTC derivatives and loans and lending commitments. Credit risk also comes from cash placed with banks, securities financing transactions (i.e., resale and repurchase agreements and securities borrowing and lending activities) and receivables from brokers, dealers, clearing organizations, customers and counterparties.

Credit Risk Management, which is independent of the revenue-producing units and reports to our chief risk officer, has primary responsibility for assessing, monitoring and managing credit risk at the firm. The Credit Policy Committee and the Firmwide Risk Committee establish and review credit policies and parameters. In addition, we hold other positions that give rise to credit risk (e.g., bonds held in our inventory and secondary bank loans). These credit risks are captured as a component of market risk measures, which are monitored and managed by Market Risk Management, consistent with other inventory positions. We also enter into derivatives to manage market risk exposures. Such derivatives also give rise to credit risk, which is monitored and managed by Credit Risk Management.

Credit Risk Management Process

Effective management of credit risk requires accurate and timely information, a high level of communication and knowledge of customers, countries, industries and products. Our process for managing credit risk includes:

- Approving transactions and setting and communicating credit exposure limits;
- Monitoring compliance with established credit exposure limits;
- Assessing the likelihood that a counterparty will default on its payment obligations;
- Measuring our current and potential credit exposure and losses resulting from counterparty default;
- Reporting of credit exposures to senior management, the Board and regulators;
- Use of credit risk mitigants, including collateral and hedging; and
- Communication and collaboration with other independent control and support functions such as operations, legal and compliance.

As part of the risk assessment process, Credit Risk Management performs credit reviews which include initial and ongoing analyses of our counterparties. For substantially all of our credit exposures, the core of our process is an annual counterparty credit review. A credit review is an independent analysis of the capacity and willingness of a counterparty to meet its financial obligations, resulting in an internal credit rating. The determination of internal credit ratings also incorporates assumptions with respect to the nature of and outlook for the counterparty's industry, and the economic environment. Senior personnel within Credit Risk Management, with expertise in specific industries, inspect and approve credit reviews and internal credit ratings.

Our global credit risk management systems capture credit exposure to individual counterparties and on an aggregate basis to counterparties and their subsidiaries (economic groups). These systems also provide management with comprehensive information on our aggregate credit risk by product, internal credit rating, industry, country and region.

Risk Measures and Limits

We measure our credit risk based on the potential loss in the event of non-payment by a counterparty using current and potential exposure. For derivatives and securities financing transactions, current exposure represents the amount presently owed to us after taking into account applicable netting and collateral arrangements while potential exposure represents our estimate of the future exposure that could arise over the life of a transaction based on market movements within a specified confidence level. Potential exposure also takes into account netting and collateral arrangements. For loans and lending commitments, the primary measure is a function of the notional amount of the position.

We use credit limits at various levels (counterparty, economic group, industry, country) to control the size of our credit exposures. Limits for counterparties and economic groups are reviewed regularly and revised to reflect changing risk appetites for a given counterparty or group of counterparties. Limits for industries and countries are based on our risk tolerance and are designed to allow for regular monitoring, review, escalation and management of credit risk concentrations. The Risk Committee of the Board and the Firmwide Risk Committee approve credit risk limits at the firmwide and business levels. Credit Risk Management sets credit limits for individual counterparties, economic groups, industries and countries. Policies authorized by the Firmwide Risk Committee and the Credit Policy Committee prescribe the level of formal approval required for us to assume credit exposure to a counterparty across all product areas, taking into account any applicable netting provisions, collateral or other credit risk mitigants.

Stress Tests

We use regular stress tests to calculate the credit exposures, including potential concentrations that would result from applying shocks to counterparty credit ratings or credit risk factors (e.g., currency rates, interest rates, equity prices). These shocks include a wide range of moderate and more extreme market movements. Some of our stress tests include shocks to multiple risk factors, consistent with the occurrence of a severe market or economic event. In the case of sovereign default, we estimate the direct impact of the default on our sovereign credit exposures, changes to our credit exposures arising from potential market moves in response to the default, and the impact of credit market deterioration on corporate borrowers and counterparties that may result from the sovereign default. Unlike potential exposure, which is calculated within a specified confidence level, with a stress test there is generally no assumed probability of these events occurring.

We run stress tests on a regular basis as part of our routine risk management processes and conduct tailored stress tests on an ad hoc basis in response to market developments. Stress tests are regularly conducted jointly with our market and liquidity risk functions.

Model Review and Validation

Our potential credit exposure and stress testing models, and any changes to such models or assumptions, are reviewed by Model Risk Management. See "Model Risk Management" for further information about the review and validation of these models.

Risk Mitigants

To reduce our credit exposures on derivatives and securities financing transactions, we may enter into netting agreements with counterparties that permit us to offset receivables and payables with such counterparties. We may also reduce credit risk with counterparties by entering into agreements that enable us to obtain collateral from them on an upfront or contingent basis and/or to terminate transactions if the counterparty's credit rating falls below a specified level. We monitor the fair value of the collateral on a daily basis to ensure that our credit exposures are appropriately collateralized. We seek to minimize exposures where there is a significant positive correlation between the creditworthiness of our counterparties and the market value of collateral we receive.

For loans and lending commitments, depending on the credit quality of the borrower and other characteristics of the transaction, we employ a variety of potential risk mitigants. Risk mitigants include: collateral provisions, guarantees, covenants, structural seniority of the bank loan claims and, for certain lending commitments, provisions in the legal documentation that allow us to adjust loan amounts, pricing, structure and other terms as market conditions change. The type and structure of risk mitigants employed can significantly influence the degree of credit risk involved in a loan or lending commitment.

When we do not have sufficient visibility into a counterparty's financial strength or when we believe a counterparty requires support from its parent, we may obtain third-party guarantees of the counterparty's obligations. We may also mitigate our credit risk using credit derivatives or participation agreements.

Credit Exposures

As of December 2015, our credit exposures increased as compared with December 2014, primarily reflecting increases in loans and lending commitments. The percentage of our credit exposure arising from non-investment-grade counterparties (based on our internally determined public rating agency equivalents) increased as compared with December 2014, primarily reflecting an increase in loans and lending commitments. During 2015, the number of counterparty defaults decreased as compared with 2014, and such defaults primarily occurred within loans and lending commitments. The total number of counterparty defaults remained low, representing less than 0.5% of all counterparties. Estimated losses associated with counterparty defaults were lower compared with the prior year and were not material to the firm. Our credit exposures are described further below.

Cash and Cash Equivalents. Cash and cash equivalents include both interest-bearing and non-interest-bearing deposits. To mitigate the risk of credit loss, we place substantially all of our deposits with highly-rated banks and central banks.

OTC Derivatives. Our credit exposure on OTC derivatives arises primarily from our market-making activities. As a market maker, we enter into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. We also enter into derivatives to manage market risk exposures. We manage our credit exposure on OTC derivatives using the credit risk process, measures, limits and risk mitigants described above.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement. Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements. We generally enter into OTC derivatives transactions under bilateral collateral arrangements with daily exchange of collateral. As credit risk is an essential component of fair value, we include a credit valuation adjustment (CVA) in the fair value of derivatives to reflect counterparty credit risk, as described in Note 7 to the consolidated financial statements. CVA is a function of the present value of expected exposure, the probability of counterparty default and the assumed recovery upon default.

The table below presents the distribution of our exposure to OTC derivatives by tenor, both before and after the effect of collateral and netting agreements. In the table below:

- Tenor is based on expected duration for mortgage-related credit derivatives and generally on remaining contractual maturity for other derivatives.
- Receivable and payable balances for the same counterparty across tenor categories are netted under enforceable netting agreements, and cash collateral received is netted under enforceable credit support agreements.
- Receivable and payable balances with the same counterparty in the same tenor category are netted within such tenor category.
- Net credit exposure represents OTC derivative assets, all of which are included in "Financial instruments owned, at fair value," less cash collateral and the fair value of securities collateral, primarily U.S. government and federal agency obligations and non-U.S. government and agency obligations, received under credit support agreements, which management considers when determining credit risk, but such collateral is not eligible for netting under U.S. GAAP.

$ in millions	Investment-Grade	Non-Investment-Grade / Unrated	Total
As of December 2015			
Less than 1 year	**$ 23,950**	**$ 3,965**	**$ 27,915**
1 - 5 years	**35,249**	**6,749**	**41,998**
Greater than 5 years	**85,394**	**4,713**	**90,107**
Total	**144,593**	**15,427**	**160,020**
Netting	**(103,087)**	**(6,507)**	**(109,594)**
OTC derivative assets	**$ 41,506**	**$ 8,920**	**$ 50,426**
Net credit exposure	**$ 27,001**	**$ 7,368**	**$ 34,369**
As of December 2014			
Less than 1 year	$ 30,147	$ 5,038	$ 35,185
1 - 5 years	40,787	6,589	47,376
Greater than 5 years	96,679	5,820	102,499
Total	167,613	17,447	185,060
Netting	(117,144)	(7,179)	(124,323)
OTC derivative assets	$ 50,469	$10,268	$ 60,737
Net credit exposure	$ 34,658	$ 8,694	$ 43,352

The tables below present the distribution of our exposure to OTC derivatives by tenor and our internally determined public rating agency equivalents.

	Investment-Grade				
$ in millions	AAA/ Aaa	AA/ Aa2	A/ A2	BBB/ Baa2	Total
As of December 2015					
Less than 1 year	**$ 411**	**$ 6,059**	**$ 10,051**	**$ 7,429**	**$ 23,950**
1 - 5 years	**1,214**	**10,374**	**16,995**	**6,666**	**35,249**
Greater than 5 years	**3,205**	**40,879**	**20,507**	**20,803**	**85,394**
Total	**4,830**	**57,312**	**47,553**	**34,898**	**144,593**
Netting	**(2,202)**	**(40,872)**	**(36,847)**	**(23,166)**	**(103,087)**
OTC derivative assets	**$ 2,628**	**$ 16,440**	**$ 10,706**	**$ 11,732**	**$ 41,506**
Net credit exposure	**$ 2,427**	**$ 10,269**	**$ 6,652**	**$ 7,653**	**$ 27,001**
As of December 2014					
Less than 1 year	$ 1,119	$ 8,260	$ 13,719	$ 7,049	$ 30,147
1 - 5 years	898	12,182	18,949	8,758	40,787
Greater than 5 years	3,500	40,443	26,649	26,087	96,679
Total	5,517	60,885	59,317	41,894	167,613
Netting	(2,163)	(42,513)	(44,147)	(28,321)	(117,144)
OTC derivative assets	$ 3,354	$ 18,372	$ 15,170	$ 13,573	$ 50,469
Net credit exposure	$ 3,135	$ 12,453	$ 9,493	$ 9,577	$ 34,658

	Non-Investment-Grade / Unrated		
$ in millions	BB/Ba2 or lower	Unrated	Total
As of December 2015			
Less than 1 year	**$ 3,657**	**$ 308**	**$ 3,965**
1 - 5 years	**6,505**	**244**	**6,749**
Greater than 5 years	**4,434**	**279**	**4,713**
Total	**14,596**	**831**	**15,427**
Netting	**(6,472)**	**(35)**	**(6,507)**
OTC derivative assets	**$ 8,124**	**$ 796**	**$ 8,920**
Net credit exposure	**$ 6,769**	**$ 599**	**$ 7,368**
As of December 2014			
Less than 1 year	$ 4,959	$ 79	$ 5,038
1 - 5 years	6,226	363	6,589
Greater than 5 years	5,660	160	5,820
Total	16,845	602	17,447
Netting	(7,062)	(117)	(7,179)
OTC derivative assets	$ 9,783	$ 485	$10,268
Net credit exposure	$ 8,506	$ 188	$ 8,694

Lending and Financing Activities. We manage our lending and financing activities using the credit risk process, measures, limits and risk mitigants described above. Other lending positions, including secondary trading positions, are risk-managed as a component of market risk.

- **Lending Activities.** Our lending activities include lending to investment-grade and non-investment-grade corporate borrowers. Loans and lending commitments associated with these activities are principally used for operating liquidity and general corporate purposes or in connection with contingent acquisitions. Our lending activities also include extending loans to borrowers that are secured by commercial and other real estate. See the tables below for further information about our credit exposures associated with these lending activities.
- **Securities Financing Transactions.** We enter into securities financing transactions in order to, among other things, facilitate client activities, invest excess cash, acquire securities to cover short positions and finance certain firm activities. We bear credit risk related to resale agreements and securities borrowed only to the extent that cash advanced or the value of securities pledged or delivered to the counterparty exceeds the value of the collateral received. We also have credit exposure on repurchase agreements and securities loaned to the extent that the value of securities pledged or delivered to the counterparty for these transactions exceeds the amount of cash or collateral received. Securities collateral obtained for securities financing transactions primarily includes U.S. government and federal agency obligations and non-U.S. government and agency obligations. We had approximately $27 billion and $36 billion as of December 2015 and December 2014, respectively, of credit exposure related to securities financing transactions reflecting both netting agreements and collateral that management considers when determining credit risk. As of both December 2015 and December 2014, substantially all of our credit exposure related to securities financing transactions was with investment-grade financial institutions, funds and governments, primarily located in the Americas and EMEA.
- **Other Credit Exposures.** We are exposed to credit risk from our receivables from brokers, dealers and clearing organizations and customers and counterparties. Receivables from brokers, dealers and clearing organizations are primarily comprised of initial margin placed with clearing organizations and receivables related to sales of securities which have traded, but not yet settled. These receivables generally have minimal credit risk due to the low probability of clearing organization default and the short-term nature of receivables related to securities settlements. Receivables from customers and counterparties are generally comprised of collateralized receivables related to customer securities transactions and generally have minimal credit risk due to both the value of the collateral received and the short-term nature of these receivables. Our net credit exposure related to these activities was approximately $33 billion and $26 billion as of December 2015 and December 2014, respectively, and was primarily comprised of initial margin (both cash and securities) placed with investment-grade clearing organizations. The regional breakdown of our net credit exposure related to these activities was approximately 44% and 48% in the Americas, approximately 45% and 39% in EMEA, and approximately 11% and 13% in Asia as of December 2015 and December 2014, respectively.

  In addition, we extend other loans and lending commitments to our private wealth management clients that are primarily secured by residential real estate, securities or other assets. We also purchase performing and distressed loans backed by residential real estate and consumer loans. The gross exposure related to such loans and lending commitments was approximately $28 billion and $17 billion as of December 2015 and December 2014, respectively, and was substantially all concentrated in the Americas region. The fair value of the collateral received against such loans and lending commitments generally exceeded the gross exposure as of both December 2015 and December 2014.

Credit Exposure by Industry, Region and Credit Quality

The tables below present our credit exposure related to cash, OTC derivatives, and loans and lending commitments (excluding credit exposures described above in "Securities Financing Transactions" and "Other Credit Exposures") broken down by industry, region and credit quality.

	Cash as of December	
$ in millions	**2015**	2014
Credit Exposure by Industry		
Funds	**$ 176**	$ 96
Financial Institutions	**12,799**	12,469
Sovereign	**62,130**	45,029
Real Estate	**—**	6
Total	**$75,105**	$57,600
Credit Exposure by Region		
Americas	**$54,846**	$45,599
EMEA	**8,496**	1,666
Asia	**11,763**	10,335
Total	**$75,105**	$57,600
Credit Exposure by Credit Quality (Credit Rating Equivalent)		
AAA/Aaa	**$55,626**	$38,778
AA/Aa2	**4,286**	4,598
A/A2	**14,243**	13,346
BBB/Baa2	**855**	730
BB/Ba2 or lower	**95**	148
Total	**$75,105**	$57,600

	OTC Derivatives as of December	
$ in millions	**2015**	2014
Credit Exposure by Industry		
Funds	**$10,899**	$13,114
Financial Institutions	**13,148**	15,051
Consumer, Retail & Healthcare	**1,553**	3,325
Sovereign	**7,566**	10,004
Municipalities & Nonprofit	**3,984**	4,303
Natural Resources & Utilities	**4,846**	5,741
Real Estate	**205**	407
Technology, Media & Telecommunications	**1,839**	2,995
Diversified Industrials	**5,008**	4,321
Other	**1,378**	1,476
Total	**$50,426**	$60,737
Credit Exposure by Region		
Americas	**$17,724**	$22,032
EMEA	**27,113**	31,295
Asia	**5,589**	7,410
Total	**$50,426**	$60,737
Credit Exposure by Credit Quality (Credit Rating Equivalent)		
AAA/Aaa	**$ 2,628**	$ 3,354
AA/Aa2	**16,440**	18,372
A/A2	**10,706**	15,170
BBB/Baa2	**11,732**	13,573
BB/Ba2 or lower	**8,124**	9,783
Unrated	**796**	485
Total	**$50,426**	$60,737

	Loans and Lending Commitments as of December	
$ in millions	**2015**	2014
Credit Exposure by Industry		
Funds	**$ 2,595**	$ 1,706
Financial Institutions	**14,063**	11,316
Consumer, Retail & Healthcare	**31,944**	30,216
Sovereign	**419**	450
Municipalities & Nonprofit	**628**	541
Natural Resources & Utilities	**24,476**	24,275
Real Estate	**15,045**	12,366
Technology, Media & Telecommunications	**36,444**	20,633
Diversified Industrials	**20,047**	16,392
Other	**13,941**	11,998
Total	**$159,602**	$129,893
Credit Exposure by Region		
Americas	**$121,271**	$ 91,378
EMEA	**33,061**	34,397
Asia	**5,270**	4,118
Total	**$159,602**	$129,893
Credit Exposure by Credit Quality (Credit Rating Equivalent)		
AAA/Aaa	**$ 4,148**	$ 3,969
AA/Aa2	**7,716**	8,097
A/A2	**27,212**	22,623
BBB/Baa2	**43,937**	35,706
BB/Ba2 or lower	**76,049**	58,670
Unrated	**540**	828
Total	**$159,602**	$129,893

Selected Exposures

The section below provides information about our credit and market exposure to certain jurisdictions and industries that have had heightened focus due to recent events and broad market concerns. Credit exposure represents the potential for loss due to the default or deterioration in credit quality of a counterparty or borrower. Market exposure represents the potential for loss in value of our long and short inventory due to changes in market prices. There is no overlap between the credit and market exposures in the amounts below.

Country Exposures. The decline in oil prices continues to raise concerns about Venezuela and Nigeria, and their sovereign debt. The political situations in Iraq and Russia, as well as the decline in oil prices, have led to continued concerns about their economic and financial stability. In addition, Argentina's default on its sovereign debt coupled with its contracting economy has raised concerns about its long term financial stability. Separately, signs of slowing growth in China and deteriorating macroeconomic conditions in Brazil have led to heightened focus and broad market concerns relating to these countries.

As of December 2015, our total credit exposure to Russia was $292 million and primarily related to loans and lending commitments. Such exposure was substantially all with non-sovereign counterparties or borrowers. In addition, our total market exposure to Russia as of December 2015 was $791 million, which was primarily with non-sovereign issuers or underliers and was primarily related to equities and credit derivatives.

As of December 2015, our total credit exposure to China was $3.7 billion and primarily related to deposits with banks and loans and lending commitments. Such exposure was primarily with non-sovereign counterparties or borrowers. In addition, our total market exposure to China as of December 2015 was $2.5 billion and was primarily related to equities.

As of December 2015, our total credit exposure to Brazil was $3.2 billion and primarily related to secured receivables and initial margin placed with clearing organizations. Substantially all of such exposure was with non-sovereign counterparties or borrowers. In addition, our total market exposure to Brazil as of December 2015 was $1.9 billion and was primarily related to sovereign debt.

Our total credit and market exposure to each of Argentina, Iraq, Venezuela and Nigeria as of December 2015 was not material.

We have a comprehensive framework to monitor, measure and assess our country exposures and to determine our risk appetite. We determine the country of risk by the location of the counterparty, issuer or underlier's assets, where they generate revenue, the country in which they are headquartered, the jurisdiction where a claim against them could be enforced, and/or the government whose policies affect their ability to repay their obligations. We monitor our credit exposure to a specific country both at the individual counterparty level as well as at the aggregate country level.

We use regular stress tests, described above, to calculate the credit exposures, including potential concentrations that would result from applying shocks to counterparty credit ratings or credit risk factors. To supplement these regular stress tests, we also conduct tailored stress tests on an ad hoc basis in response to specific market events that we deem significant. These stress tests are designed to estimate the direct impact of the event on our credit and market exposures resulting from shocks to risk factors including, but not limited to, currency rates, interest rates, and equity prices. We also utilize these stress tests to estimate the indirect impact of certain hypothetical events on our country exposures, such as the impact of credit market deterioration on corporate borrowers and counterparties along with the shocks to the risk factors described above. The parameters of these shocks vary based on the scenario reflected in each stress test. We review estimated losses produced by the stress tests in order to understand their magnitude, highlight potential loss concentrations, and assess and mitigate our exposures where necessary.

See "Stress Tests" above, "Liquidity Risk Management — Liquidity Stress Tests" and "Market Risk Management — Stress Testing" for further information about stress tests.

Industry Exposures. Significant declines in the price of oil have led to market concerns regarding the creditworthiness of certain companies in the oil and gas industry. As of December 2015, our credit exposure to oil and gas companies related to loans and lending commitments was $10.6 billion ($1.8 billion of loans and $8.8 billion of lending commitments). Such exposure included $4.2 billion of exposure to non-investment-grade counterparties ($1.5 billion related to loans and $2.7 billion related to lending commitments). In addition, we have exposure to our clients in the oil and gas industry arising from derivatives. As of December 2015, our credit exposure related to derivatives and receivables with oil and gas companies was $1.9 billion, primarily with investment-grade counterparties. As of December 2015, our market exposure related to oil and gas companies was $(677) million, which was primarily to investment-grade issuers or underliers.

Operational Risk Management

Overview

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Our exposure to operational risk arises from routine processing errors as well as extraordinary incidents, such as major systems failures or legal and regulatory matters. Potential types of loss events related to internal and external operational risk include:

- Clients, products and business practices;
- Execution, delivery and process management;
- Business disruption and system failures;
- Employment practices and workplace safety;
- Damage to physical assets;
- Internal fraud; and
- External fraud.

We maintain a comprehensive control framework designed to provide a well-controlled environment to minimize operational risks. The Firmwide Operational Risk Committee provides oversight of the ongoing development and implementation of our operational risk policies and framework. Operational Risk Management is a risk management function independent of our revenue-producing units, reports to our chief risk officer, and is responsible for developing and implementing policies, methodologies and a formalized framework for operational risk management with the goal of minimizing our exposure to operational risk.

Operational Risk Management Process

Managing operational risk requires timely and accurate information as well as a strong control culture. We seek to manage our operational risk through:

- Training, supervision and development of our people;
- Active participation of senior management in identifying and mitigating key operational risks across the firm;
- Independent control and support functions that monitor operational risk on a daily basis, and implementation of extensive policies and procedures, and controls designed to prevent the occurrence of operational risk events;
- Proactive communication between our revenue-producing units and our independent control and support functions; and
- A network of systems throughout the firm to facilitate the collection of data used to analyze and assess our operational risk exposure.

We combine top-down and bottom-up approaches to manage and measure operational risk. From a top-down perspective, our senior management assesses firmwide and business-level operational risk profiles. From a bottom-up perspective, revenue-producing units and independent control and support functions are responsible for risk management on a day-to-day basis, including identifying, mitigating, and escalating operational risks to senior management.

Our operational risk framework is in part designed to comply with the operational risk measurement rules under the Revised Capital Framework and has evolved based on the changing needs of our businesses and regulatory guidance. Our framework comprises the following practices:

- Risk identification and reporting;
- Risk measurement; and
- Risk monitoring.

Internal Audit performs an independent review of our operational risk framework, including our key controls, processes and applications, on an annual basis to assess the effectiveness of our framework.

Risk Identification and Reporting

The core of our operational risk management framework is risk identification and reporting. We have a comprehensive data collection process, including firmwide policies and procedures, for operational risk events.

We have established policies that require managers in our revenue-producing units and our independent control and support functions to escalate operational risk events. When operational risk events are identified, our policies require that the events be documented and analyzed to determine whether changes are required in our systems and/or processes to further mitigate the risk of future events.

We have established thresholds to monitor the impact of an operational risk event, including single loss events and cumulative losses over a twelve-month period, as well as escalation protocols. We also provide periodic operational risk reports, which include incidents that breach escalation thresholds, to senior management, firmwide and divisional risk committees and the Risk Committee of the Board.

In addition, our firmwide systems capture internal operational risk event data, key metrics such as transaction volumes, and statistical information such as performance trends. We use an internally-developed operational risk management application to aggregate and organize this information. Managers from both revenue-producing units and independent control and support functions analyze the information to evaluate operational risk exposures and identify businesses, activities or products with heightened levels of operational risk. We also provide periodic operational risk reports to senior management, risk committees and the Board.

Risk Measurement

We measure our operational risk exposure over a twelve-month time horizon using both statistical modeling and scenario analyses, which involve qualitative assessments of the potential frequency and extent of potential operational risk losses, for each of our businesses. Operational risk measurement incorporates qualitative and quantitative assessments of factors including:

- Internal and external operational risk event data;
- Assessments of our internal controls;
- Evaluations of the complexity of our business activities;
- The degree of and potential for automation in our processes;
- New product information;
- The legal and regulatory environment;
- Changes in the markets for our products and services, including the diversity and sophistication of our customers and counterparties; and
- Liquidity of the capital markets and the reliability of the infrastructure that supports the capital markets.

The results from these scenario analyses are used to monitor changes in operational risk and to determine business lines that may have heightened exposure to operational risk. These analyses ultimately are used in the determination of the appropriate level of operational risk capital to hold.

Risk Monitoring

We evaluate changes in the operational risk profile of the firm and its businesses, including changes in business mix or jurisdictions in which we operate, by monitoring the factors noted above at a firmwide level. We have both detective and preventive internal controls, which are designed to reduce the frequency and severity of operational risk losses and the probability of operational risk events. We monitor the results of assessments and independent internal audits of these internal controls.

Model Review and Validation

The statistical models utilized by Operational Risk Management are subject to independent review and validation by Model Risk Management. See "Model Risk Management" for further information about the review and validation of these models.

Model Risk Management

Overview

Model risk is the potential for adverse consequences from decisions made based on model outputs that may be incorrect or used inappropriately. We rely on quantitative models across our business activities primarily to value certain financial assets and liabilities, to monitor and manage our risk, and to measure and monitor our regulatory capital.

Our model risk management framework is managed through a governance structure and risk management controls, which encompass standards designed to ensure we maintain a comprehensive model inventory, including risk assessment and classification, sound model development practices, independent review and model-specific usage controls. The Firmwide Risk Committee and the Firmwide Model Risk Control Committee oversee our model risk management framework. Model Risk Management, which is independent of model developers, model owners and model users, reports to our chief risk officer, is responsible for identifying and reporting significant risks associated with models, and provides periodic updates to senior management, risk committees and the Risk Committee of the Board.

Model Review and Validation

Model Risk Management consists of quantitative professionals who perform an independent review, validation and approval of our models. This review includes an analysis of the model documentation, independent testing, an assessment of the appropriateness of the methodology used, and verification of compliance with model development and implementation standards. Model Risk Management reviews all existing models on an annual basis, as well as new models or significant changes to models.

The model validation process incorporates a review of models and trade and risk parameters across a broad range of scenarios (including extreme conditions) in order to critically evaluate and verify:

- The model's conceptual soundness, including the reasonableness of model assumptions, and suitability for intended use;
- The testing strategy utilized by the model developers to ensure that the models function as intended;
- The suitability of the calculation techniques incorporated in the model;
- The model's accuracy in reflecting the characteristics of the related product and its significant risks;
- The model's consistency with models for similar products; and
- The model's sensitivity to input parameters and assumptions.

See "Critical Accounting Policies — Fair Value — Review of Valuation Models," "Liquidity Risk Management," "Market Risk Management," "Credit Risk Management" and "Operational Risk Management" for further information about our use of models within these areas.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Quantitative and qualitative disclosures about market risk are set forth under "Management's Discussion and Analysis of Financial Condition and Results of Operations — Overview and Structure of Risk Management" in Part II, Item 7 of the 2015 Form 10-K.

Item 8. Financial Statements and Supplementary Data

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Management's Report on Internal Control over Financial Reporting

Management of The Goldman Sachs Group, Inc., together with its consolidated subsidiaries (the firm), is responsible for establishing and maintaining adequate internal control over financial reporting. The firm's internal control over financial reporting is a process designed under the supervision of the firm's principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the firm's financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles.

As of December 31, 2015, management conducted an assessment of the firm's internal control over financial reporting based on the framework established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management has determined that the firm's internal control over financial reporting as of December 31, 2015 was effective.

Our internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets; provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of management and the directors of the firm; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the firm's assets that could have a material effect on our financial statements.

The firm's internal control over financial reporting as of December 31, 2015 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report appearing on page 115, which expresses an unqualified opinion on the effectiveness of the firm's internal control over financial reporting as of December 31, 2015.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and the Shareholders of
The Goldman Sachs Group, Inc.:

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of The Goldman Sachs Group, Inc. and its subsidiaries (the Company) at December 31, 2015 and 2014, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2015, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing on page 114. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PRICEWATERHOUSECOOPERS LLP

New York, New York
February 19, 2016

Consolidated Statements of Earnings

in millions, except per share amounts	Year Ended December 2015	2014	2013
Revenues			
Investment banking	**$ 7,027**	$ 6,464	$ 6,004
Investment management	**5,868**	5,748	5,194
Commissions and fees	**3,320**	3,316	3,255
Market making	**9,523**	8,365	9,368
Other principal transactions	**5,018**	6,588	6,993
Total non-interest revenues	**30,756**	30,481	30,814
Interest income	**8,452**	9,604	10,060
Interest expense	**5,388**	5,557	6,668
Net interest income	**3,064**	4,047	3,392
Net revenues, including net interest income	**33,820**	34,528	34,206
Operating expenses			
Compensation and benefits	**12,678**	12,691	12,613
Brokerage, clearing, exchange and distribution fees	**2,576**	2,501	2,341
Market development	**557**	549	541
Communications and technology	**806**	779	776
Depreciation and amortization	**991**	1,337	1,322
Occupancy	**772**	827	839
Professional fees	**963**	902	930
Insurance reserves	**—**	—	176
Other expenses	**5,699**	2,585	2,931
Total non-compensation expenses	**12,364**	9,480	9,856
Total operating expenses	**25,042**	22,171	22,469
Pre-tax earnings	**8,778**	12,357	11,737
Provision for taxes	**2,695**	3,880	3,697
Net earnings	**6,083**	8,477	8,040
Preferred stock dividends	**515**	400	314
Net earnings applicable to common shareholders	**$ 5,568**	$ 8,077	$ 7,726
Earnings per common share			
Basic	**$ 12.35**	$ 17.55	$ 16.34
Diluted	**12.14**	17.07	15.46
Average common shares outstanding			
Basic	**448.9**	458.9	471.3
Diluted	**458.6**	473.2	499.6

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Comprehensive Income

	Year Ended December		
$ in millions	**2015**	2014	2013
Net earnings	**$6,083**	$8,477	$8,040
Other comprehensive income/(loss) adjustments, net of tax:			
Currency translation	**(114)**	(109)	(50)
Pension and postretirement liabilities	**139**	(102)	38
Available-for-sale securities	**—**	—	(327)
Cash flow hedges	**—**	(8)	8
Other comprehensive income/(loss)	**25**	(219)	(331)
Comprehensive income	**$6,108**	$8,258	$7,709

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Financial Condition

$ in millions, except per share amounts	As of December 2015	2014
Assets		
Cash and cash equivalents	**$ 75,105**	$ 57,600
Cash and securities segregated for regulatory and other purposes (includes $38,504 and $34,291 at fair value as of December 2015 and December 2014, respectively)	**56,838**	51,716
Collateralized agreements:		
Securities purchased under agreements to resell and federal funds sold (includes $119,450 and $126,036 at fair value as of December 2015 and December 2014, respectively)	**120,905**	127,938
Securities borrowed (includes $69,801 and $66,769 at fair value as of December 2015 and December 2014, respectively)	**172,099**	160,722
Receivables:		
Brokers, dealers and clearing organizations	**25,453**	30,671
Customers and counterparties (includes $4,992 and $6,944 at fair value as of December 2015 and December 2014, respectively)	**46,430**	63,808
Loans receivable	**45,407**	28,938
Financial instruments owned, at fair value (includes $54,426 and $64,473 pledged as collateral as of December 2015 and December 2014, respectively)	**293,940**	312,248
Other assets	**25,218**	22,201
Total assets	**$861,395**	$855,842
Liabilities and shareholders' equity		
Deposits (includes $14,680 and $13,523 at fair value as of December 2015 and December 2014, respectively)	**$ 97,519**	$ 82,880
Collateralized financings:		
Securities sold under agreements to repurchase, at fair value	**86,069**	88,215
Securities loaned (includes $466 and $765 at fair value as of December 2015 and December 2014, respectively)	**3,614**	5,570
Other secured financings (includes $23,207 and $21,450 at fair value as of December 2015 and December 2014, respectively)	**24,753**	22,809
Payables:		
Brokers, dealers and clearing organizations	**5,406**	6,636
Customers and counterparties	**204,956**	206,936
Financial instruments sold, but not yet purchased, at fair value	**115,248**	132,083
Unsecured short-term borrowings, including the current portion of unsecured long-term borrowings (includes $17,743 and $18,826 at fair value as of December 2015 and December 2014, respectively)	**42,787**	44,539
Unsecured long-term borrowings (includes $22,273 and $16,005 at fair value as of December 2015 and December 2014, respectively)	**175,422**	167,302
Other liabilities and accrued expenses (includes $1,253 and $831 at fair value as of December 2015 and December 2014, respectively)	**18,893**	16,075
Total liabilities	**774,667**	773,045
Commitments, contingencies and guarantees		
Shareholders' equity		
Preferred stock, par value $0.01 per share; aggregate liquidation preference of $11,200 and $9,200 as of December 2015 and December 2014, respectively	**11,200**	9,200
Common stock, par value $0.01 per share; 4,000,000,000 shares authorized, 863,976,731 and 852,784,764 shares issued as of December 2015 and December 2014, respectively, and 419,480,736 and 430,259,102 shares outstanding as of December 2015 and December 2014, respectively	**9**	9
Share-based awards	**4,151**	3,766
Nonvoting common stock, par value $0.01 per share; 200,000,000 shares authorized, no shares issued and outstanding	**—**	—
Additional paid-in capital	**51,340**	50,049
Retained earnings	**83,386**	78,984
Accumulated other comprehensive loss	**(718)**	(743)
Stock held in treasury, at cost, par value $0.01 per share; 444,495,997 and 422,525,664 shares as of December 2015 and December 2014, respectively	**(62,640)**	(58,468)
Total shareholders' equity	**86,728**	82,797
Total liabilities and shareholders' equity	**$861,395**	$855,842

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Changes in Shareholders' Equity

	Year Ended December		
$ in millions	**2015**	2014	2013
Preferred stock			
Balance, beginning of year	**$ 9,200**	$ 7,200	$ 6,200
Issued	**2,000**	2,000	1,000
Balance, end of year	**11,200**	9,200	7,200
Common stock			
Balance, beginning of year	**9**	8	8
Issued	**—**	1	—
Balance, end of year	**9**	9	8
Share-based awards			
Balance, beginning of year	**3,766**	3,839	3,298
Issuance and amortization of share-based awards	**2,308**	2,079	2,017
Delivery of common stock underlying share-based awards	**(1,742)**	(1,725)	(1,378)
Forfeiture of share-based awards	**(72)**	(92)	(79)
Exercise of share-based awards	**(109)**	(335)	(19)
Balance, end of year	**4,151**	3,766	3,839
Additional paid-in capital			
Balance, beginning of year	**50,049**	48,998	48,030
Delivery of common stock underlying share-based awards	**2,092**	2,206	1,483
Cancellation of share-based awards in satisfaction of withholding tax requirements	**(1,198)**	(1,922)	(599)
Preferred stock issuance costs	**(7)**	(20)	(9)
Excess net tax benefit related to share-based awards	**406**	788	94
Cash settlement of share-based awards	**(2)**	(1)	(1)
Balance, end of year	**51,340**	50,049	48,998
Retained earnings			
Balance, beginning of year	**78,984**	71,961	65,223
Net earnings	**6,083**	8,477	8,040
Dividends and dividend equivalents declared on common stock and share-based awards	**(1,166)**	(1,054)	(988)
Dividends declared on preferred stock	**(515)**	(400)	(314)
Balance, end of year	**83,386**	78,984	71,961
Accumulated other comprehensive loss			
Balance, beginning of year	**(743)**	(524)	(193)
Other comprehensive income/(loss)	**25**	(219)	(331)
Balance, end of year	**(718)**	(743)	(524)
Stock held in treasury, at cost			
Balance, beginning of year	**(58,468)**	(53,015)	(46,850)
Repurchased	**(4,195)**	(5,469)	(6,175)
Reissued	**32**	49	40
Other	**(9)**	(33)	(30)
Balance, end of year	**(62,640)**	(58,468)	(53,015)
Total shareholders' equity	**$ 86,728**	$ 82,797	$ 78,467

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows

$ in millions	Year Ended December 2015	2014	2013
Cash flows from operating activities			
Net earnings	**$ 6,083**	$ 8,477	$ 8,040
Adjustments to reconcile net earnings to net cash provided by/(used for) operating activities			
Depreciation and amortization	**991**	1,337	1,322
Deferred income taxes	**425**	495	29
Share-based compensation	**2,272**	2,085	2,015
Gain on sale of European insurance business	**—**	—	(211)
Gain related to extinguishment of junior subordinated debt	**(34)**	(289)	—
Changes in operating assets and liabilities			
Cash and securities segregated for regulatory and other purposes	**(5,123)**	(2,046)	(143)
Receivables and payables (excluding loans receivable), net	**19,132**	12,328	(3,682)
Collateralized transactions (excluding other secured financings), net	**(9,005)**	(52,104)	(51,669)
Financial instruments owned, at fair value	**14,472**	27,547	51,079
Financial instruments sold, but not yet purchased, at fair value	**(16,835)**	4,642	933
Other, net	**(5,417)**	(10,095)	(3,170)
Net cash provided by/(used for) operating activities	**6,961**	(7,623)	4,543
Cash flows from investing activities			
Purchase of property, leasehold improvements and equipment	**(1,833)**	(678)	(706)
Proceeds from sales of property, leasehold improvements and equipment	**228**	30	62
Business acquisitions, net of cash acquired	**(1,808)**	(1,732)	(2,274)
Proceeds from sales of investments	**1,019**	1,514	2,503
Purchase of available-for-sale securities	**—**	—	(738)
Proceeds from sales of available-for-sale securities	**—**	—	817
Loans receivable, net	**(16,180)**	(14,043)	(8,392)
Net cash used for investing activities	**(18,574)**	(14,909)	(8,728)
Cash flows from financing activities			
Unsecured short-term borrowings, net	**(369)**	1,659	1,336
Other secured financings (short-term), net	**(867)**	(837)	(7,272)
Proceeds from issuance of other secured financings (long-term)	**10,349**	6,900	6,604
Repayment of other secured financings (long-term), including the current portion	**(6,502)**	(7,636)	(3,630)
Proceeds from issuance of unsecured long-term borrowings	**44,595**	39,857	30,851
Repayment of unsecured long-term borrowings, including the current portion	**(29,520)**	(28,138)	(30,473)
Purchase of trust preferred securities	**(1)**	(1,611)	—
Derivative contracts with a financing element, net	**(47)**	643	874
Deposits, net	**14,639**	12,201	683
Common stock repurchased	**(4,135)**	(5,469)	(6,175)
Dividends and dividend equivalents paid on common stock, preferred stock and share-based awards	**(1,681)**	(1,454)	(1,302)
Proceeds from issuance of preferred stock, net of issuance costs	**1,993**	1,980	991
Proceeds from issuance of common stock, including exercise of share-based awards	**259**	123	65
Excess tax benefit related to share-based awards	**407**	782	98
Cash settlement of share-based awards	**(2)**	(1)	(1)
Net cash provided by/(used for) financing activities	**29,118**	18,999	(7,351)
Net increase/(decrease) in cash and cash equivalents	**17,505**	(3,533)	(11,536)
Cash and cash equivalents, beginning of year	**57,600**	61,133	72,669
Cash and cash equivalents, end of year	**$ 75,105**	$ 57,600	$ 61,133

SUPPLEMENTAL DISCLOSURES:

Cash payments for interest, net of capitalized interest, were $4.82 billion, $6.43 billion and $5.69 billion for 2015, 2014 and 2013, respectively.

Cash payments for income taxes, net of refunds, were $2.65 billion, $3.05 billion and $4.07 billion for 2015, 2014 and 2013, respectively.

Non-cash activities:

During 2015, the firm exchanged $262 million of Trust Preferred Securities and common beneficial interests held by the firm for $296 million of the firm's junior subordinated debt held by the issuing trust. Following the exchange, this junior subordinated debt was extinguished.

During 2015, the firm repurchased $60 million of its common stock for which settlement occurred and cash was paid in 2016.

During 2014, the firm exchanged $1.58 billion of Trust Preferred Securities, common beneficial interests and senior guaranteed trust securities held by the firm for $1.87 billion of the firm's junior subordinated debt held by the issuing trusts. Following the exchange, this junior subordinated debt was extinguished.

During 2014, the firm sold certain consolidated investments and provided seller financing, which resulted in a non-cash increase to loans receivable of $115 million.

The accompanying notes are an integral part of these consolidated financial statements.

Note 1.

Description of Business

The Goldman Sachs Group, Inc. (Group Inc. or parent company), a Delaware corporation, together with its consolidated subsidiaries (collectively, the firm), is a leading global investment banking, securities and investment management firm that provides a wide range of financial services to a substantial and diversified client base that includes corporations, financial institutions, governments and individuals. Founded in 1869, the firm is headquartered in New York and maintains offices in all major financial centers around the world.

The firm reports its activities in the following four business segments:

Investment Banking

The firm provides a broad range of investment banking services to a diverse group of corporations, financial institutions, investment funds and governments. Services include strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings, spin-offs and risk management, and debt and equity underwriting of public offerings and private placements, including local and cross-border transactions and acquisition financing, as well as derivative transactions directly related to these activities.

Institutional Client Services

The firm facilitates client transactions and makes markets in fixed income, equity, currency and commodity products, primarily with institutional clients such as corporations, financial institutions, investment funds and governments. The firm also makes markets in and clears client transactions on major stock, options and futures exchanges worldwide and provides financing, securities lending and other prime brokerage services to institutional clients.

Investing & Lending

The firm invests in and originates loans to provide financing to clients. These investments and loans are typically longer-term in nature. The firm makes investments, some of which are consolidated, directly and indirectly through funds and separate accounts that the firm manages, in debt securities and loans, public and private equity securities, and real estate entities.

Investment Management

The firm provides investment management services and offers investment products (primarily through separately managed accounts and commingled vehicles, such as mutual funds and private investment funds) across all major asset classes to a diverse set of institutional and individual clients. The firm also offers wealth advisory services, including portfolio management and financial counseling, and brokerage and other transaction services to high-net-worth individuals and families.

Note 2.

Basis of Presentation

These consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) and include the accounts of Group Inc. and all other entities in which the firm has a controlling financial interest. Intercompany transactions and balances have been eliminated.

All references to 2015, 2014 and 2013 refer to the firm's years ended, or the dates, as the context requires, December 31, 2015, December 31, 2014 and December 31, 2013, respectively. Any reference to a future year refers to a year ending on December 31 of that year. Certain reclassifications have been made to previously reported amounts to conform to the current presentation.

Note 3.

Significant Accounting Policies

The firm's significant accounting policies include when and how to measure the fair value of assets and liabilities, accounting for goodwill and identifiable intangible assets, and when to consolidate an entity. See Notes 5 through 8 for policies on fair value measurements, Note 13 for policies on goodwill and identifiable intangible assets, and below and Note 12 for policies on consolidation accounting. All other significant accounting policies are either described below or included in the following footnotes:

Financial Instruments Owned, at Fair Value and Financial Instruments Sold, But Not Yet Purchased, at Fair Value	Note 4
Fair Value Measurements	Note 5
Cash Instruments	Note 6
Derivatives and Hedging Activities	Note 7
Fair Value Option	Note 8
Loans Receivable	Note 9
Collateralized Agreements and Financings	Note 10
Securitization Activities	Note 11
Variable Interest Entities	Note 12
Other Assets, including Goodwill and Identifiable Intangible Assets	Note 13
Deposits	Note 14
Short-Term Borrowings	Note 15
Long-Term Borrowings	Note 16
Other Liabilities and Accrued Expenses	Note 17
Commitments, Contingencies and Guarantees	Note 18
Shareholders' Equity	Note 19
Regulation and Capital Adequacy	Note 20
Earnings Per Common Share	Note 21
Transactions with Affiliated Funds	Note 22
Interest Income and Interest Expense	Note 23
Income Taxes	Note 24
Business Segments	Note 25
Credit Concentrations	Note 26
Legal Proceedings	Note 27
Employee Benefit Plans	Note 28
Employee Incentive Plans	Note 29
Parent Company	Note 30

Consolidation

The firm consolidates entities in which the firm has a controlling financial interest. The firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity (VIE).

Voting Interest Entities. Voting interest entities are entities in which (i) the total equity investment at risk is sufficient to enable the entity to finance its activities independently and (ii) the equity holders have the power to direct the activities of the entity that most significantly impact its economic performance, the obligation to absorb the losses of the entity and the right to receive the residual returns of the entity. The usual condition for a controlling financial interest in a voting interest entity is ownership of a majority voting interest. If the firm has a majority voting interest in a voting interest entity, the entity is consolidated.

Variable Interest Entities. A VIE is an entity that lacks one or more of the characteristics of a voting interest entity. The firm has a controlling financial interest in a VIE when the firm has a variable interest or interests that provide it with (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE. See Note 12 for further information about VIEs.

Equity-Method Investments. When the firm does not have a controlling financial interest in an entity but can exert significant influence over the entity's operating and financial policies, the investment is accounted for either (i) under the equity method of accounting or (ii) at fair value by electing the fair value option available under U.S. GAAP. Significant influence generally exists when the firm owns 20% to 50% of the entity's common stock or in-substance common stock.

In general, the firm accounts for investments acquired after the fair value option became available, at fair value. In certain cases, the firm applies the equity method of accounting to new investments that are strategic in nature or closely related to the firm's principal business activities, when the firm has a significant degree of involvement in the cash flows or operations of the investee or when cost-benefit considerations are less significant. See Note 13 for further information about equity-method investments.

Investment Funds. The firm has formed numerous investment funds with third-party investors. These funds are typically organized as limited partnerships or limited liability companies for which the firm acts as general partner or manager. Generally, the firm does not hold a majority of the economic interests in these funds. These funds are usually voting interest entities and generally are not consolidated because third-party investors typically have rights to terminate the funds or to remove the firm as general partner or manager. Investments in these funds are included in "Financial instruments owned, at fair value." See Notes 6, 18 and 22 for further information about investments in funds.

Use of Estimates

Preparation of these consolidated financial statements requires management to make certain estimates and assumptions, the most important of which relate to fair value measurements, accounting for goodwill and identifiable intangible assets, the provisions for losses that may arise from litigation, regulatory proceedings and tax audits, and the allowance for losses on loans and lending commitments held for investment. These estimates and assumptions are based on the best available information but actual results could be materially different.

Revenue Recognition

Financial Assets and Financial Liabilities at Fair Value. Financial instruments owned, at fair value and Financial instruments sold, but not yet purchased, at fair value are recorded at fair value either under the fair value option or in accordance with other U.S. GAAP. In addition, the firm has elected to account for certain of its other financial assets and financial liabilities at fair value by electing the fair value option. The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. Fair value gains or losses are generally included in "Market making" for positions in Institutional Client Services and "Other principal transactions" for positions in Investing & Lending. See Notes 5 through 8 for further information about fair value measurements.

Investment Banking. Fees from financial advisory assignments and underwriting revenues are recognized in earnings when the services related to the underlying transaction are completed under the terms of the assignment. Expenses associated with such transactions are deferred until the related revenue is recognized or the assignment is otherwise concluded. Expenses associated with financial advisory assignments are recorded as non-compensation expenses, net of client reimbursements. Underwriting revenues are presented net of related expenses.

Investment Management. The firm earns management fees and incentive fees for investment management services. Management fees for mutual funds are calculated as a percentage of daily net asset value and are received monthly. Management fees for hedge funds and separately managed accounts are calculated as a percentage of month-end net asset value and are generally received quarterly. Management fees for private equity funds are calculated as a percentage of monthly invested capital or commitments and are received quarterly, semi-annually or annually, depending on the fund. All management fees are recognized over the period that the related service is provided. Incentive fees are calculated as a percentage of a fund's or separately managed account's return, or excess return above a specified benchmark or other performance target. Incentive fees are generally based on investment performance over a 12-month period or over the life of a fund. Fees that are based on performance over a 12-month period are subject to adjustment prior to the end of the measurement period. For fees that are based on investment performance over the life of the fund, future investment underperformance may require fees previously distributed to the firm to be returned to the fund. Incentive fees are recognized only when all material contingencies have been resolved. Management and incentive fee revenues are included in "Investment management" revenues.

The firm makes payments to brokers and advisors related to the placement of the firm's investment funds. These payments are computed based on either a percentage of the management fee or the investment fund's net asset value. Where the firm is principal to the arrangement, such costs are recorded on a gross basis and included in "Brokerage, clearing, exchange and distribution fees," and where the firm is agent to the arrangement, such costs are recorded on a net basis in "Investment management" revenues.

Commissions and Fees. The firm earns "Commissions and fees" from executing and clearing client transactions on stock, options and futures markets, as well as over-the-counter (OTC) transactions. Commissions and fees are recognized on the day the trade is executed.

Transfers of Assets

Transfers of assets are accounted for as sales when the firm has relinquished control over the assets transferred. For transfers of assets accounted for as sales, any gains or losses are recognized in net revenues. Assets or liabilities that arise from the firm's continuing involvement with transferred assets are recognized at fair value. For transfers of assets that are not accounted for as sales, the assets remain in "Financial instruments owned, at fair value" and the transfer is accounted for as a collateralized financing, with the related interest expense recognized over the life of the transaction. See Note 10 for further information about transfers of assets accounted for as collateralized financings and Note 11 for further information about transfers of assets accounted for as sales.

Cash and Cash Equivalents

The firm defines cash equivalents as highly liquid overnight deposits held in the ordinary course of business. As of December 2015 and December 2014, "Cash and cash equivalents" included $6.47 billion and $5.79 billion, respectively, of cash and due from banks, and $68.64 billion and $51.81 billion, respectively, of interest-bearing deposits with banks.

Receivables from and Payables to Brokers, Dealers and Clearing Organizations

Receivables from and payables to brokers, dealers and clearing organizations are accounted for at cost plus accrued interest, which generally approximates fair value. While these receivables and payables are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these receivables and payables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015 and December 2014.

Receivables from Customers and Counterparties

Receivables from customers and counterparties generally relate to collateralized transactions. Such receivables are primarily comprised of customer margin loans, certain transfers of assets accounted for as secured loans rather than purchases at fair value and collateral posted in connection with certain derivative transactions. Substantially all of these receivables are accounted for at amortized cost net of estimated uncollectible amounts. Certain of the firm's receivables from customers and counterparties are accounted for at fair value under the fair value option, with changes in fair value generally included in "Market making" revenues. See Note 8 for further information about receivables from customers and counterparties accounted for at fair value under the fair value option. In addition, as of December 2015 and December 2014, the firm's receivables from customers and counterparties included $2.35 billion and $400 million, respectively, of loans held for sale, accounted for at the lower of cost or fair value. See Note 5 for an overview of the firm's fair value measurement policies.

As of December 2015 and December 2014, the carrying value of receivables not accounted for at fair value generally approximated fair value. While these items are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these items been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015 and December 2014. Interest on receivables from customers and counterparties is recognized over the life of the transaction and included in "Interest income."

Payables to Customers and Counterparties

Payables to customers and counterparties primarily consist of customer credit balances related to the firm's prime brokerage activities. Payables to customers and counterparties are accounted for at cost plus accrued interest, which generally approximates fair value. While these payables are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these payables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015 and December 2014. Interest on payables to customers and counterparties is recognized over the life of the transaction and included in "Interest expense."

Offsetting Assets and Liabilities

To reduce credit exposures on derivatives and securities financing transactions, the firm may enter into master netting agreements or similar arrangements (collectively, netting agreements) with counterparties that permit it to offset receivables and payables with such counterparties. A netting agreement is a contract with a counterparty that permits net settlement of multiple transactions with that counterparty, including upon the exercise of termination rights by a non-defaulting party. Upon exercise of such termination rights, all transactions governed by the netting agreement are terminated and a net settlement amount is calculated. In addition, the firm receives and posts cash and securities collateral with respect to its derivatives and securities financing transactions, subject to the terms of the related credit support agreements or similar arrangements (collectively, credit support agreements). An enforceable credit support agreement grants the non-defaulting party exercising termination rights the right to liquidate the collateral and apply the proceeds to any amounts owed. In order to assess enforceability of the firm's right of setoff under netting and credit support agreements, the firm evaluates various factors including applicable bankruptcy laws, local statutes and regulatory provisions in the jurisdiction of the parties to the agreement.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) in the consolidated statements of financial condition when a legal right of setoff exists under an enforceable netting agreement. Resale and repurchase agreements and securities borrowed and loaned transactions with the same term and currency are presented on a net-by-counterparty basis in the consolidated statements of financial condition when such transactions meet certain settlement criteria and are subject to netting agreements.

In the consolidated statements of financial condition, derivatives are reported net of cash collateral received and posted under enforceable credit support agreements, when transacted under an enforceable netting agreement. In the consolidated statements of financial condition, resale and repurchase agreements, and securities borrowed and loaned, are not reported net of the related cash and securities received or posted as collateral. See Note 10 for further information about collateral received and pledged, including rights to deliver or repledge collateral. See Notes 7 and 10 for further information about offsetting.

Foreign Currency Translation

Assets and liabilities denominated in non-U.S. currencies are translated at rates of exchange prevailing on the date of the consolidated statements of financial condition and revenues and expenses are translated at average rates of exchange for the period. Foreign currency remeasurement gains or losses on transactions in nonfunctional currencies are recognized in earnings. Gains or losses on translation of the financial statements of a non-U.S. operation, when the functional currency is other than the U.S. dollar, are included, net of hedges and taxes, in the consolidated statements of comprehensive income.

Recent Accounting Developments

Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity (ASC 205 and ASC 360). In April 2014, the FASB issued ASU No. 2014-08, "Presentation of Financial Statements (Topic 205) and Property, Plant, and Equipment (Topic 360) — Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity." ASU No. 2014-08 limits discontinued operations reporting to disposals of components of an entity that represent strategic shifts that have (or will have) a major effect on an entity's operations and financial results. The ASU requires expanded disclosures for discontinued operations and disposals of individually significant components of an entity that do not qualify for discontinued operations reporting. The ASU was effective for disposals and components classified as held for sale that occurred within annual periods beginning on or after December 15, 2014, and interim periods within those years. Early adoption was permitted. The firm early adopted ASU No. 2014-08 in 2014 and adoption did not materially affect the firm's financial condition, results of operations, or cash flows.

Revenue from Contracts with Customers (ASC 606). In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." ASU No. 2014-09 provides comprehensive guidance on the recognition of revenue from customers arising from the transfer of goods and services. The ASU also provides guidance on accounting for certain contract costs, and requires new disclosures. ASU No. 2014-09, as amended in August 2015 by ASU No. 2015-14, is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Early adoption is permitted for annual reporting periods beginning after December 15, 2016. The firm is still evaluating the effect of the ASU on its financial condition, results of operations, and cash flows.

Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures (ASC 860). In June 2014, the FASB issued ASU No. 2014-11, "Transfers and Servicing (Topic 860) — Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures." ASU No. 2014-11 changes the accounting for repurchase- and resale-to-maturity agreements by requiring that such agreements be recognized as financing arrangements, and requires that a transfer of a financial asset and a repurchase agreement entered into contemporaneously be accounted for separately. ASU No. 2014-11 also requires additional disclosures about certain transferred financial assets accounted for as sales and certain securities financing transactions. The accounting changes and additional disclosures about certain transferred financial assets accounted for as sales were effective for the first interim and annual reporting periods beginning after December 15, 2014. The additional disclosures for certain securities financing transactions were required for annual reporting periods beginning after December 15, 2014 and for interim reporting periods beginning after March 15, 2015. Adoption of ASU No. 2014-11 did not materially affect the firm's financial condition, results of operations, or cash flows.

Measuring the Financial Assets and the Financial Liabilities of a Consolidated Collateralized Financing Entity (ASC 810). In August 2014, the FASB issued ASU No. 2014-13, "Consolidation (Topic 810) — Measuring the Financial Assets and the Financial Liabilities of a Consolidated Collateralized Financing Entity (CFE)." ASU No. 2014-13 provides an alternative to reflect changes in the fair value of the financial assets and the financial liabilities of the CFE by measuring either the fair value of the assets or liabilities, whichever is more observable. ASU No. 2014-13 provides new disclosure requirements for those electing this approach, and was effective for interim and annual periods beginning after December 15, 2015. Adoption of ASU No. 2014-13 in the first quarter of 2016 did not materially affect the firm's financial condition, results of operations, or cash flows.

Amendments to the Consolidation Analysis (ASC 810). In February 2015, the FASB issued ASU No. 2015-02, "Consolidation (Topic 810) — Amendments to the Consolidation Analysis." ASU No. 2015-02 eliminates the deferral of the requirements of ASU No. 2009-17, "Consolidations (Topic 810) — Improvements to Financial Reporting by Enterprises Involved with Variable Interest Entities" for certain interests in investment funds and provides a scope exception from Topic 810 for certain investments in money market funds. The ASU also makes several modifications to the consolidation guidance for VIEs and general partners' investments in limited partnerships, as well as modifications to the evaluation of whether limited partnerships are VIEs or voting interest entities. ASU No. 2015-02 is effective for interim and annual reporting periods beginning after December 15, 2015. ASU No. 2015-02 is required to be adopted under a modified retrospective approach or retrospectively to all periods presented. Early adoption was permitted. The firm adopted ASU No. 2015-02 effective January 1, 2016, using a modified retrospective approach. The impact of adoption was not material (approximately $200 million on the firm's statement of financial condition).

Simplifying the Presentation of Debt Issuance Costs (ASC 835). In April 2015, the FASB issued ASU No. 2015-03, "Interest — Imputation of Interest (Subtopic 835-30) — Simplifying the Presentation of Debt Issuance Costs." ASU No. 2015-03 simplifies the presentation of debt issuance costs by requiring that these costs related to a recognized debt liability be presented in the statement of financial condition as a direct reduction from the carrying amount of that liability. ASU No. 2015-03 is effective for annual reporting periods beginning after December 15, 2015, including interim periods within that reporting period. ASU No. 2015-03 is required to be applied retrospectively to all periods presented beginning in the year of adoption. Early adoption was permitted. The firm early adopted ASU No. 2015-03 in September 2015 and upon adoption the impact was a reduction to both total assets and total liabilities of $444 million. In accordance with ASU No. 2015-03, previously reported amounts have been conformed to the current presentation, as reflected in Notes 13 through 16. The impact as of December 2014 was a reduction to both total assets and total liabilities of $398 million.

Disclosures for Investments in Certain Entities That Calculate Net Asset Value (NAV) per Share (or Its Equivalent) (ASC 820). In May 2015, the FASB issued ASU No. 2015–07, "Fair Value Measurement (Topic 820) — Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)." ASU No. 2015–07 requires that investments for which the fair value is measured at NAV using the practical expedient (investments in funds measured at NAV) under "Fair Value Measurements and Disclosures" (Topic 820) be excluded from the fair value hierarchy. ASU No. 2015–07 is effective for annual reporting periods beginning after December 15, 2015, including interim periods within that reporting period. ASU No. 2015–07 is required to be applied retrospectively to all periods presented beginning in the period of adoption. Early adoption was permitted. The firm early adopted ASU No. 2015–07 in June 2015 and adoption did not affect the firm's financial condition, results of operations, or cash flows. In accordance with ASU No. 2015-07, previously reported amounts have been conformed to the current presentation. See Notes 4 through 6 for the disclosures required by ASU No. 2015-07.

Simplifying the Accounting for Measurement-Period Adjustments (ASC 805). In September 2015, the FASB issued ASU No. 2015-16, "Business Combinations (Topic 805) — Simplifying the Accounting for Measurement-Period Adjustments." ASU No. 2015-16 eliminates the requirement for an acquirer in a business combination to account for measurement-period adjustments retrospectively. ASU No. 2015-16 was effective for annual reporting periods beginning after December 15, 2015, including interim periods within that reporting period. Adoption of ASU No. 2015-16 in the first quarter of 2016 did not materially affect the firm's financial condition, results of operations, or cash flows.

Recognition and Measurement of Financial Assets and Financial Liabilities (ASC 825). In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments (Topic 825) — Recognition and Measurement of Financial Assets and Financial Liabilities." ASU No. 2016-01 amends certain aspects of recognition, measurement, presentation and disclosure of financial instruments. This guidance includes a requirement to present separately in other comprehensive income changes in fair value attributable to a firm's own credit spreads (debt valuation adjustments or DVA), net of tax, on financial liabilities for which the fair value option was elected. ASU No. 2016-01 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Early adoption is permitted under a modified retrospective approach for the requirements related to DVA. The cumulative DVA gain, net of tax, of approximately $300 million as of December 2015, will be reclassified from retained earnings to accumulated other comprehensive loss if ASU No. 2016-01 is early adopted by the firm in 2016. In addition, any DVA recorded during 2016 would be classified as other comprehensive income/(loss).

Note 4.

Financial Instruments Owned, at Fair Value and Financial Instruments Sold, But Not Yet Purchased, at Fair Value

Financial instruments owned, at fair value and financial instruments sold, but not yet purchased, at fair value are accounted for at fair value either under the fair value option or in accordance with other U.S. GAAP. See Note 8 for further information about other financial assets and financial liabilities accounted for at fair value primarily under the fair value option.

The tables below present the firm's financial instruments owned, at fair value, and financial instruments sold, but not yet purchased, at fair value.

	As of December 2015	
$ in millions	**Financial Instruments Owned**	**Financial Instruments Sold, But Not Yet Purchased**
Commercial paper, certificates of deposit, time deposits and other money market instruments	**$ 2,583**	**$ —**
U.S. government and federal agency obligations	**46,382**	**15,516**
Non-U.S. government and agency obligations	**31,772**	**14,973**
Loans and securities backed by commercial real estate	**4,975** [1]	**4**
Loans and securities backed by residential real estate	**13,183** [2]	**2**
Bank loans and bridge loans	**12,164**	**461**
Corporate debt securities	**16,640**	**6,123**
State and municipal obligations	**992**	**2**
Other debt obligations	**1,595** [3]	**2**
Equities and convertible debentures	**98,072**	**31,394**
Commodities	**3,935**	**—**
Investments in funds measured at NAV	**7,757**	**—**
Subtotal	**240,050**	**68,477**
Derivatives	**53,890**	**46,771**
Total	**$293,940**	**$115,248**

	As of December 2014	
$ in millions	Financial Instruments Owned	Financial Instruments Sold, But Not Yet Purchased
Commercial paper, certificates of deposit, time deposits and other money market instruments	$ 3,654	$ —
U.S. government and federal agency obligations	48,002	12,762
Non-U.S. government and agency obligations	37,059	20,500
Loans and securities backed by commercial real estate	7,140 [1]	1
Loans and securities backed by residential real estate	11,717 [2]	—
Bank loans and bridge loans	14,171	464
Corporate debt securities	21,419	5,800
State and municipal obligations	1,203	—
Other debt obligations	3,257 [3]	2
Equities and convertible debentures	87,900	28,314
Commodities	3,846	1,224
Investments in funds measured at NAV	9,610	—
Subtotal	248,978	69,067
Derivatives	63,270	63,016
Total	$312,248	$132,083

1. Includes $3.11 billion and $4.97 billion of loans backed by commercial real estate as of December 2015 and December 2014, respectively.
2. Includes $10.22 billion and $6.43 billion of loans backed by residential real estate as of December 2015 and December 2014, respectively.
3. Includes $272 million and $618 million of loans backed by consumer loans and other assets as of December 2015 and December 2014, respectively.

Gains and Losses from Market Making and Other Principal Transactions

The table below presents "Market making" revenues by major product type, as well as "Other principal transactions" revenues. These gains/(losses) include both realized and unrealized gains and losses, and are primarily related to the firm's financial instruments owned, at fair value and financial instruments sold, but not yet purchased, at fair value, including both derivative and non-derivative financial instruments. These gains/(losses) exclude related interest income and interest expense. See Note 23 for further information about interest income and interest expense.

The gains/(losses) in the table below are not representative of the manner in which the firm manages its business activities because many of the firm's market-making and client facilitation strategies utilize financial instruments across various product types. Accordingly, gains or losses in one product type frequently offset gains or losses in other product types. For example, most of the firm's longer-term derivatives across product types are sensitive to changes in interest rates and may be economically hedged with interest rate swaps. Similarly, a significant portion of the firm's cash instruments and derivatives across product types has exposure to foreign currencies and may be economically hedged with foreign currency contracts.

$ in millions	Year Ended December		
Product Type	**2015**	2014	2013
Interest rates	**$ (1,360)**	$ (5,316)	$ 930
Credit	**920**	2,982	1,845
Currencies	**3,345**	6,566	2,446
Equities	**5,515**	2,683	2,655
Commodities	**1,103**	1,450	902
Other	**—**	—	590 [2]
Market making	**9,523**	8,365	9,368
Other principal transactions [1]	**5,018**	6,588	6,993
Total	**$14,541**	$14,953	$16,361

1. Other principal transactions are included in the firm's Investing & Lending segment. See Note 25 for net revenues, including net interest income, by product type for Investing & Lending, as well as the amount of net interest income included in Investing & Lending.
2. Includes a gain of $211 million on the sale of a majority stake in the firm's European insurance business.

Note 5.

Fair Value Measurements

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. The firm measures certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks).

The best evidence of fair value is a quoted price in an active market. If quoted prices in active markets are not available, fair value is determined by reference to prices for similar instruments, quoted prices or recent transactions in less active markets, or internally developed models that primarily use market-based or independently sourced parameters as inputs including, but not limited to, interest rates, volatilities, equity or debt prices, foreign exchange rates, commodity prices, credit spreads and funding spreads (i.e., the spread, or difference, between the interest rate at which a borrower could finance a given financial instrument relative to a benchmark interest rate).

U.S. GAAP has a three-level fair value hierarchy for disclosure of fair value measurements. The fair value hierarchy prioritizes inputs to the valuation techniques used to measure fair value, giving the highest priority to level 1 inputs and the lowest priority to level 3 inputs. A financial instrument's level in the fair value hierarchy is based on the lowest level of input that is significant to its fair value measurement. The fair value hierarchy is as follows:

Level 1. Inputs are unadjusted quoted prices in active markets to which the firm had access at the measurement date for identical, unrestricted assets or liabilities.

Level 2. Inputs to valuation techniques are observable, either directly or indirectly.

Level 3. One or more inputs to valuation techniques are significant and unobservable.

The fair values for substantially all of the firm's financial assets and financial liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors such as counterparty and the firm's credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads. Valuation adjustments are generally based on market evidence.

See Notes 6 through 8 for further information about fair value measurements of cash instruments, derivatives and other financial assets and financial liabilities accounted for at fair value primarily under the fair value option (including information about unrealized gains and losses related to level 3 financial assets and financial liabilities, and transfers in and out of level 3), respectively.

The table below presents financial assets and financial liabilities accounted for at fair value under the fair value option or in accordance with other U.S. GAAP. Counterparty and cash collateral netting represents the impact on derivatives of netting across levels of the fair value hierarchy. Netting among positions classified in the same level is included in that level.

	As of December	
$ in millions	**2015**	2014
Total level 1 financial assets	**$153,051**	$139,484
Total level 2 financial assets	**432,445**	466,030
Total level 3 financial assets	**24,046**	35,780
Investments in funds measured at NAV	**7,757**	9,610
Counterparty and cash collateral netting	**(90,612)**	(104,616)
Total financial assets at fair value	**$526,687**	$546,288
Total assets [1]	**$861,395**	$855,842
Total level 3 financial assets as a percentage of total assets	**2.8%**	4.2%
Total level 3 financial assets as a percentage of total financial assets at fair value	**4.6%**	6.5%
Total level 1 financial liabilities	**$ 59,798**	$ 59,697
Total level 2 financial liabilities	**245,759**	253,364
Total level 3 financial liabilities	**16,812**	15,904
Counterparty and cash collateral netting	**(41,430)**	(37,267)
Total financial liabilities at fair value	**$280,939**	$291,698
Total level 3 financial liabilities as a percentage of total financial liabilities at fair value	**6.0%**	5.5%

1. Includes $836 billion and $834 billion as of December 2015 and December 2014, respectively, that is carried at fair value or at amounts that generally approximate fair value.

The table below presents a summary of level 3 financial assets. See Notes 6 through 8 for further information about level 3 financial assets.

	Level 3 Financial Assets as of December	
$ in millions	**2015**	2014
Cash instruments	**$ 18,131**	$ 28,650
Derivatives	**5,870**	7,074
Other financial assets	**45**	56
Total	**$ 24,046**	$ 35,780

Level 3 financial assets as of December 2015 decreased compared with December 2014, primarily reflecting a decrease in level 3 cash instruments. See Note 6 for further information about changes in level 3 cash instruments.

Note 6.

Cash Instruments

Cash instruments include U.S. government and federal agency obligations, non-U.S. government and agency obligations, mortgage-backed loans and securities, bank loans and bridge loans, corporate debt securities, equities and convertible debentures, investments in funds measured at NAV, and other non-derivative financial instruments owned and financial instruments sold, but not yet purchased. See below for the types of cash instruments included in each level of the fair value hierarchy and the valuation techniques and significant inputs used to determine their fair values. See Note 5 for an overview of the firm's fair value measurement policies.

Level 1 Cash Instruments

Level 1 cash instruments include U.S. government obligations and most non-U.S. government obligations, actively traded listed equities, certain government agency obligations and money market instruments. These instruments are valued using quoted prices for identical unrestricted instruments in active markets.

The firm defines active markets for equity instruments based on the average daily trading volume both in absolute terms and relative to the market capitalization for the instrument. The firm defines active markets for debt instruments based on both the average daily trading volume and the number of days with trading activity.

Level 2 Cash Instruments

Level 2 cash instruments include commercial paper, certificates of deposit, time deposits, most government agency obligations, certain non-U.S. government obligations, most corporate debt securities, commodities, certain mortgage-backed loans and securities, certain bank loans and bridge loans, restricted or less liquid listed equities, most state and municipal obligations and certain lending commitments.

Valuations of level 2 cash instruments can be verified to quoted prices, recent trading activity for identical or similar instruments, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Valuation adjustments are typically made to level 2 cash instruments (i) if the cash instrument is subject to transfer restrictions and/or (ii) for other premiums and liquidity discounts that a market participant would require to arrive at fair value. Valuation adjustments are generally based on market evidence.

Level 3 Cash Instruments

Level 3 cash instruments have one or more significant valuation inputs that are not observable. Absent evidence to the contrary, level 3 cash instruments are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequently, the firm uses other methodologies to determine fair value, which vary based on the type of instrument. Valuation inputs and assumptions are changed when corroborated by substantive observable evidence, including values realized on sales of financial assets.

Valuation Techniques and Significant Inputs

The table below presents the valuation techniques and the nature of significant inputs. These valuation techniques and significant inputs are generally used to determine the fair values of each type of level 3 cash instrument.

Level 3 Cash Instruments	Valuation Techniques and Significant Inputs
Loans and securities backed by commercial real estate • Directly or indirectly collateralized by a single commercial real estate property or a portfolio of properties • May include tranches of varying levels of subordination	Valuation techniques vary by instrument, but are generally based on discounted cash flow techniques. Significant inputs are generally determined based on relative value analyses and include: • Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral and the basis, or price difference, to such prices • Market yields implied by transactions of similar or related assets and/or current levels and changes in market indices such as the CMBX (an index that tracks the performance of commercial mortgage bonds) • A measure of expected future cash flows in a default scenario (recovery rates) implied by the value of the underlying collateral, which is mainly driven by current performance of the underlying collateral, capitalization rates and multiples. Recovery rates are expressed as a percentage of notional or face value of the instrument and reflect the benefit of credit enhancements on certain instruments • Timing of expected future cash flows (duration) which, in certain cases, may incorporate the impact of other unobservable inputs (e.g., prepayment speeds)
Loans and securities backed by residential real estate • Directly or indirectly collateralized by portfolios of residential real estate • May include tranches of varying levels of subordination	Valuation techniques vary by instrument, but are generally based on discounted cash flow techniques. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons to instruments with similar collateral and risk profiles. Significant inputs include: • Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral • Market yields implied by transactions of similar or related assets • Cumulative loss expectations, driven by default rates, home price projections, residential property liquidation timelines, related costs and subsequent recoveries • Duration, driven by underlying loan prepayment speeds and residential property liquidation timelines
Bank loans and bridge loans	Valuation techniques vary by instrument, but are generally based on discounted cash flow techniques. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include: • Market yields implied by transactions of similar or related assets and/or current levels and trends of market indices such as CDX and LCDX (indices that track the performance of corporate credit and loans, respectively) • Current performance and recovery assumptions and, where the firm uses credit default swaps to value the related cash instrument, the cost of borrowing the underlying reference obligation • Duration
Commercial paper, certificates of deposit, time deposits and other money market instruments Non-U.S. government and agency obligations Corporate debt securities State and municipal obligations Other debt obligations	Valuation techniques vary by instrument, but are generally based on discounted cash flow techniques. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include: • Market yields implied by transactions of similar or related assets and/or current levels and trends of market indices such as CDX and LCDX • Current performance and recovery assumptions and, where the firm uses credit default swaps to value the related cash instrument, the cost of borrowing the underlying reference obligation • Duration
Equities and convertible debentures (including private equity investments and investments in real estate entities)	Recent third-party completed or pending transactions (e.g., merger proposals, tender offers, debt restructurings) are considered to be the best evidence for any change in fair value. When these are not available, the following valuation methodologies are used, as appropriate: • Industry multiples (primarily EBITDA multiples) and public comparables • Transactions in similar instruments • Discounted cash flow techniques • Third-party appraisals The firm also considers changes in the outlook for the relevant industry and financial performance of the issuer as compared to projected performance. Significant inputs include: • Market and transaction multiples • Discount rates, long-term growth rates, earnings compound annual growth rates and capitalization rates • For equity instruments with debt-like features: market yields implied by transactions of similar or related assets, current performance and recovery assumptions, and duration

Significant Unobservable Inputs

The table below presents the ranges and weighted averages of significant unobservable inputs used to value the firm's level 3 cash instruments. In the table below:

- Ranges represent the significant unobservable inputs that were used in the valuation of each type of cash instrument.
- Weighted averages are calculated by weighting each input by the relative fair value of the financial instruments.
- The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one cash instrument. For example, the highest multiple presented in the tables below for private equity investments is appropriate for valuing a specific private equity investment but may not be appropriate for valuing any other private equity investment. Accordingly, the ranges of inputs presented below do not represent uncertainty in, or possible ranges of, fair value measurements of the firm's level 3 cash instruments.
- Increases in yield, discount rate, capitalization rate, duration or cumulative loss rate used in the valuation of the firm's level 3 cash instruments would result in a lower fair value measurement, while increases in recovery rate, basis, multiples, long-term growth rate or compound annual growth rate would result in a higher fair value measurement. Due to the distinctive nature of each of the firm's level 3 cash instruments, the interrelationship of inputs is not necessarily uniform within each product type.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, market comparables and discounted cash flows may be used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Level 3 Cash Instruments	Valuation Techniques and Significant Unobservable Inputs	Range of Significant Unobservable Inputs (Weighted Average)	
		As of December 2015	As of December 2014
Loans and securities backed by commercial real estate • Directly or indirectly collateralized by a single commercial real estate property or a portfolio of properties • May include tranches of varying levels of subordination *($1.92 billion and $3.28 billion of level 3 assets as of December 2015 and December 2014, respectively)*	Discounted cash flows: • Yield • Recovery rate • Duration (years) • Basis	 3.5% to 22.0% (11.8%) 19.6% to 96.5% (59.4%) 0.3 to 5.3 (2.3) (11) points to 4 points ((2) points)	 3.2% to 20.0% (10.5%) 24.9% to 100.0% (68.3%) 0.3 to 4.7 (2.0) (8) points to 13 points (2 points)
Loans and securities backed by residential real estate • Directly or indirectly collateralized by portfolios of residential real estate • May include tranches of varying levels of subordination *($1.77 billion and $2.55 billion of level 3 assets as of December 2015 and December 2014, respectively)*	Discounted cash flows: • Yield • Cumulative loss rate • Duration (years)	 3.2% to 17.0% (7.9%) 4.6% to 44.2% (27.3%) 1.5 to 13.8 (7.0)	 1.9% to 17.5% (7.6%) 0.0% to 95.1% (24.4%) 0.5 to 13.0 (4.3)
Bank loans and bridge loans *($3.15 billion and $6.97 billion of level 3 assets as of December 2015 and December 2014, respectively)*	Discounted cash flows: • Yield • Recovery rate • Duration (years)	 1.9% to 36.6% (10.2%) 14.5% to 85.6% (51.2%) 0.7 to 6.1 (2.2)	 1.4% to 29.5% (8.7%) 26.6% to 92.5% (60.6%) 0.3 to 7.8 (2.5)
Non-U.S. government and agency obligations Corporate debt securities State and municipal obligations Other debt obligations *($2.74 billion and $4.75 billion of level 3 assets as of December 2015 and December 2014, respectively)*	Discounted cash flows: • Yield • Recovery rate • Duration (years)	 0.9% to 25.6% (10.9%) 0.0% to 70.0% (59.7%) 1.1 to 11.4 (4.5)	 0.9% to 24.4% (9.2%) 0.0% to 71.9% (59.2%) 0.5 to 19.6 (3.7)
Equities and convertible debentures (including private equity investments and investments in real estate entities) *($8.55 billion and $11.11 billion of level 3 assets as of December 2015 and December 2014, respectively)*	Market comparables and discounted cash flows: • Multiples • Discount rate/yield • Long-term growth rate/ compound annual growth rate • Capitalization rate	 0.7x to 21.4x (6.4x) 7.1% to 20.0% (14.8%) 3.0% to 5.2% (4.5%) 5.5% to 12.5% (7.6%)	 0.8x to 16.6x (6.5x) 3.7% to 30.0% (14.4%) 1.0% to 10.0% (6.0%) 3.8% to 13.0% (7.6%)

Fair Value of Cash Instruments by Level

The tables below present cash instrument assets and liabilities at fair value by level within the fair value hierarchy. In the tables below:

- Cash instrument assets and liabilities are included in "Financial instruments owned, at fair value" and "Financial instruments sold, but not yet purchased, at fair value," respectively.
- Cash instrument assets are shown as positive amounts and cash instrument liabilities are shown as negative amounts.

	Cash Instruments at Fair Value as of December 2015			
$ in millions	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Commercial paper, certificates of deposit, time deposits and other money market instruments	**$ 625**	**$ 1,958**	**$ —**	**$ 2,583**
U.S. government and federal agency obligations	**24,844**	**21,538**	**—**	**46,382**
Non-U.S. government and agency obligations	**26,500**	**5,260**	**12**	**31,772**
Loans and securities backed by commercial real estate	**—**	**3,051**	**1,924**	**4,975**
Loans and securities backed by residential real estate	**—**	**11,418**	**1,765**	**13,183**
Bank loans and bridge loans	**—**	**9,014**	**3,150**	**12,164**
Corporate debt securities	**218**	**14,330**	**2,092**	**16,640**
State and municipal obligations	**—**	**891**	**101**	**992**
Other debt obligations	**—**	**1,057**	**538**	**1,595**
Equities and convertible debentures	**81,252**	**8,271**	**8,549**	**98,072**
Commodities	**—**	**3,935**	**—**	**3,935**
Subtotal	**$133,439**	**$80,723**	**$18,131**	**$232,293**
Investments in funds measured at NAV				**7,757**
Total cash instrument assets				**$240,050**
Liabilities				
U.S. government and federal agency obligations	**$ (15,455)**	**$ (61)**	**$ —**	**$ (15,516)**
Non-U.S. government and agency obligations	**(13,522)**	**(1,451)**	**—**	**(14,973)**
Loans and securities backed by commercial real estate	**—**	**(4)**	**—**	**(4)**
Loans and securities backed by residential real estate	**—**	**(2)**	**—**	**(2)**
Bank loans and bridge loans	**—**	**(337)**	**(124)**	**(461)**
Corporate debt securities	**(2)**	**(6,119)**	**(2)**	**(6,123)**
State and municipal obligations	**—**	**(2)**	**—**	**(2)**
Other debt obligations	**—**	**(1)**	**(1)**	**(2)**
Equities and convertible debentures	**(30,790)**	**(538)**	**(66)**	**(31,394)**
Total cash instrument liabilities	**$ (59,769)**	**$ (8,515)**	**$ (193)**	**$ (68,477)**

	Cash Instruments at Fair Value as of December 2014			
$ in millions	Level 1	Level 2	Level 3	Total
Assets				
Commercial paper, certificates of deposit, time deposits and other money market instruments	$ —	$ 3,654	$ —	$ 3,654
U.S. government and federal agency obligations	18,540	29,462	—	48,002
Non-U.S. government and agency obligations	30,255	6,668	136	37,059
Loans and securities backed by commercial real estate	—	3,865	3,275	7,140
Loans and securities backed by residential real estate	—	9,172	2,545	11,717
Bank loans and bridge loans	—	7,198	6,973	14,171
Corporate debt securities	249	17,537	3,633	21,419
State and municipal obligations	—	1,093	110	1,203
Other debt obligations	—	2,387	870	3,257
Equities and convertible debentures	68,974	7,818	11,108	87,900
Commodities	—	3,846	—	3,846
Subtotal	$118,018	$92,700	$28,650	$239,368
Investments in funds measured at NAV				9,610
Total cash instrument assets				$248,978
Liabilities				
U.S. government and federal agency obligations	$ (12,746)	$ (16)	$ —	$ (12,762)
Non-U.S. government and agency obligations	(19,256)	(1,244)	—	(20,500)
Loans and securities backed by commercial real estate	—	(1)	—	(1)
Bank loans and bridge loans	—	(286)	(178)	(464)
Corporate debt securities	—	(5,741)	(59)	(5,800)
Other debt obligations	—	—	(2)	(2)
Equities and convertible debentures	(27,587)	(722)	(5)	(28,314)
Commodities	—	(1,224)	—	(1,224)
Total cash instrument liabilities	$ (59,589)	$ (9,234)	$ (244)	$ (69,067)

In the tables above:

- Total cash instrument assets includes collateralized debt obligations (CDOs) and collateralized loan obligations (CLOs) backed by real estate and corporate obligations of $405 million in level 2 and $774 million in level 3 as of December 2015, and $234 million in level 2 and $1.34 billion in level 3 as of December 2014, respectively.
- Level 3 equities and convertible debentures includes $7.69 billion of private equity investments, $308 million of investments in real estate entities and $552 million of convertible debentures as of December 2015, and $10.25 billion of private equity investments, $294 million of investments in real estate entities and $562 million of convertible debentures as of December 2014.

Transfers Between Levels of the Fair Value Hierarchy

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur.

During 2015:

- Transfers into level 2 from level 1 of cash instruments were $260 million, reflecting transfers of public equity securities primarily due to decreased market activity in these instruments.
- Transfers into level 1 from level 2 of cash instruments were $283 million, reflecting transfers of public equity securities due to increased market activity in these instruments.

During 2014:

- Transfers into level 2 from level 1 of cash instruments were $60 million, including $47 million of public equity securities and $13 million of U.S. government and federal agency obligations due to decreased market activity in these instruments.
- Transfers into level 1 from level 2 of cash instruments were $92 million, reflecting transfers of public equity securities due to increased market activity in these instruments.

See level 3 rollforward below for information about transfers between level 2 and level 3.

Level 3 Rollforward

The table below presents changes in fair value for all cash instrument assets and liabilities categorized as level 3 as of the end of the year. In the table below:

- If a cash instrument asset or liability was transferred to level 3 during a reporting period, its entire gain or loss for the period is included in level 3. For level 3 cash instrument assets, increases are shown as positive amounts, while decreases are shown as negative amounts. For level 3 cash instrument liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Level 3 cash instruments are frequently economically hedged with level 1 and level 2 cash instruments and/or level 1, level 2 or level 3 derivatives. Accordingly, gains or losses that are reported in level 3 can be partially offset by gains or losses attributable to level 1 or level 2 cash instruments and/or level 1, level 2 or level 3 derivatives. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.
- Purchases include both originations and secondary market purchases.
- Net unrealized gains/(losses) relate to instruments that were still held at year-end.
- For the year ended December 2015, the net realized and unrealized gains on level 3 cash instrument assets of $1.66 billion (reflecting $957 million of realized gains and $701 million of unrealized gains) include gains/(losses) of approximately $(142) million, $1.08 billion and $718 million reported in "Market making," "Other principal transactions" and "Interest income," respectively.
- For the year ended December 2014, the net realized and unrealized gains on level 3 cash instrument assets of $3.20 billion (reflecting $1.33 billion of realized gains and $1.87 billion of unrealized gains) include gains of approximately $247 million, $1.95 billion and $1.00 billion reported in "Market making," "Other principal transactions" and "Interest income," respectively.
- See "Level 3 Rollforward Commentary" below for an explanation of the net unrealized gains/(losses) on level 3 cash instruments and the activity related to transfers into and out of level 3.

	Level 3 Cash Instrument Assets and Liabilities at Fair Value								
$ in millions	Balance, beginning of year	Net realized gains/ (losses)	Net unrealized gains/ (losses)	Purchases	Sales	Settlements	Transfers into level 3	Transfers out of level 3	Balance, end of year
Year Ended December 2015									
Non-U.S. government and agency obligations	**$ 136**	**$ 7**	**$ —**	**$ 11**	**$ (35)**	**$ (23)**	**$ —**	**$ (84)**	**$ 12**
Loans and securities backed by commercial real estate	**3,275**	**120**	**44**	**566**	**(598)**	**(1,569)**	**351**	**(265)**	**1,924**
Loans and securities backed by residential real estate	**2,545**	**150**	**34**	**564**	**(609)**	**(327)**	**188**	**(780)**	**1,765**
Bank loans and bridge loans	**6,973**	**198**	**(156)**	**663**	**(1,027)**	**(2,170)**	**516**	**(1,847)**	**3,150**
Corporate debt securities	**3,633**	**208**	**(78)**	**616**	**(641)**	**(982)**	**236**	**(900)**	**2,092**
State and municipal obligations	**110**	**3**	**3**	**9**	**(24)**	**(2)**	**24**	**(22)**	**101**
Other debt obligations	**870**	**20**	**10**	**116**	**(164)**	**(206)**	**17**	**(125)**	**538**
Equities and convertible debentures	**11,108**	**251**	**844**	**1,295**	**(744)**	**(1,193)**	**466**	**(3,478)**	**8,549**
Total cash instrument assets	**$28,650**	**$ 957**	**$ 701**	**$ 3,840**	**$(3,842)**	**$(6,472)**	**$1,798**	**$(7,501)**	**$18,131**
Total cash instrument liabilities	**$ (244)**	**$ (28)**	**$ (21)**	**$ 205**	**$ (38)**	**$ (14)**	**$ (116)**	**$ 63**	**$ (193)**
Year Ended December 2014									
Non-U.S. government and agency obligations	$ 40	$ 7	$ 3	$ 103	$ (20)	$ (5)	$ 8	$ —	$ 136
Loans and securities backed by commercial real estate	2,515	173	49	1,877	(436)	(890)	176	(189)	3,275
Loans and securities backed by residential real estate	1,961	123	224	1,008	(363)	(497)	235	(146)	2,545
Bank loans and bridge loans	6,071	611	(222)	4,512	(709)	(3,166)	294	(418)	6,973
Corporate debt securities	2,744	254	(16)	2,635	(1,023)	(929)	384	(416)	3,633
State and municipal obligations	257	4	3	12	(112)	(2)	25	(77)	110
Other debt obligations	807	24	41	448	(212)	(164)	21	(95)	870
Equities and convertible debentures	8,671	132	1,788	2,670	(1,128)	(1,016)	1,250	(1,259)	11,108
Total cash instrument assets	$23,066	$1,328	$1,870	$13,265	$(4,003)	$(6,669)	$2,393	$(2,600)	$28,650
Total cash instrument liabilities	$ (297)	$ 12	$ (1)	$ 223	$ (121)	$ (23)	$ (49)	$ 12	$ (244)

Level 3 Rollforward Commentary

Year Ended December 2015. The net unrealized gain on level 3 cash instruments of $680 million (reflecting a $701 million gain on cash instrument assets and a $21 million loss on cash instrument liabilities) for 2015 primarily reflected gains on private equity investments, principally driven by company-specific events and strong corporate performance.

Transfers into level 3 during 2015 primarily reflected transfers of certain bank loans and bridge loans, private equity investments and loans and securities backed by commercial real estate from level 2, principally due to reduced price transparency as a result of a lack of market evidence, including fewer market transactions in these instruments.

Transfers out of level 3 during 2015 primarily reflected transfers of certain private equity investments, corporate debt securities and loans and securities backed by residential real estate to level 2, principally due to increased price transparency as a result of market evidence, including market transactions in these instruments, and transfers of certain bank loans and bridge loans to level 2 principally due to certain unobservable yield and duration inputs not being significant to the valuation of these instruments.

Year Ended December 2014. The net unrealized gain on level 3 cash instruments of $1.87 billion (reflecting a $1.87 billion gain on cash instrument assets and a $1 million loss on cash instrument liabilities) for 2014 primarily reflected gains on private equity investments principally driven by company-specific events and strong corporate performance.

Transfers into level 3 during 2014 primarily reflected transfers of certain private equity investments and corporate debt securities from level 2 principally due to reduced price transparency as a result of a lack of market evidence, including fewer market transactions in these instruments.

Transfers out of level 3 during 2014 primarily reflected transfers of certain private equity investments, bank loan and bridge loans and corporate debt securities to level 2 principally due to increased price transparency as a result of market evidence, including market transactions in these instruments.

Investments in Funds That Are Measured at Net Asset Value Per Share

Cash instruments at fair value include investments in funds that are measured at NAV of the investment fund. The firm uses NAV to measure the fair value of its fund investments when (i) the fund investment does not have a readily determinable fair value and (ii) the NAV of the investment fund is calculated in a manner consistent with the measurement principles of investment company accounting, including measurement of the underlying investments at fair value. The firm early adopted ASU No. 2015-07 in June 2015 and, as required, disclosures in the paragraphs and tables below are limited to only those investments in funds that are measured at NAV. In accordance with ASU No. 2015-07, previously reported amounts have been conformed to the current presentation.

The firm's investments in funds measured at NAV primarily consist of investments in firm-sponsored private equity, credit, real estate and hedge funds where the firm co-invests with third-party investors.

Private equity funds primarily invest in a broad range of industries worldwide in a variety of situations, including leveraged buyouts, recapitalizations, growth investments and distressed investments. Credit funds generally invest in loans and other fixed income instruments and are focused on providing private high-yield capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, refinancings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers. Real estate funds invest globally, primarily in real estate companies, loan portfolios, debt recapitalizations and property. The private equity, credit and real estate funds are primarily closed-end funds in which the firm's investments are generally not eligible for redemption. Distributions will be received from these funds as the underlying assets are liquidated or distributed.

The firm also invests in hedge funds, primarily multi-disciplinary hedge funds that employ a fundamental bottom-up investment approach across various asset classes and strategies including long/short equity, credit, convertibles, risk arbitrage, special situations and capital structure arbitrage. The firm's investments in hedge funds primarily include interests where the underlying assets are illiquid in nature, and proceeds from redemptions will not be received until the underlying assets are liquidated or distributed.

Many of the funds described above are "covered funds" as defined by the Volcker Rule of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act). The Board of Governors of the Federal Reserve System (Federal Reserve Board) extended the conformance period through July 2016 for investments in, and relationships with, covered funds that were in place prior to December 2013, and indicated that it intends to further extend the conformance period through July 2017. The firm currently expects to be able to exit the majority of such interests in these funds in orderly transactions prior to July 2017, subject to market conditions. However, to the extent that the underlying investments of particular funds are not sold, the firm may be required to sell its interests in such funds. If that occurs, the firm may receive a value for its interests that is less than the then carrying value as there could be a limited secondary market for these investments and the firm may be unable to sell them in orderly transactions. The firm continues to manage its existing interests in such funds, taking into account the conformance period outlined above. In order to be compliant with the Volcker Rule, the firm will be required to reduce most of its interests in the funds in the table below by the end of the conformance period.

The tables below present the fair value of the firm's investments in, and unfunded commitments to, funds that are measured at NAV.

	As of December 2015	
$ in millions	**Fair Value of Investments**	**Unfunded Commitments**
Private equity funds	**$5,414**	**$2,057**
Credit funds	**611**	**344**
Hedge funds	**560**	**—**
Real estate funds	**1,172**	**296**
Total	**$7,757**	**$2,697**

	As of December 2014	
$ in millions	Fair Value of Investments	Unfunded Commitments
Private equity funds	$6,307	$2,175
Credit funds	1,008	383
Hedge funds	863	—
Real estate funds	1,432	310
Total	$9,610	$2,868

Note 7.

Derivatives and Hedging Activities

Derivative Activities

Derivatives are instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors. Derivatives may be traded on an exchange (exchange-traded) or they may be privately negotiated contracts, which are usually referred to as OTC derivatives. Certain of the firm's OTC derivatives are cleared and settled through central clearing counterparties (OTC-cleared), while others are bilateral contracts between two counterparties (bilateral OTC).

Market-Making. As a market maker, the firm enters into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. In this capacity, the firm typically acts as principal and is consequently required to commit capital to provide execution. As a market maker, it is essential to maintain an inventory of financial instruments sufficient to meet expected client and market demands.

Risk Management. The firm also enters into derivatives to actively manage risk exposures that arise from its market-making and investing and lending activities in derivative and cash instruments. The firm's holdings and exposures are hedged, in many cases, on either a portfolio or risk-specific basis, as opposed to an instrument-by-instrument basis. The offsetting impact of this economic hedging is reflected in the same business segment as the related revenues. In addition, the firm may enter into derivatives designated as hedges under U.S. GAAP. These derivatives are used to manage interest rate exposure in certain fixed-rate unsecured long-term and short-term borrowings, and deposits, and to manage foreign currency exposure on the net investment in certain non-U.S. operations.

The firm enters into various types of derivatives, including:

- **Futures and Forwards.** Contracts that commit counterparties to purchase or sell financial instruments, commodities or currencies in the future.
- **Swaps.** Contracts that require counterparties to exchange cash flows such as currency or interest payment streams. The amounts exchanged are based on the specific terms of the contract with reference to specified rates, financial instruments, commodities, currencies or indices.
- **Options.** Contracts in which the option purchaser has the right, but not the obligation, to purchase from or sell to the option writer financial instruments, commodities or currencies within a defined time period for a specified price.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement (counterparty netting). Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements (cash collateral netting). Derivative assets and liabilities are included in "Financial instruments owned, at fair value" and "Financial instruments sold, but not yet purchased, at fair value," respectively. Realized and unrealized gains and losses on derivatives not designated as hedges under ASC 815 are included in "Market making" and "Other principal transactions" in Note 4.

The table below presents the gross fair value and the notional amount of derivative contracts by major product type, the amounts of counterparty and cash collateral netting in the consolidated statements of financial condition, as well as cash and securities collateral posted and received under enforceable credit support agreements that do not meet the criteria for netting under U.S. GAAP.

In the table below:

- Gross fair values exclude the effects of both counterparty netting and collateral, and therefore are not representative of the firm's exposure.
- Where the firm has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.
- Notional amounts, which represent the sum of gross long and short derivative contracts, provide an indication of the volume of the firm's derivative activity and do not represent anticipated losses.

	As of December 2015			As of December 2014		
$ in millions	**Derivative Assets**	**Derivative Liabilities**	**Notional Amount**	Derivative Assets	Derivative Liabilities	Notional Amount
Derivatives not accounted for as hedges						
Exchange-traded	**$ 310**	**$ 280**	**$ 4,402,843**	$ 228	$ 238	$ 3,151,865
OTC-cleared	**211,272**	**192,401**	**20,738,687**	351,801	330,298	30,408,636
Bilateral OTC	**345,516**	**321,458**	**12,953,830**	434,333	409,071	13,552,017
Total interest rates	**557,098**	**514,139**	**38,095,360**	786,362	739,607	47,112,518
OTC-cleared	**5,203**	**5,596**	**339,244**	5,812	5,663	378,099
Bilateral OTC	**35,679**	**31,179**	**1,552,806**	49,036	44,491	2,122,859
Total credit	**40,882**	**36,775**	**1,892,050**	54,848	50,154	2,500,958
Exchange-traded	**183**	**204**	**13,073**	69	69	17,214
OTC-cleared	**165**	**128**	**14,617**	100	96	13,304
Bilateral OTC	**96,660**	**99,235**	**5,461,940**	109,747	108,442	5,535,685
Total currencies	**97,008**	**99,567**	**5,489,630**	109,916	108,607	5,566,203
Exchange-traded	**2,997**	**3,623**	**203,465**	7,683	7,166	321,378
OTC-cleared	**232**	**233**	**2,839**	313	315	3,036
Bilateral OTC	**17,445**	**17,215**	**230,750**	20,994	21,065	345,065
Total commodities	**20,674**	**21,071**	**437,054**	28,990	28,546	669,479
Exchange-traded	**9,372**	**7,908**	**528,419**	9,592	9,636	541,711
Bilateral OTC	**37,788**	**38,290**	**927,078**	49,339	49,013	983,784
Total equities	**47,160**	**46,198**	**1,455,497**	58,931	58,649	1,525,495
Subtotal	**762,822**	**717,750**	**47,369,591**	1,039,047	985,563	57,374,653
Derivatives accounted for as hedges						
OTC-cleared	**4,567**	**85**	**51,446**	2,713	228	31,109
Bilateral OTC	**6,660**	**20**	**62,022**	11,559	34	95,389
Total interest rates	**11,227**	**105**	**113,468**	14,272	262	126,498
OTC-cleared	**24**	**6**	**1,333**	12	3	1,205
Bilateral OTC	**116**	**27**	**8,615**	113	13	8,431
Total currencies	**140**	**33**	**9,948**	125	16	9,636
Subtotal	**11,367**	**138**	**123,416**	14,397	278	136,134
Total gross fair value/notional amount of derivatives	**$ 774,189** [1]	**$ 717,888** [1]	**$47,493,007**	$1,053,444 [1]	$ 985,841 [1]	$57,510,787
Amounts that have been offset in the consolidated statements of financial condition						
Exchange-traded	**$ (9,398)**	**$ (9,398)**		$ (15,039)	$ (15,039)	
OTC-cleared	**(194,928)**	**(194,928)**		(335,792)	(335,792)	
Bilateral OTC	**(426,841)**	**(426,841)**		(535,839)	(535,839)	
Total counterparty netting	**(631,167)**	**(631,167)**		(886,670)	(886,670)	
OTC-cleared	**(26,151)**	**(3,305)**		(24,801)	(738)	
Bilateral OTC	**(62,981)**	**(36,645)**		(78,703)	(35,417)	
Total cash collateral netting	**(89,132)**	**(39,950)**		(103,504)	(36,155)	
Total counterparty and cash collateral netting	**$(720,299)**	**$(671,117)**		$ (990,174)	$(922,825)	
Amounts included in financial instruments owned/financial instruments sold, but not yet purchased						
Exchange-traded	**$ 3,464**	**$ 2,617**		$ 2,533	$ 2,070	
OTC-cleared	**384**	**216**		158	73	
Bilateral OTC	**50,042**	**43,938**		60,579	60,873	
Total amounts included in the consolidated statements of financial condition	**$ 53,890**	**$ 46,771**		$ 63,270	$ 63,016	
Amounts that have not been offset in the consolidated statements of financial condition						
Cash collateral received/posted	**$ (498)**	**$ (1,935)**		$ (980)	$ (2,940)	
Securities collateral received/posted	**(14,008)**	**(10,044)**		(14,742)	(18,159)	
Total	**$ 39,384**	**$ 34,792**		$ 47,548	$ 41,917	

1. Includes derivative assets and derivative liabilities of $17.09 billion and $18.16 billion, respectively, as of December 2015, and derivative assets and derivative liabilities of $25.93 billion and $26.19 billion, respectively, as of December 2014, which are not subject to an enforceable netting agreement or are subject to a netting agreement that the firm has not yet determined to be enforceable.

Valuation Techniques for Derivatives

The firm's level 2 and level 3 derivatives are valued using derivative pricing models (e.g., discounted cash flow models, correlation models, and models that incorporate option pricing methodologies, such as Monte Carlo simulations). Price transparency of derivatives can generally be characterized by product type, as described below.

- **Interest Rate.** In general, the key inputs used to value interest rate derivatives are transparent, even for most long-dated contracts. Interest rate swaps and options denominated in the currencies of leading industrialized nations are characterized by high trading volumes and tight bid/offer spreads. Interest rate derivatives that reference indices, such as an inflation index, or the shape of the yield curve (e.g., 10-year swap rate vs. 2-year swap rate) are more complex, but the key inputs are generally observable.
- **Credit.** Price transparency for credit default swaps, including both single names and baskets of credits, varies by market and underlying reference entity or obligation. Credit default swaps that reference indices, large corporates and major sovereigns generally exhibit the most price transparency. For credit default swaps with other underliers, price transparency varies based on credit rating, the cost of borrowing the underlying reference obligations, and the availability of the underlying reference obligations for delivery upon the default of the issuer. Credit default swaps that reference loans, asset-backed securities and emerging market debt instruments tend to have less price transparency than those that reference corporate bonds. In addition, more complex credit derivatives, such as those sensitive to the correlation between two or more underlying reference obligations, generally have less price transparency.
- **Currency.** Prices for currency derivatives based on the exchange rates of leading industrialized nations, including those with longer tenors, are generally transparent. The primary difference between the price transparency of developed and emerging market currency derivatives is that emerging markets tend to be observable for contracts with shorter tenors.
- **Commodity.** Commodity derivatives include transactions referenced to energy (e.g., oil and natural gas), metals (e.g., precious and base) and soft commodities (e.g., agricultural). Price transparency varies based on the underlying commodity, delivery location, tenor and product quality (e.g., diesel fuel compared to unleaded gasoline). In general, price transparency for commodity derivatives is greater for contracts with shorter tenors and contracts that are more closely aligned with major and/or benchmark commodity indices.
- **Equity.** Price transparency for equity derivatives varies by market and underlier. Options on indices and the common stock of corporates included in major equity indices exhibit the most price transparency. Equity derivatives generally have observable market prices, except for contracts with long tenors or reference prices that differ significantly from current market prices. More complex equity derivatives, such as those sensitive to the correlation between two or more individual stocks, generally have less price transparency.

Liquidity is essential to observability of all product types. If transaction volumes decline, previously transparent prices and other inputs may become unobservable. Conversely, even highly structured products may at times have trading volumes large enough to provide observability of prices and other inputs. See Note 5 for an overview of the firm's fair value measurement policies.

Level 1 Derivatives

Level 1 derivatives include short-term contracts for future delivery of securities when the underlying security is a level 1 instrument, and exchange-traded derivatives if they are actively traded and are valued at their quoted market price.

Level 2 Derivatives

Level 2 derivatives include OTC derivatives for which all significant valuation inputs are corroborated by market evidence and exchange-traded derivatives that are not actively traded and/or that are valued using models that calibrate to market-clearing levels of OTC derivatives. In evaluating the significance of a valuation input, the firm considers, among other factors, a portfolio's net risk exposure to that input.

The selection of a particular model to value a derivative depends on the contractual terms of and specific risks inherent in the instrument, as well as the availability of pricing information in the market. For derivatives that trade in liquid markets, model selection does not involve significant management judgment because outputs of models can be calibrated to market-clearing levels.

Valuation models require a variety of inputs, such as contractual terms, market prices, yield curves, discount rates (including those derived from interest rates on collateral received and posted as specified in credit support agreements for collateralized derivatives), credit curves, measures of volatility, prepayment rates, loss severity rates and correlations of such inputs. Significant inputs to the valuations of level 2 derivatives can be verified to market transactions, broker or dealer quotations or other alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Level 3 Derivatives

Level 3 derivatives are valued using models which utilize observable level 1 and/or level 2 inputs, as well as unobservable level 3 inputs. The significant unobservable inputs used to value the firm's level 3 derivatives are described below.

- For the majority of the firm's interest rate and currency derivatives classified within level 3, significant unobservable inputs include correlations of certain currencies and interest rates (e.g., the correlation between Euro inflation and Euro interest rates) and specific interest rate volatilities.
- For level 3 credit derivatives, significant unobservable inputs include illiquid credit spreads and upfront credit points, which are unique to specific reference obligations and reference entities, recovery rates and certain correlations required to value credit and mortgage derivatives (e.g., the likelihood of default of the underlying reference obligation relative to one another).
- For level 3 commodity derivatives, significant unobservable inputs include volatilities for options with strike prices that differ significantly from current market prices and prices or spreads for certain products for which the product quality or physical location of the commodity is not aligned with benchmark indices.
- For level 3 equity derivatives, significant unobservable inputs generally include equity volatility inputs for options that are long-dated and/or have strike prices that differ significantly from current market prices. In addition, the valuation of certain structured trades requires the use of level 3 correlation inputs, such as the correlation of the price performance of two or more individual stocks or the correlation of the price performance for a basket of stocks to another asset class such as commodities.

Subsequent to the initial valuation of a level 3 derivative, the firm updates the level 1 and level 2 inputs to reflect observable market changes and any resulting gains and losses are recorded in level 3. Level 3 inputs are changed when corroborated by evidence such as similar market transactions, third-party pricing services and/or broker or dealer quotations or other empirical market data. In circumstances where the firm cannot verify the model value by reference to market transactions, it is possible that a different valuation model could produce a materially different estimate of fair value. See below for further information about significant unobservable inputs used in the valuation of level 3 derivatives.

Valuation Adjustments

Valuation adjustments are integral to determining the fair value of derivative portfolios and are used to adjust the mid-market valuations produced by derivative pricing models to the appropriate exit price valuation. These adjustments incorporate bid/offer spreads, the cost of liquidity, credit valuation adjustments and funding valuation adjustments, which account for the credit and funding risk inherent in the uncollateralized portion of derivative portfolios. The firm also makes funding valuation adjustments to collateralized derivatives where the terms of the agreement do not permit the firm to deliver or repledge collateral received. Market-based inputs are generally used when calibrating valuation adjustments to market-clearing levels.

In addition, for derivatives that include significant unobservable inputs, the firm makes model or exit price adjustments to account for the valuation uncertainty present in the transaction.

Significant Unobservable Inputs

The table below presents the ranges, averages and medians of significant unobservable inputs used to value the firm's level 3 derivatives. In the table below:

- Ranges represent the significant unobservable inputs that were used in the valuation of each type of derivative.
- Averages represent the arithmetic average of the inputs and are not weighted by the relative fair value or notional of the respective financial instruments. An average greater than the median indicates that the majority of inputs are below the average.
- The ranges, averages and medians of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one derivative. For example, the highest correlation presented in the tables below for interest rate derivatives is appropriate for valuing a specific interest rate derivative but may not be appropriate for valuing any other interest rate derivative. Accordingly, the ranges of inputs presented below do not represent uncertainty in, or possible ranges of, fair value measurements of the firm's level 3 derivatives.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, option pricing models and discounted cash flows models are typically used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Level 3 Derivative Product Type	**Valuation Techniques and Significant Unobservable Inputs**	**Range of Significant Unobservable Inputs (Average / Median)**	
		As of December 2015	As of December 2014
Interest rates *($398 million and $40 million of net level 3 liabilities as of December 2015 and December 2014, respectively)*	Option pricing models: • Correlation • Volatility	 (25)% to 92% (53% / 55%) 31 basis points per annum (bpa) to 152 bpa (84 bpa / 57 bpa)	 (16)% to 84% (37% / 40%) 36 basis points per annum (bpa) to 156 bpa (100 bpa / 115 bpa)
Credit *($2.79 billion and $3.53 billion of net level 3 assets as of December 2015 and December 2014, respectively)*	Option pricing models, correlation models and discounted cash flows models: • Correlation • Credit spreads • Upfront credit points • Recovery rates	 46% to 99% (68% / 66%) 1 basis points (bps) to 1,019 bps (129 bps / 86 bps) [1] 0 points to 100 points (41 points / 40 points) 2% to 97% (58% / 70%)	 5% to 99% (71% / 72%) 1 basis points (bps) to 700 bps (116 bps / 79 bps) [1] 0 points to 99 points (40 points / 30 points) 14% to 87% (44% / 40%)
Currencies *($34 million and $267 million of net level 3 liabilities as of December 2015 and December 2014, respectively)*	Option pricing models: • Correlation (including cross-product correlation)	 25% to 70% (50% / 51%)	 22% to 80% (47% / 50%)
Commodities *($262 million and $1.14 billion of net level 3 liabilities as of December 2015 and December 2014, respectively)*	Option pricing models and discounted cash flows models: • Volatility • Spread per million British Thermal units (MMBTU) of natural gas • Spread per Metric Tonne (MT) of coal • Spread per barrel of oil and refined products	 11% to 77% (35% / 34%) $(1.32) to $4.15 ($(0.05) / $(0.01)) N/A $(10.64) to $65.29 ($3.34 / $(3.31)) [1]	 16% to 68% (33% / 32%) $(1.66) to $4.45 ($(0.13) / $(0.03)) $(10.50) to $3.00 ($(4.04) / $(6.74)) $(15.35) to $80.55 ($22.32 / $13.50) [1]
Equities *($1.60 billion and $1.38 billion of net level 3 liabilities as of December 2015 and December 2014, respectively)*	Option pricing models: • Correlation (including cross-product correlation) • Volatility	 (65)% to 94% (42% / 48%) 5% to 76% (24% / 23%)	 (34)% to 99% (47% / 49%) 5% to 90% (23% / 21%)

1. The difference between the average and the median for these spread inputs indicates that the majority of the inputs fall in the lower end of the range.

Range of Significant Unobservable Inputs

The following is information about the ranges of significant unobservable inputs used to value the firm's level 3 derivative instruments:

- **Correlation.** Ranges for correlation cover a variety of underliers both within one market (e.g., equity index and equity single stock names) and across markets (e.g., correlation of an interest rate and a foreign exchange rate), as well as across regions. Generally, cross-product correlation inputs are used to value more complex instruments and are lower than correlation inputs on assets within the same derivative product type.
- **Volatility.** Ranges for volatility cover numerous underliers across a variety of markets, maturities and strike prices. For example, volatility of equity indices is generally lower than volatility of single stocks.
- **Credit spreads, upfront credit points and recovery rates.** The ranges for credit spreads, upfront credit points and recovery rates cover a variety of underliers (index and single names), regions, sectors, maturities and credit qualities (high-yield and investment-grade). The broad range of this population gives rise to the width of the ranges of significant unobservable inputs.
- **Commodity prices and spreads.** The ranges for commodity prices and spreads cover variability in products, maturities and locations.

Sensitivity of Fair Value Measurement to Changes in Significant Unobservable Inputs

The following is a description of the directional sensitivity of the firm's level 3 fair value measurements to changes in significant unobservable inputs, in isolation:

- **Correlation.** In general, for contracts where the holder benefits from the convergence of the underlying asset or index prices (e.g., interest rates, credit spreads, foreign exchange rates, inflation rates and equity prices), an increase in correlation results in a higher fair value measurement.
- **Volatility.** In general, for purchased options, an increase in volatility results in a higher fair value measurement.
- **Credit spreads, upfront credit points and recovery rates.** In general, the fair value of purchased credit protection increases as credit spreads or upfront credit points increase or recovery rates decrease. Credit spreads, upfront credit points and recovery rates are strongly related to distinctive risk factors of the underlying reference obligations, which include reference entity-specific factors such as leverage, volatility and industry, market-based risk factors, such as borrowing costs or liquidity of the underlying reference obligation, and macroeconomic conditions.
- **Commodity prices and spreads.** In general, for contracts where the holder is receiving a commodity, an increase in the spread (price difference from a benchmark index due to differences in quality or delivery location) or price results in a higher fair value measurement.

Due to the distinctive nature of each of the firm's level 3 derivatives, the interrelationship of inputs is not necessarily uniform within each product type.

Fair Value of Derivatives by Level

The tables below present the fair value of derivatives on a gross basis by level and major product type as well as the impact of netting. In the tables below:

- The gross fair values exclude the effects of both counterparty netting and collateral netting, and therefore are not representative of the firm's exposure.
- Counterparty netting is reflected in each level to the extent that receivable and payable balances are netted within the same level and is included in "Counterparty netting within levels." Where the counterparty netting is across levels, the netting is reflected in "Cross-level counterparty netting."
- Derivative assets are shown as positive amounts and derivative liabilities are shown as negative amounts.

	Derivatives at Fair Value as of December 2015			
$ in millions	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Interest rates	**$ 4**	**$ 567,761**	**$ 560**	**$ 568,325**
Credit	**—**	**34,832**	**6,050**	**40,882**
Currencies	**—**	**96,959**	**189**	**97,148**
Commodities	**—**	**20,087**	**587**	**20,674**
Equities	**46**	**46,491**	**623**	**47,160**
Gross fair value of derivative assets	**50**	**766,130**	**8,009**	**774,189**
Counterparty netting within levels	**—**	**(627,548)**	**(2,139)**	**(629,687)**
Subtotal	**$ 50**	**$ 138,582**	**$ 5,870**	**$ 144,502**
Cross-level counterparty netting				**(1,480)**
Cash collateral netting				**(89,132)**
Fair value included in financial instruments owned				**$ 53,890**
Liabilities				
Interest rates	**$(11)**	**$(513,275)**	**$ (958)**	**$(514,244)**
Credit	**—**	**(33,518)**	**(3,257)**	**(36,775)**
Currencies	**—**	**(99,377)**	**(223)**	**(99,600)**
Commodities	**—**	**(20,222)**	**(849)**	**(21,071)**
Equities	**(18)**	**(43,953)**	**(2,227)**	**(46,198)**
Gross fair value of derivative liabilities	**(29)**	**(710,345)**	**(7,514)**	**(717,888)**
Counterparty netting within levels	**—**	**627,548**	**2,139**	**629,687**
Subtotal	**$(29)**	**$ (82,797)**	**$(5,375)**	**$ (88,201)**
Cross-level counterparty netting				**1,480**
Cash collateral netting				**39,950**
Fair value included in financial instruments sold, but not yet purchased				**$ (46,771)**

	Derivatives at Fair Value as of December 2014			
$ in millions	Level 1	Level 2	Level 3	Total
Assets				
Interest rates	$ 123	$ 800,028	$ 483	$ 800,634
Credit	—	47,190	7,658	54,848
Currencies	—	109,891	150	110,041
Commodities	—	28,124	866	28,990
Equities	175	58,122	634	58,931
Gross fair value of derivative assets	298	1,043,355	9,791	1,053,444
Counterparty netting within levels	—	(882,841)	(2,717)	(885,558)
Subtotal	$ 298	$ 160,514	$ 7,074	$ 167,886
Cross-level counterparty netting				(1,112)
Cash collateral netting				(103,504)
Fair value included in financial instruments owned				$ 63,270
Liabilities				
Interest rates	$ (14)	$ (739,332)	$ (523)	$ (739,869)
Credit	—	(46,026)	(4,128)	(50,154)
Currencies	—	(108,206)	(417)	(108,623)
Commodities	—	(26,538)	(2,008)	(28,546)
Equities	(94)	(56,546)	(2,009)	(58,649)
Gross fair value of derivative liabilities	(108)	(976,648)	(9,085)	(985,841)
Counterparty netting within levels	—	882,841	2,717	885,558
Subtotal	$(108)	$ (93,807)	$(6,368)	$ (100,283)
Cross-level counterparty netting				1,112
Cash collateral netting				36,155
Fair value included in financial instruments sold, but not yet purchased				$ (63,016)

Level 3 Rollforward

The table below presents changes in fair value for all derivatives categorized as level 3 as of the end of the year. In the table below:

- If a derivative was transferred to level 3 during a reporting period, its entire gain or loss for the period is included in level 3. Transfers between levels are reported at the beginning of the reporting period in which they occur.
- Positive amounts for transfers into level 3 and negative amounts for transfers out of level 3 represent net transfers of derivative assets. Negative amounts for transfers into level 3 and positive amounts for transfers out of level 3 represent net transfers of derivative liabilities.
- A derivative with level 1 and/or level 2 inputs is classified in level 3 in its entirety if it has at least one significant level 3 input.
- If there is one significant level 3 input, the entire gain or loss from adjusting only observable inputs (i.e., level 1 and level 2 inputs) is classified as level 3.
- Gains or losses that have been reported in level 3 resulting from changes in level 1 or level 2 inputs are frequently offset by gains or losses attributable to level 1 or level 2 derivatives and/or level 1, level 2 and level 3 cash instruments. As a result, gains/(losses) included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.
- Net unrealized gains/(losses) relate to instruments that were still held at year-end.
- For the year ended December 2015, the net realized and unrealized gains on level 3 derivative assets and liabilities of $746 million (reflecting $67 million of realized gains and $679 million of unrealized gains) include gains of approximately $518 million and $228 million reported in "Market making" and "Other principal transactions" respectively.
- For the year ended December 2014, the net realized and unrealized losses on level 3 derivative assets and liabilities of $306 million (reflecting $123 million of realized losses and $183 million of unrealized losses) include losses of approximately $276 million and $30 million reported in "Market making" and "Other principal transactions" respectively.
- See "Level 3 Rollforward Commentary" below for an explanation of the net unrealized gains/(losses) on level 3 derivative assets and liabilities and the activity related to transfers into and out of level 3.

	Level 3 Derivative Assets and Liabilities at Fair Value								
$ in millions	Asset/ (liability) balance, beginning of year	Net realized gains/ (losses)	Net unrealized gains/ (losses)	Purchases	Sales	Settlements	Transfers into level 3	Transfers out of level 3	Asset/ (liability) balance, end of year
Year Ended December 2015									
Interest rates — net	**$ (40)**	**$ (53)**	**$ 66**	**$ 3**	**$ (31)**	**$ (144)**	**$(149)**	**$ (50)**	**$ (398)**
Credit — net	**3,530**	**92**	**804**	**80**	**(237)**	**(640)**	**206**	**(1,042)**	**2,793**
Currencies — net	**(267)**	**(49)**	**40**	**32**	**(10)**	**162**	**(1)**	**59**	**(34)**
Commodities — net	**(1,142)**	**34**	**(52)**	**—**	**(234)**	**1,034**	**(35)**	**133**	**(262)**
Equities — net	**(1,375)**	**43**	**(179)**	**125**	**(1,352)**	**1,086**	**(25)**	**73**	**(1,604)**
Total derivatives — net	**$ 706**	**$ 67**	**$ 679**	**$240**	**$(1,864)**	**$ 1,498**	**$ (4)**	**$ (827)**	**$ 495**
Year Ended December 2014									
Interest rates — net	$ (86)	$ (50)	$ (101)	$ 97	$ (2)	$ 92	$ 14	$ (4)	$ (40)
Credit — net	4,176	64	1,625	151	(138)	(1,693)	(194)	(461)	3,530
Currencies — net	(200)	(70)	(175)	19	—	172	(9)	(4)	(267)
Commodities — net	60	(19)	(1,096)	38	(272)	95	84	(32)	(1,142)
Equities — net	(959)	(48)	(436)	344	(979)	270	(115)	548	(1,375)
Total derivatives — net	$ 2,991	$(123)	$ (183)	$649	$(1,391)	$(1,064)	$(220)	$ 47	$ 706

Level 3 Rollforward Commentary

Year Ended December 2015. The net unrealized gain on level 3 derivatives of $679 million for 2015 was primarily attributable to gains on certain credit derivatives, reflecting the impact of wider credit spreads, and changes in foreign exchange and interest rates.

Transfers into level 3 derivatives during 2015 primarily reflected transfers of certain credit derivative assets from level 2, primarily due to unobservable credit spread inputs becoming significant to the valuations of these derivatives, and transfers of certain interest rate derivative liabilities from level 2, primarily due to certain unobservable inputs becoming significant to the valuations of these derivatives.

Transfers out of level 3 derivatives during 2015 primarily reflected transfers of certain credit derivative assets to level 2, principally due to increased transparency and reduced significance of certain unobservable credit spread inputs used to value these derivatives.

Year Ended December 2014. The net unrealized loss on level 3 derivatives of $183 million for 2014 was primarily attributable to the impact of a decrease in commodity prices on certain commodity derivatives, a decrease in equity prices on certain equity derivatives, and the impact of changes in foreign exchange rates on certain currency derivatives, largely offset by the impact of tighter credit spreads and a decrease in interest rates on certain credit derivatives.

Transfers into level 3 derivatives during 2014 primarily reflected transfers of certain credit derivative liabilities from level 2, principally due to unobservable credit spread inputs becoming significant to the valuation of these derivatives and transfers of certain equity derivative liabilities from level 2, primarily due to reduced transparency of volatility inputs used to value these derivatives.

Transfers out of level 3 derivatives during 2014 primarily reflected transfers of certain equity derivative liabilities to level 2, principally due to unobservable correlation inputs no longer being significant to the valuation of these derivatives, and transfers of certain credit derivative assets to level 2, principally due to unobservable credit spread inputs no longer being significant to the net risk of certain portfolios.

OTC Derivatives

The tables below present the fair values of OTC derivative assets and liabilities by tenor and major product type.

	OTC Derivatives as of December 2015			
$ in millions	**Less than 1 Year**	**1 - 5 Years**	**Greater than 5 Years**	**Total**
Assets				
Interest rates	**$ 4,231**	**$23,278**	**$ 81,401**	**$ 108,910**
Credit	**1,664**	**4,547**	**5,842**	**12,053**
Currencies	**14,646**	**8,936**	**6,353**	**29,935**
Commodities	**6,228**	**3,897**	**231**	**10,356**
Equities	**4,806**	**7,091**	**1,550**	**13,447**
Counterparty netting within tenors	**(3,660)**	**(5,751)**	**(5,270)**	**(14,681)**
Subtotal	**$27,915**	**$41,998**	**$ 90,107**	**$ 160,020**
Cross-tenor counterparty netting				**(20,462)**
Cash collateral netting				**(89,132)**
Total				**$ 50,426**
Liabilities				
Interest rates	**$ 5,323**	**$13,945**	**$ 35,592**	**$ 54,860**
Credit	**1,804**	**4,704**	**1,437**	**7,945**
Currencies	**12,378**	**9,940**	**10,048**	**32,366**
Commodities	**4,464**	**3,136**	**2,526**	**10,126**
Equities	**5,154**	**5,802**	**2,994**	**13,950**
Counterparty netting within tenors	**(3,660)**	**(5,751)**	**(5,270)**	**(14,681)**
Subtotal	**$25,463**	**$31,776**	**$ 47,327**	**$ 104,566**
Cross-tenor counterparty netting				**(20,462)**
Cash collateral netting				**(39,950)**
Total				**$ 44,154**

	OTC Derivatives as of December 2014			
$ in millions	Less than 1 Year	1 - 5 Years	Greater than 5 Years	Total
Assets				
Interest rates	$ 7,064	$25,049	$ 90,553	$ 122,666
Credit	1,696	6,093	5,707	13,496
Currencies	17,835	9,897	6,386	34,118
Commodities	8,298	4,068	161	12,527
Equities	4,771	9,285	3,750	17,806
Counterparty netting within tenors	(4,479)	(7,016)	(4,058)	(15,553)
Subtotal	$35,185	$47,376	$102,499	$ 185,060
Cross-tenor counterparty netting				(20,819)
Cash collateral netting				(103,504)
Total				$ 60,737
Liabilities				
Interest rates	$ 7,001	$17,649	$ 37,242	$ 61,892
Credit	2,154	4,942	1,706	8,802
Currencies	18,549	7,667	6,482	32,698
Commodities	5,686	4,105	2,810	12,601
Equities	7,064	6,845	3,571	17,480
Counterparty netting within tenors	(4,479)	(7,016)	(4,058)	(15,553)
Subtotal	$35,975	$34,192	$ 47,753	$ 117,920
Cross-tenor counterparty netting				(20,819)
Cash collateral netting				(36,155)
Total				$ 60,946

In the tables above:

- Tenor is based on expected duration for mortgage-related credit derivatives and generally on remaining contractual maturity for other derivatives.
- Counterparty netting within the same product type and tenor category is included within such product type and tenor category.
- Counterparty netting across product types within the same tenor category is included in "Counterparty netting within tenors." Where the counterparty netting is across tenor categories, the netting is reflected in "Cross-tenor counterparty netting."

Credit Derivatives

The firm enters into a broad array of credit derivatives in locations around the world to facilitate client transactions and to manage the credit risk associated with market-making and investing and lending activities. Credit derivatives are actively managed based on the firm's net risk position.

Credit derivatives are individually negotiated contracts and can have various settlement and payment conventions. Credit events include failure to pay, bankruptcy, acceleration of indebtedness, restructuring, repudiation and dissolution of the reference entity.

The firm enters into the following types of credit derivatives:

- **Credit Default Swaps.** Single-name credit default swaps protect the buyer against the loss of principal on one or more bonds, loans or mortgages (reference obligations) in the event the issuer (reference entity) of the reference obligations suffers a credit event. The buyer of protection pays an initial or periodic premium to the seller and receives protection for the period of the contract. If there is no credit event, as defined in the contract, the seller of protection makes no payments to the buyer of protection. However, if a credit event occurs, the seller of protection is required to make a payment to the buyer of protection, which is calculated in accordance with the terms of the contract.
- **Credit Indices, Baskets and Tranches.** Credit derivatives may reference a basket of single-name credit default swaps or a broad-based index. If a credit event occurs in one of the underlying reference obligations, the protection seller pays the protection buyer. The payment is typically a pro-rata portion of the transaction's total notional amount based on the underlying defaulted reference obligation. In certain transactions, the credit risk of a basket or index is separated into various portions (tranches), each having different levels of subordination. The most junior tranches cover initial defaults and once losses exceed the notional amount of these junior tranches, any excess loss is covered by the next most senior tranche in the capital structure.
- **Total Return Swaps.** A total return swap transfers the risks relating to economic performance of a reference obligation from the protection buyer to the protection seller. Typically, the protection buyer receives from the protection seller a floating rate of interest and protection against any reduction in fair value of the reference obligation, and in return the protection seller receives the cash flows associated with the reference obligation, plus any increase in the fair value of the reference obligation.
- **Credit Options.** In a credit option, the option writer assumes the obligation to purchase or sell a reference obligation at a specified price or credit spread. The option purchaser buys the right, but does not assume the obligation, to sell the reference obligation to, or purchase it from, the option writer. The payments on credit options depend either on a particular credit spread or the price of the reference obligation.

The firm economically hedges its exposure to written credit derivatives primarily by entering into offsetting purchased credit derivatives with identical underliers. Substantially all of the firm's purchased credit derivative transactions are with financial institutions and are subject to stringent collateral thresholds. In addition, upon the occurrence of a specified trigger event, the firm may take possession of the reference obligations underlying a particular written credit derivative, and consequently may, upon liquidation of the reference obligations, recover amounts on the underlying reference obligations in the event of default.

As of December 2015, written and purchased credit derivatives had total gross notional amounts of $923.48 billion and $968.68 billion, respectively, for total net notional purchased protection of $45.20 billion. As of December 2014, written and purchased credit derivatives had total gross notional amounts of $1.22 trillion and $1.28 trillion, respectively, for total net notional purchased protection of $59.35 billion. Substantially all of the firm's written and purchased credit derivatives are credit default swaps.

The tables below present certain information about credit derivatives. In the tables below:

- Fair values exclude the effects of both netting of receivable balances with payable balances under enforceable netting agreements, and netting of cash received or posted under enforceable credit support agreements, and therefore are not representative of the firm's credit exposure.
- Tenor is based on expected duration for mortgage-related credit derivatives and on remaining contractual maturity for other credit derivatives.
- The credit spread on the underlier, together with the tenor of the contract, are indicators of payment/performance risk. The firm is less likely to pay or otherwise be required to perform where the credit spread and the tenor are lower.
- Offsetting purchased credit derivatives represent the notional amount of purchased credit derivatives that economically hedge written credit derivatives with identical underliers and are included in "Offsetting."
- Other purchased credit derivatives represent the notional amount of all other purchased credit derivatives not included in "Offsetting."

	As of December 2015				
	Credit Spread on Underlier (basis points)				
$ in millions	**0 - 250**	**251 - 500**	**501 - 1,000**	**Greater than 1,000**	**Total**
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	**$ 240,468**	**$ 2,859**	**$ 2,881**	**$ 10,533**	**$ 256,741**
1 – 5 years	**514,986**	**42,399**	**16,327**	**26,271**	**599,983**
Greater than 5 years	**57,054**	**6,481**	**1,567**	**1,651**	**66,753**
Total	**$ 812,508**	**$51,739**	**$20,775**	**$ 38,455**	**$ 923,477**
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	**$ 722,436**	**$46,313**	**$19,556**	**$ 33,266**	**$ 821,571**
Other	**132,757**	**6,383**	**3,372**	**4,598**	**147,110**
Fair Value of Written Credit Derivatives					
Asset	**$ 17,110**	**$ 924**	**$108**	**$190**	**$ 18,332**
Liability	**2,756**	**2,596**	**1,942**	**12,485**	**19,779**
Net asset/(liability)	**$ 14,354**	**$ (1,672)**	**$ (1,834)**	**$(12,295)**	**$ (1,447)**

	As of December 2014				
	Credit Spread on Underlier (basis points)				
$ in millions	0 - 250	251 - 500	501 - 1,000	Greater than 1,000	Total
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	$ 261,591	$ 7,726	$ 8,449	$ 8,728	$ 286,494
1 – 5 years	775,784	37,255	18,046	26,834	857,919
Greater than 5 years	68,830	5,042	1,309	1,279	76,460
Total	$1,106,205	$50,023	$27,804	$ 36,841	$1,220,873
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	$1,012,874	$41,657	$26,240	$ 33,112	$1,113,883
Other	152,465	8,426	1,949	3,499	166,339
Fair Value of Written Credit Derivatives					
Asset	$ 28,004	$ 1,542	$ 112	$ 82	$ 29,740
Liability	3,629	2,266	1,909	13,943	21,747
Net asset/(liability)	$ 24,375	$ (724)	$ (1,797)	$(13,861)	$ 7,993

Impact of Credit Spreads on Derivatives

On an ongoing basis, the firm realizes gains or losses relating to changes in credit risk through the unwind of derivative contracts and changes in credit mitigants.

The net gain/(loss), including hedges, attributable to the impact of changes in credit exposure and credit spreads (counterparty and the firm's) on derivatives was $9 million for 2015, $135 million for 2014 and $(66) million for 2013.

Bifurcated Embedded Derivatives

The table below presents the fair value and the notional amount of derivatives that have been bifurcated from their related borrowings. These derivatives, which are recorded at fair value, primarily consist of interest rate, equity and commodity products and are included in "Unsecured short-term borrowings" and "Unsecured long-term borrowings" with the related borrowings. See Note 8 for further information.

	As of December	
$ in millions	**2015**	2014
Fair value of assets	**$ 466**	$ 390
Fair value of liabilities	**794**	690
Net liability	**$ 328**	$ 300
Notional amount	**$7,869**	$7,735

Derivatives with Credit-Related Contingent Features

Certain of the firm's derivatives have been transacted under bilateral agreements with counterparties who may require the firm to post collateral or terminate the transactions based on changes in the firm's credit ratings. The firm assesses the impact of these bilateral agreements by determining the collateral or termination payments that would occur assuming a downgrade by all rating agencies. A downgrade by any one rating agency, depending on the agency's relative ratings of the firm at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies.

The table below presents the aggregate fair value of net derivative liabilities under such agreements (excluding application of collateral posted to reduce these liabilities), the related aggregate fair value of the assets posted as collateral and the additional collateral or termination payments that could have been called at the reporting date by counterparties in the event of a one-notch and two-notch downgrade in the firm's credit ratings.

	As of December	
$ in millions	**2015**	2014
Net derivative liabilities under bilateral agreements	**$29,836**	$35,764
Collateral posted	**26,075**	30,824
Additional collateral or termination payments for a one-notch downgrade	**1,061**	1,072
Additional collateral or termination payments for a two-notch downgrade	**2,689**	2,815

Hedge Accounting

The firm applies hedge accounting for (i) certain interest rate swaps used to manage the interest rate exposure of certain fixed-rate unsecured long-term and short-term borrowings and certain fixed-rate certificates of deposit and (ii) certain foreign currency forward contracts and foreign currency-denominated debt used to manage foreign currency exposures on the firm's net investment in certain non-U.S. operations.

To qualify for hedge accounting, the hedging instrument must be highly effective at reducing the risk from the exposure being hedged. Additionally, the firm must formally document the hedging relationship at inception and test the hedging relationship at least on a quarterly basis to ensure the hedging instrument continues to be highly effective over the life of the hedging relationship.

Fair Value Hedges

The firm designates certain interest rate swaps as fair value hedges. These interest rate swaps hedge changes in fair value attributable to the designated benchmark interest rate (e.g., London Interbank Offered Rate (LIBOR) or Overnight Index Swap Rate (OIS)), effectively converting a substantial portion of fixed-rate obligations into floating-rate obligations.

The firm applies a statistical method that utilizes regression analysis when assessing the effectiveness of its fair value hedging relationships in achieving offsetting changes in the fair values of the hedging instrument and the risk being hedged (i.e., interest rate risk). An interest rate swap is considered highly effective in offsetting changes in fair value attributable to changes in the hedged risk when the regression analysis results in a coefficient of determination of 80% or greater and a slope between 80% and 125%.

For qualifying fair value hedges, gains or losses on derivatives are included in "Interest expense." The change in fair value of the hedged item attributable to the risk being hedged is reported as an adjustment to its carrying value and is subsequently amortized into interest expense over its remaining life. Gains or losses resulting from hedge ineffectiveness are included in "Interest expense." When a derivative is no longer designated as a hedge, any remaining difference between the carrying value and par value of the hedged item is amortized to interest expense over the remaining life of the hedged item using the effective interest method. See Note 23 for further information about interest income and interest expense.

The table below presents the gains/(losses) from interest rate derivatives accounted for as hedges, the related hedged borrowings and bank deposits, and the hedge ineffectiveness on these derivatives, which primarily consists of amortization of prepaid credit spreads resulting from the passage of time.

	Year Ended December		
$ in millions	**2015**	2014	2013
Interest rate hedges	**$(1,613)**	$ 1,936	$(8,683)
Hedged borrowings and bank deposits	**898**	(2,451)	6,999
Hedge ineffectiveness	**$ (715)**	$ (515)	$(1,684)

Net Investment Hedges

The firm seeks to reduce the impact of fluctuations in foreign exchange rates on its net investments in certain non-U.S. operations through the use of foreign currency forward contracts and foreign currency-denominated debt. For foreign currency forward contracts designated as hedges, the effectiveness of the hedge is assessed based on the overall changes in the fair value of the forward contracts (i.e., based on changes in forward rates). For foreign currency-denominated debt designated as a hedge, the effectiveness of the hedge is assessed based on changes in spot rates.

For qualifying net investment hedges, the gains or losses on the hedging instruments, to the extent effective, are included in "Currency translation" within the consolidated statements of comprehensive income.

The table below presents the gains/(losses) from net investment hedging.

	Year Ended December		
$ in millions	**2015**	2014	2013
Foreign currency forward contract hedges	**$695**	$576	$150
Foreign currency-denominated debt hedges	**(9)**	202	470

The gain/(loss) related to ineffectiveness and the gain/(loss) reclassified to earnings from accumulated other comprehensive income/(loss) were not material for 2015, 2014 or 2013.

As of December 2015 and December 2014, the firm had designated $2.20 billion and $1.36 billion, respectively, of foreign currency-denominated debt, included in "Unsecured long-term borrowings" and "Unsecured short-term borrowings," as hedges of net investments in non-U.S. subsidiaries.

Cash Flow Hedges

During 2013, the firm designated certain commodities-related swap and forward contracts as cash flow hedges. These swap and forward contracts hedged the firm's exposure to the variability in cash flows associated with the forecasted sales of certain energy commodities by one of the firm's consolidated investments. During the fourth quarter of 2014, the firm de-designated these swaps and forward contracts as cash flow hedges as it became probable that the hedged forecasted sales would not occur.

Prior to de-designation, the firm applied a statistical method that utilized regression analysis of changes in forecasted cash flows when assessing hedge effectiveness, subject to the same quantitative criteria as the firm's fair value hedging relationships described above.

The effective portion of the gains/(losses) recognized on these cash flow hedges were included in "Cash flow hedges" within the consolidated statements of comprehensive income, and gains/(losses) reclassified to earnings from accumulated other comprehensive income and gains/(losses) related to hedge ineffectiveness were included in "Other principal transactions" within the consolidated statements of earnings. Such gains/(losses) were not material for 2014 and 2013. There were no gains/(losses) excluded from the assessment of hedge effectiveness for 2014 and 2013.

Note 8.

Fair Value Option

Other Financial Assets and Financial Liabilities at Fair Value

In addition to all cash and derivative instruments included in "Financial instruments owned, at fair value" and "Financial instruments sold, but not yet purchased, at fair value," the firm accounts for certain of its other financial assets and financial liabilities at fair value primarily under the fair value option. The primary reasons for electing the fair value option are to:

- Reflect economic events in earnings on a timely basis;
- Mitigate volatility in earnings from using different measurement attributes (e.g., transfers of financial instruments owned accounted for as financings are recorded at fair value whereas the related secured financing would be recorded on an accrual basis absent electing the fair value option); and
- Address simplification and cost-benefit considerations (e.g., accounting for hybrid financial instruments at fair value in their entirety versus bifurcation of embedded derivatives and hedge accounting for debt hosts).

Hybrid financial instruments are instruments that contain bifurcatable embedded derivatives and do not require settlement by physical delivery of non-financial assets (e.g., physical commodities). If the firm elects to bifurcate the embedded derivative from the associated debt, the derivative is accounted for at fair value and the host contract is accounted for at amortized cost, adjusted for the effective portion of any fair value hedges. If the firm does not elect to bifurcate, the entire hybrid financial instrument is accounted for at fair value under the fair value option.

Other financial assets and financial liabilities accounted for at fair value under the fair value option include:

- Repurchase agreements and substantially all resale agreements;
- Securities borrowed and loaned within Fixed Income, Currency and Commodities Client Execution;
- Substantially all other secured financings, including transfers of assets accounted for as financings rather than sales;
- Certain unsecured short-term borrowings, consisting of all promissory notes and commercial paper, and certain hybrid financial instruments;
- Certain unsecured long-term borrowings, including certain prepaid commodity transactions and certain hybrid financial instruments;
- Certain receivables from customers and counterparties, including transfers of assets accounted for as secured loans rather than purchases and certain margin loans;
- Certain time deposits issued by the firm's bank subsidiaries (deposits with no stated maturity are not eligible for a fair value option election), including structured certificates of deposit, which are hybrid financial instruments; and
- Certain subordinated liabilities issued by consolidated VIEs.

These financial assets and financial liabilities at fair value are generally valued based on discounted cash flow techniques, which incorporate inputs with reasonable levels of price transparency, and are generally classified as level 2 because the inputs are observable. Valuation adjustments may be made for liquidity and for counterparty and the firm's credit quality.

See below for information about the significant inputs used to value other financial assets and financial liabilities at fair value, including the ranges of significant unobservable inputs used to value the level 3 instruments within these categories. These ranges represent the significant unobservable inputs that were used in the valuation of each type of other financial assets and financial liabilities at fair value. The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one instrument. For example, the highest yield presented below for other secured financings is appropriate for valuing a specific agreement in that category but may not be appropriate for valuing any other agreements in that category. Accordingly, the ranges of inputs presented below do not represent uncertainty in, or possible ranges of, fair value measurements of the firm's level 3 other financial assets and financial liabilities.

Resale and Repurchase Agreements and Securities Borrowed and Loaned. The significant inputs to the valuation of resale and repurchase agreements and securities borrowed and loaned are funding spreads, the amount and timing of expected future cash flows and interest rates. As of both December 2015 and December 2014, the firm had no level 3 resale agreements, securities borrowed or securities loaned. As of both December 2015 and December 2014, the firm's level 3 repurchase agreements were not material. See Note 10 for further information about collateralized agreements and financings.

Other Secured Financings. The significant inputs to the valuation of other secured financings at fair value are the amount and timing of expected future cash flows, interest rates, funding spreads, the fair value of the collateral delivered by the firm (which is determined using the amount and timing of expected future cash flows, market prices, market yields and recovery assumptions) and the frequency of additional collateral calls. The ranges of significant unobservable inputs used to value level 3 other secured financings are as follows:

As of December 2015:

- Yield: 0.6% to 10.0% (weighted average: 2.7%)
- Duration: 1.6 to 8.8 years (weighted average: 2.8 years)

As of December 2014:

- Funding spreads: 210 bps to 325 bps (weighted average: 278 bps)
- Yield: 1.1% to 10.0% (weighted average: 3.1%)
- Duration: 0.7 to 3.8 years (weighted average: 2.6 years)

Generally, increases in funding spreads, yield or duration, in isolation, would result in a lower fair value measurement. Due to the distinctive nature of each of the firm's level 3 other secured financings, the interrelationship of inputs is not necessarily uniform across such financings. See Note 10 for further information about collateralized agreements and financings.

Unsecured Short-term and Long-term Borrowings. The significant inputs to the valuation of unsecured short-term and long-term borrowings at fair value are the amount and timing of expected future cash flows, interest rates, the credit spreads of the firm, as well as commodity prices in the case of prepaid commodity transactions. The inputs used to value the embedded derivative component of hybrid financial instruments are consistent with the inputs used to value the firm's other derivative instruments. See Note 7 for further information about derivatives. See Notes 15 and 16 for further information about unsecured short-term and long-term borrowings, respectively.

Certain of the firm's unsecured short-term and long-term instruments are included in level 3, substantially all of which are hybrid financial instruments. As the significant unobservable inputs used to value hybrid financial instruments primarily relate to the embedded derivative component of these borrowings, these inputs are incorporated in the firm's derivative disclosures related to unobservable inputs in Note 7.

Receivables from Customers and Counterparties. Receivables from customers and counterparties at fair value are primarily comprised of transfers of assets accounted for as secured loans rather than purchases. The significant inputs to the valuation of such receivables are commodity prices, interest rates, the amount and timing of expected future cash flows and funding spreads. As of both December 2015 and December 2014, the firm's level 3 receivables from customers and counterparties were not material.

Deposits. The significant inputs to the valuation of time deposits are interest rates and the amount and timing of future cash flows. The inputs used to value the embedded derivative component of hybrid financial instruments are consistent with the inputs used to value the firm's other derivative instruments. See Note 7 for further information about derivatives. See Note 14 for further information about deposits.

The firm's deposits that are included in level 3 are hybrid financial instruments. As the significant unobservable inputs used to value hybrid financial instruments primarily relate to the embedded derivative component of these deposits, these inputs are incorporated in the firm's derivative disclosures related to unobservable inputs in Note 7.

Fair Value of Other Financial Assets and Financial Liabilities by Level

The tables below present, by level within the fair value hierarchy, other financial assets and financial liabilities accounted for at fair value primarily under the fair value option. In the tables below:

- Securities segregated for regulatory and other purposes include segregated securities accounted for at fair value under the fair value option and consists of securities borrowed and resale agreements.
- Level 1 other financial assets at fair value include U.S. Treasury securities segregated for regulatory and other purposes accounted for at fair value under other U.S. GAAP.
- Other financial assets are shown as positive amounts and other financial liabilities are shown as negative amounts.

	Other Financial Assets and Liabilities at Fair Value as of December 2015			
$ in millions	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Securities segregated for regulatory and other purposes	**$19,562**	**$ 18,942**	**$ —**	**$ 38,504**
Securities purchased under agreements to resell	**—**	**119,450**	**—**	**119,450**
Securities borrowed	**—**	**69,801**	**—**	**69,801**
Receivables from customers and counterparties	**—**	**4,947**	**45**	**4,992**
Total	**$19,562**	**$ 213,140**	**$ 45**	**$ 232,747**
Liabilities				
Deposits	**$ —**	**$ (12,465)**	**$ (2,215)**	**$ (14,680)**
Securities sold under agreements to repurchase	**—**	**(85,998)**	**(71)**	**(86,069)**
Securities loaned	**—**	**(466)**	**—**	**(466)**
Other secured financings	**—**	**(22,658)**	**(549)**	**(23,207)**
Unsecured short-term borrowings	**—**	**(13,610)**	**(4,133)**	**(17,743)**
Unsecured long-term borrowings	**—**	**(18,049)**	**(4,224)**	**(22,273)**
Other liabilities and accrued expenses	**—**	**(1,201)**	**(52)**	**(1,253)**
Total	**$ —**	**$(154,447)**	**$(11,244)**	**$(165,691)**

	Other Financial Assets and Liabilities at Fair Value as of December 2014			
$ in millions	Level 1	Level 2	Level 3	Total
Assets				
Securities segregated for regulatory and other purposes	$21,168	$ 13,123	$ —	$ 34,291
Securities purchased under agreements to resell	—	126,036	—	126,036
Securities borrowed	—	66,769	—	66,769
Receivables from customers and counterparties	—	6,888	56	6,944
Total	$21,168	$ 212,816	$ 56	$ 234,040
Liabilities				
Deposits	$ —	$ (12,458)	$(1,065)	$ (13,523)
Securities sold under agreements to repurchase	—	(88,091)	(124)	(88,215)
Securities loaned	—	(765)	—	(765)
Other secured financings	—	(20,359)	(1,091)	(21,450)
Unsecured short-term borrowings	—	(15,114)	(3,712)	(18,826)
Unsecured long-term borrowings	—	(13,420)	(2,585)	(16,005)
Other liabilities and accrued expenses	—	(116)	(715)	(831)
Total	$ —	$(150,323)	$(9,292)	$(159,615)

Transfers Between Levels of the Fair Value Hierarchy

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. There were no transfers of other financial assets and financial liabilities between level 1 and level 2 during 2015 or 2014. The table below presents information about transfers between level 2 and level 3.

Level 3 Rollforward

The table below presents changes in fair value for other financial assets and financial liabilities accounted for at fair value categorized as level 3 as of the end of the year. In the table below:

- If a financial asset or financial liability was transferred to level 3 during a reporting period, its entire gain or loss for the period is included in level 3. For level 3 other financial assets, increases are shown as positive amounts, while decreases are shown as negative amounts. For level 3 other financial liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Level 3 other financial assets and liabilities are frequently economically hedged with cash instruments and derivatives. Accordingly, gains or losses that are reported in level 3 can be partially offset by gains or losses attributable to level 1, 2 or 3 cash instruments or derivatives. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.
- Net unrealized gains/(losses) relate to instruments that were still held at year-end.
- For the year ended December 2015, the net realized and unrealized gains on level 3 other financial liabilities of $858 million (reflecting $75 million of realized gains and $783 million of unrealized gains) include gains/(losses) of approximately $841 million, $28 million and $(11) million reported in "Market making," "Other principal transactions" and "Interest expense," respectively.
- For the year ended December 2014, the net realized and unrealized losses on level 3 other financial liabilities of $716 million (reflecting $93 million of realized losses and $623 million of unrealized losses) include gains/(losses) of approximately $150 million, $(833) million and $(33) million reported in "Market making," "Other principal transactions" and "Interest expense," respectively.
- See "Level 3 Rollforward Commentary" below for an explanation of the net unrealized gains/(losses) on level 3 other financial assets and liabilities and the activity related to transfers into and out of level 3.

Level 3 Other Financial Assets and Liabilities at Fair Value

$ in millions	Balance, beginning of year	Net realized gains/ (losses)	Net unrealized gains/ (losses)	Purchases	Sales	Issuances	Settlements	Transfers into level 3	Transfers out of level 3	Balance, end of year
Year Ended December 2015										
Receivables from customers and counterparties	**$ 56**	**$ 2**	**$ 2**	**$ 8**	**$ —**	**$ —**	**$ (22)**	**$ —**	**$ (1)**	**$ 45**
Total other financial assets	**$ 56**	**$ 2**	**$ 2**	**$ 8**	**$ —**	**$ —**	**$ (22)**	**$ —**	**$ (1)**	**$ 45**
Deposits	**$(1,065)**	**$ (9)**	**$ 56**	**$ —**	**$ —**	**$(1,252)**	**$ 55**	**$ —**	**$ —**	**$ (2,215)**
Securities sold under agreements to repurchase	**(124)**	**—**	**(2)**	**—**	**—**	**—**	**55**	**—**	**—**	**(71)**
Other secured financings	**(1,091)**	**(10)**	**34**	**(1)**	**—**	**(504)**	**363**	**(85)**	**745**	**(549)**
Unsecured short-term borrowings	**(3,712)**	**96**	**355**	**—**	**—**	**(3,377)**	**2,275**	**(641)**	**871**	**(4,133)**
Unsecured long-term borrowings	**(2,585)**	**(7)**	**352**	**—**	**—**	**(2,888)**	**846**	**(464)**	**522**	**(4,224)**
Other liabilities and accrued expenses	**(715)**	**5**	**(12)**	**—**	**—**	**(3)**	**10**	**(23)**	**686**	**(52)**
Total other financial liabilities	**$(9,292)**	**$ 75**	**$ 783**	**$ (1)**	**$ —**	**$(8,024)**	**$3,604**	**$(1,213)**	**$2,824**	**$(11,244)**
Year Ended December 2014										
Securities purchased under agreements to resell	$ 63	$ —	$ —	$ —	$ —	$ —	$ (63)	$ —	$ —	$ —
Receivables from customers and counterparties	235	3	2	29	—	—	(33)	—	(180)	56
Total other financial assets	$ 298	$ 3	$ 2	$ 29	$ —	$ —	$ (96)	$ —	$ (180)	$ 56
Deposits	$ (385)	$ —	$ (21)	$ 5	$ —	$ (442)	$ 6	$ (280)	$ 52	$ (1,065)
Securities sold under agreements to repurchase	(1,010)	—	—	—	—	—	886	—	—	(124)
Other secured financings	(1,019)	(31)	27	(20)	—	(402)	521	(364)	197	(1,091)
Unsecured short-term borrowings	(3,387)	(11)	(251)	(5)	—	(2,246)	1,828	(981)	1,341	(3,712)
Unsecured long-term borrowings	(1,837)	(46)	56	3	—	(1,221)	446	(1,344)	1,358	(2,585)
Other liabilities and accrued expenses	(26)	(5)	(434)	—	(19)	—	20	(301)	50	(715)
Total other financial liabilities	$(7,664)	$ (93)	$(623)	$(17)	$(19)	$(4,311)	$3,707	$(3,270)	$2,998	$ (9,292)

Level 3 Rollforward Commentary

Year Ended December 2015. The net unrealized gain on level 3 other financial assets and liabilities of $785 million (reflecting $2 million of gains on other financial assets and $783 million of gains on other financial liabilities) for 2015 primarily reflected gains on certain hybrid financial instruments included in unsecured short-term and long-term borrowings, principally due to a decrease in global equity prices, the impact of wider credit spreads, and changes in interest and foreign exchange rates.

Transfers into level 3 of other financial liabilities during 2015 primarily reflected transfers of certain hybrid financial instruments included in unsecured short-term and long-term borrowings from level 2, principally due to reduced transparency of certain correlation and volatility inputs used to value these instruments, and transfers from level 3 unsecured long-term borrowings to level 3 unsecured short-term borrowings, as these borrowings neared maturity.

Transfers out of level 3 of other financial liabilities during 2015 primarily reflected transfers of certain hybrid financial instruments included in unsecured short-term and long-term borrowings and certain other secured financings to level 2, principally due to increased transparency of certain correlation, volatility and funding spread inputs used to value these instruments, transfers to level 3 unsecured short-term borrowings from level 3 unsecured long-term borrowings, as these borrowings neared maturity, and transfers of certain subordinated liabilities included in other liabilities and accrued expenses to level 2, principally due to increased price transparency as a result of market transactions in the related underlying investments.

Year Ended December 2014. The net unrealized loss on level 3 other financial assets and liabilities of $621 million (reflecting $2 million of gains on other financial assets and $623 million of losses on other financial liabilities) for 2014 primarily reflected losses on certain subordinated liabilities included in other liabilities and accrued expenses, principally due to changes in the market value of the related underlying investments, and certain hybrid financial instruments included in unsecured short-term borrowings, principally due to an increase in global equity prices.

Transfers out of level 3 of other financial assets during 2014 primarily reflected transfers of certain secured loans included in receivables from customers and counterparties to level 2, principally due to unobservable inputs not being significant to the net risk of the portfolio.

Transfers into level 3 of other financial liabilities during 2014 primarily reflected transfers of certain hybrid financial instruments included in unsecured long-term and short-term borrowings from level 2, principally due to unobservable inputs being significant to the valuation of these instruments, and transfers from level 3 unsecured long-term borrowings to level 3 unsecured short-term borrowings, as these borrowings neared maturity.

Transfers out of level 3 of other financial liabilities during 2014 primarily reflected transfers of certain hybrid financial instruments included in unsecured long-term and short-term borrowings to level 2, principally due to increased transparency of certain correlation and volatility inputs used to value these instruments, transfers of certain other hybrid financial instruments included in unsecured short-term borrowings to level 2, principally due to certain unobservable inputs not being significant to the valuation of these hybrid financial instruments, and transfers to level 3 unsecured short-term borrowings from level 3 unsecured long-term borrowings, as these borrowings neared maturity.

Gains and Losses on Financial Assets and Financial Liabilities Accounted for at Fair Value Under the Fair Value Option

The table below presents the gains and losses recognized as a result of the firm electing to apply the fair value option to certain financial assets and financial liabilities. These gains and losses are included in "Market making" and "Other principal transactions." The table below also includes gains and losses on the embedded derivative component of hybrid financial instruments included in unsecured short-term borrowings, unsecured long-term borrowings and deposits. These gains and losses would have been recognized under other U.S. GAAP even if the firm had not elected to account for the entire hybrid financial instrument at fair value.

The amounts in the table exclude contractual interest, which is included in "Interest income" and "Interest expense," for all instruments other than hybrid financial instruments. See Note 23 for further information about interest income and interest expense.

	Gains/(Losses) on Financial Assets and Financial Liabilities at Fair Value Under the Fair Value Option		
	Year Ended December		
$ in millions	**2015**	2014	2013
Unsecured short-term borrowings [1]	**$ 346**	$(1,180)	$(1,145)
Unsecured long-term borrowings [2]	**771**	(592)	683
Other liabilities and accrued expenses [3]	**(684)**	(441)	(167)
Other [4]	**(217)**	(366)	(443)
Total	**$ 216**	$(2,579)	$(1,072)

1. Includes gains/(losses) on the embedded derivative component of hybrid financial instruments of $339 million for 2015, $(1.22) billion for 2014 and $(1.04) billion for 2013, respectively.
2. Includes gains/(losses) on the embedded derivative component of hybrid financial instruments of $653 million for 2015, $(697) million for 2014 and $902 million for 2013, respectively.
3. Includes gains/(losses) on certain subordinated liabilities issued by consolidated VIEs. Gains/(losses) for 2013 also includes gains on certain insurance contracts.
4. Primarily consists of gains/(losses) on resale and repurchase agreements, securities borrowed, receivables from customers and counterparties, deposits and other secured financings.

Excluding the gains and losses on the instruments accounted for under the fair value option described above, "Market making" and "Other principal transactions" primarily represent gains and losses on "Financial instruments owned, at fair value" and "Financial instruments sold, but not yet purchased, at fair value."

Loans and Lending Commitments

The table below presents the difference between the aggregate fair value and the aggregate contractual principal amount for loans and long-term receivables for which the fair value option was elected.

	As of December	
$ in millions	**2015**	2014
Performing loans and long-term receivables		
Aggregate contractual principal in excess of the related fair value	**$1,330**	$1,699
Loans on nonaccrual status and/or more than 90 days past due [1]		
Aggregate contractual principal in excess of the related fair value (excluding loans carried at zero fair value and considered uncollectible)	**9,600**	13,106
Aggregate fair value of loans on nonaccrual status and/or more than 90 days past due	**2,391**	3,333

1. The aggregate contractual principal amount of these loans exceeds the related fair value primarily because the firm regularly purchases loans, such as distressed loans, at values significantly below contractual principal amounts.

As of December 2015 and December 2014, the fair value of unfunded lending commitments for which the fair value option was elected was a liability of $211 million and $402 million, respectively, and the related total contractual amount of these lending commitments was $14.01 billion and $26.19 billion, respectively. See Note 18 for further information about lending commitments.

Long-Term Debt Instruments

The aggregate contractual principal amount of long-term other secured financings for which the fair value option was elected exceeded the related fair value by $362 million and $203 million as of December 2015 and December 2014, respectively. The aggregate contractual principal amount of unsecured long-term borrowings for which the fair value option was elected exceeded the related fair value by $1.12 billion and $163 million as of December 2015 and December 2014, respectively. The amounts above include both principal and non-principal-protected long-term borrowings.

Impact of Credit Spreads on Loans and Lending Commitments

The estimated net gain attributable to changes in instrument-specific credit spreads on loans and lending commitments for which the fair value option was elected was $751 million for 2015, $1.83 billion for 2014 and $2.69 billion for 2013, respectively. Changes in the fair value of loans and lending commitments are primarily attributable to changes in instrument-specific credit spreads. Substantially all of the firm's performing loans and lending commitments are floating-rate.

Impact of Credit Spreads on Borrowings

The table below presents the net gains/(losses) attributable to the impact of changes in the firm's own credit spreads on borrowings for which the fair value option was elected. The firm calculates the fair value of borrowings by discounting future cash flows at a rate which incorporates the firm's credit spreads.

	Year Ended December		
$ in millions	**2015**	2014	2013
Net gains/(losses) including hedges	**$255**	$144	$(296)
Net gains/(losses) excluding hedges	**255**	142	(317)

Note 9.

Loans Receivable

Loans receivable is comprised of loans held for investment that are accounted for at amortized cost net of allowance for loan losses. Interest on loans receivable is recognized over the life of the loan and is recorded on an accrual basis.

The table below presents details about loans receivable.

	As of December	
$ in millions	**2015**	2014
Corporate loans	**$20,740**	$14,310
Loans to private wealth management clients	**13,961**	11,289
Loans backed by commercial real estate	**5,271**	2,425
Loans backed by residential real estate	**2,316**	321
Other loans	**3,533**	821
Total loans receivable, gross	**45,821**	29,166
Allowance for loan losses	**(414)**	(228)
Total loans receivable	**$45,407**	$28,938

As of December 2015 and December 2014, the fair value of loans receivable was $45.19 billion and $28.90 billion, respectively. As of December 2015, had these loans been carried at fair value and included in the fair value hierarchy, $23.91 billion and $21.28 billion would have been classified in level 2 and level 3, respectively. As of December 2014, had these loans been carried at fair value and included in the fair value hierarchy, $13.75 billion and $15.15 billion would have been classified in level 2 and level 3, respectively.

The firm also extends lending commitments that are held for investment and accounted for on an accrual basis. As of December 2015 and December 2014, such lending commitments were $93.92 billion and $66.22 billion, respectively, substantially all of which were extended to corporate borrowers. The carrying value and the estimated fair value of such lending commitments were liabilities of $291 million and $3.32 billion, respectively, as of December 2015, and $199 million and $1.86 billion, respectively, as of December 2014. Had these commitments been included in the firm's fair value hierarchy, they would have primarily been classified in level 3 as of both December 2015 and December 2014.

The following is a description of the captions in the table above:

- **Corporate Loans.** Corporate loans include term loans, revolving lines of credit, letter of credit facilities and bridge loans, and are principally used for operating liquidity and general corporate purposes, or in connection with acquisitions. Corporate loans may be secured or unsecured, depending on the loan purpose, the risk profile of the borrower and other factors.
- **Loans to Private Wealth Management Clients.** Loans to the firm's private wealth management clients include loans used by clients to finance private asset purchases, employ leverage for strategic investments in real or financial assets, bridge cash flow timing gaps or provide liquidity for other needs. Such loans are primarily secured by securities or other assets.
- **Loans Backed by Commercial Real Estate.** Loans backed by commercial real estate include loans extended by the firm that are directly or indirectly secured by hotels, retail stores, multifamily housing complexes and commercial and industrial properties. Loans backed by commercial real estate also include loans purchased by the firm.
- **Loans Backed by Residential Real Estate.** Loans backed by residential real estate include loans extended by the firm to clients who warehouse assets that are directly or indirectly secured by residential real estate. Loans backed by residential real estate also include loans purchased by the firm.
- **Other Loans.** Other loans primarily include loans extended to clients who warehouse assets that are directly or indirectly secured by consumer loans, including auto loans, and private student loans and other assets.

Loans receivable includes Purchased Credit Impaired (PCI) loans. PCI loans represent acquired loans or pools of loans with evidence of credit deterioration subsequent to their origination and where it is probable, at acquisition, that the firm will not be able to collect all contractually required payments. Loans acquired within the same reporting period, which have at least two common risk characteristics, one of which relates to their credit risk, are eligible to be pooled together and considered a single unit of account. PCI loans are initially recorded at acquisition price and the difference between the acquisition price and the expected cash flows (accretable yield) is recognized over the life of such loans or pools of loans on an effective yield method. Expected cash flows on PCI loans are determined using various inputs and assumptions, including default rates, loss severities, recoveries, amount and timing of prepayments and other macroeconomic indicators. As of December 2015, the carrying value of such loans was $2.12 billion (including $1.16 billion, $941 million and $23 million related to loans backed by commercial real estate, residential real estate and other consumer loans, respectively). The outstanding principal balance and accretable yield related to such loans was $5.54 billion and $234 million, respectively, as of December 2015. The fair value, related expected cash flows, and the contractually required cash flows of PCI loans at the time of acquisition was $2.27 billion, $2.50 billion and $6.47 billion, respectively. The firm did not have any PCI loans as of December 2014.

Credit Quality

The firm's risk assessment process includes evaluating the credit quality of its loans receivable. For loans receivable (excluding PCI loans), the firm performs credit reviews which include initial and ongoing analyses of its borrowers. A credit review is an independent analysis of the capacity and willingness of a borrower to meet its financial obligations, resulting in an internal credit rating. The determination of internal credit ratings also incorporates assumptions with respect to the nature of and outlook for the borrower's industry, and the economic environment. The firm also assigns a regulatory risk rating to such loans based on the definitions provided by the U.S. federal bank regulatory agencies. Such loans are determined to be impaired when it is probable that the firm will not be able to collect all principal and interest due under the contractual terms of the loan. At that time, loans are placed on non-accrual status and all accrued but uncollected interest is reversed against interest income, and interest subsequently collected is recognized on a cash basis to the extent the loan balance is deemed collectible. Otherwise, all cash received is used to reduce the outstanding loan balance. As of December 2015 and December 2014, impaired loans receivable (excluding PCI loans) in non-accrual status were $223 million and $59 million, respectively.

For PCI loans, the firm's risk assessment process includes reviewing certain key metrics, such as delinquency status, collateral values, credit scores and other risk factors. When it is determined that the firm cannot reasonably estimate expected cash flows on the PCI loans or pools of loans, such loans are placed on non-accrual status.

The table below presents gross loans receivable (excluding PCI loans of $2.12 billion, which are not assigned a credit rating equivalent) and related lending commitments by the firm's internally determined public rating agency equivalent and by regulatory risk rating. Non-criticized/pass loans and lending commitments represent loans and lending commitments that are performing and/or do not demonstrate adverse characteristics that are likely to result in a credit loss.

$ in millions	Loans	Lending Commitments	Total
Credit Rating Equivalent As of December 2015			
Investment-grade	**$19,459**	**$64,898**	**$ 84,357**
Non-investment-grade	**24,241**	**29,021**	**53,262**
Total	**$43,700**	**$93,919**	**$137,619**
As of December 2014			
Investment-grade	$ 8,090	$48,112	$ 56,202
Non-investment-grade	21,076	18,106	39,182
Total	$29,166	$66,218	$ 95,384
Regulatory Risk Rating As of December 2015			
Non-criticized/pass	**$40,967**	**$92,021**	**$132,988**
Criticized	**2,733**	**1,898**	**4,631**
Total	**$43,700**	**$93,919**	**$137,619**
As of December 2014			
Non-criticized/pass	$27,538	$65,141	$ 92,679
Criticized	1,628	1,077	2,705
Total	$29,166	$66,218	$ 95,384

Allowance for Losses on Loans and Lending Commitments

The firm's allowance for loan losses is comprised of portfolio level reserves, specific loan level reserves, and reserves on PCI loans as described below:

- Portfolio level reserves are determined on loans (excluding PCI loans) not deemed impaired by aggregating groups of loans with similar risk characteristics and estimating the probable loss inherent in the portfolio.
- Specific loan level reserves are determined on loans (excluding PCI loans) that exhibit credit quality weakness and are therefore individually evaluated for impairment.
- Reserves on PCI loans are recorded when it is determined that the expected cash flows, which are reassessed on a quarterly basis, will be lower than those used to establish the current effective yield for such loans or pools of loans. If the expected cash flows are determined to be significantly higher than those used to establish the current effective yield, such increases are initially recognized as a reduction to any previously recorded allowances for loan losses and any remaining increases are recognized as interest income prospectively over the life of the loan or pools of loans as an increase to the effective yield.

The allowance for loan losses is determined using various inputs, including industry default and loss data, current macroeconomic indicators, borrower's capacity to meet its financial obligations, borrower's country of risk, loan seniority and collateral type. Management's estimate of loan losses entails judgment about loan collectability at the reporting dates, and there are uncertainties inherent in those judgments. While management uses the best information available to determine this estimate, future adjustments to the allowance may be necessary based on, among other things, changes in the economic environment or variances between actual results and the original assumptions used. Loans are charged off against the allowance for loan losses when deemed to be uncollectible. As of December 2015 and December 2014, substantially all of the firm's loans receivable were evaluated for impairment at the portfolio level.

The firm also records an allowance for losses on lending commitments that are held for investment and accounted for on an accrual basis. Such allowance is determined using the same methodology as the allowance for loan losses, while also taking into consideration the probability of drawdowns or funding, and is included in "Other liabilities and accrued expenses" in the consolidated statements of financial condition. As of December 2015 and December 2014, substantially all of such lending commitments were evaluated for impairment at the portfolio level.

The table below presents changes in the allowance for loan losses and the allowance for losses on lending commitments.

	Year Ended December	
$ in millions	**2015**	2014
Allowance for loan losses		
Balance, beginning of period	**$228**	$139
Charge-offs	**(1)**	(3)
Provision for loan losses	**187**	92
Balance, end of period	**$414**	$228
Allowance for losses on lending commitments		
Balance, beginning of period	**$ 86**	$ 57
Provision for losses on lending commitments	**102**	29
Balance, end of period	**$188**	$ 86

The provision for losses on loans and lending commitments is included in "Other principal transactions" in the consolidated statements of earnings. As of December 2015 and December 2014, substantially all of the allowance for loan losses and allowance for losses on lending commitments were related to corporate loans and corporate lending commitments and were primarily determined at the portfolio level. The firm did not have any allowance for losses on PCI loans as of December 2015 and did not have any PCI loans as of December 2014.

Note 10.
Collateralized Agreements and Financings

Collateralized agreements are securities purchased under agreements to resell (resale agreements) and securities borrowed. Collateralized financings are securities sold under agreements to repurchase (repurchase agreements), securities loaned and other secured financings. The firm enters into these transactions in order to, among other things, facilitate client activities, invest excess cash, acquire securities to cover short positions and finance certain firm activities.

Collateralized agreements and financings are presented on a net-by-counterparty basis when a legal right of setoff exists. Interest on collateralized agreements and collateralized financings is recognized over the life of the transaction and included in "Interest income" and "Interest expense," respectively. See Note 23 for further information about interest income and interest expense.

The table below presents the carrying value of resale and repurchase agreements and securities borrowed and loaned transactions.

	As of December	
$ in millions	**2015**	2014
Securities purchased under agreements to resell [1]	**$120,905**	$127,938
Securities borrowed [2]	**172,099**	160,722
Securities sold under agreements to repurchase [1]	**86,069**	88,215
Securities loaned [2]	**3,614**	5,570

1. Substantially all resale agreements and all repurchase agreements are carried at fair value under the fair value option. See Note 8 for further information about the valuation techniques and significant inputs used to determine fair value.

2. As of December 2015 and December 2014, $69.80 billion and $66.77 billion of securities borrowed, and $466 million and $765 million of securities loaned were at fair value, respectively.

Resale and Repurchase Agreements

A resale agreement is a transaction in which the firm purchases financial instruments from a seller, typically in exchange for cash, and simultaneously enters into an agreement to resell the same or substantially the same financial instruments to the seller at a stated price plus accrued interest at a future date.

A repurchase agreement is a transaction in which the firm sells financial instruments to a buyer, typically in exchange for cash, and simultaneously enters into an agreement to repurchase the same or substantially the same financial instruments from the buyer at a stated price plus accrued interest at a future date.

The financial instruments purchased or sold in resale and repurchase agreements typically include U.S. government and federal agency, and investment-grade sovereign obligations.

The firm receives financial instruments purchased under resale agreements and makes delivery of financial instruments sold under repurchase agreements. To mitigate credit exposure, the firm monitors the market value of these financial instruments on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the financial instruments, as appropriate. For resale agreements, the firm typically requires collateral with a fair value approximately equal to the carrying value of the relevant assets in the consolidated statements of financial condition.

Even though repurchase and resale agreements (including "repos- and reverses-to-maturity") involve the legal transfer of ownership of financial instruments, they are accounted for as financing arrangements because they require the financial instruments to be repurchased or resold at the maturity of the agreement. A repo-to-maturity is a transaction in which the firm transfers a security under an agreement to repurchase the security where the maturity date of the repurchase agreement matches the maturity date of the underlying security. Prior to January 2015, repos-to-maturity were accounted for as sales. The firm had no repos-to-maturity as of December 2015 and December 2014. See Note 3 for information about changes to the accounting for repos-to-maturity which became effective in January 2015.

Securities Borrowed and Loaned Transactions

In a securities borrowed transaction, the firm borrows securities from a counterparty in exchange for cash or securities. When the firm returns the securities, the counterparty returns the cash or securities. Interest is generally paid periodically over the life of the transaction.

In a securities loaned transaction, the firm lends securities to a counterparty in exchange for cash or securities. When the counterparty returns the securities, the firm returns the cash or securities posted as collateral. Interest is generally paid periodically over the life of the transaction.

The firm receives securities borrowed and makes delivery of securities loaned. To mitigate credit exposure, the firm monitors the market value of these securities on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the securities, as appropriate. For securities borrowed transactions, the firm typically requires collateral with a fair value approximately equal to the carrying value of the securities borrowed transaction.

Securities borrowed and loaned within Fixed Income, Currency and Commodities Client Execution are recorded at fair value under the fair value option. See Note 8 for further information about securities borrowed and loaned accounted for at fair value.

Securities borrowed and loaned within Securities Services are recorded based on the amount of cash collateral advanced or received plus accrued interest. As these arrangements generally can be terminated on demand, they exhibit little, if any, sensitivity to changes in interest rates. Therefore, the carrying value of such arrangements approximates fair value. While these arrangements are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these arrangements been included in the firm's fair value hierarchy, they would have been classified in level 2 as of December 2015 and December 2014.

Offsetting Arrangements

The tables below present the gross and net resale and repurchase agreements and securities borrowed and loaned transactions, and the related amount of counterparty netting included in the consolidated statements of financial condition. The tables below also present the amounts not offset in the consolidated statements of financial condition, including counterparty netting that does not meet the criteria for netting under U.S. GAAP and the fair value of cash or securities collateral received or posted subject to enforceable credit support agreements.

	As of December 2015			
	Assets		**Liabilities**	
$ in millions	**Resale agreements**	**Securities borrowed**	**Repurchase agreements**	**Securities loaned**
Amounts included in the consolidated statements of financial condition				
Gross carrying value	**$ 163,199**	**$ 180,203**	**$114,960**	**$ 6,179**
Counterparty netting	**(28,891)**	**(2,565)**	**(28,891)**	**(2,565)**
Total	**134,308 [1]**	**177,638 [1]**	**86,069**	**3,614**
Amounts not offset in the consolidated statements of financial condition				
Counterparty netting	**(4,979)**	**(1,732)**	**(4,979)**	**(1,732)**
Collateral	**(125,561)**	**(167,061)**	**(78,958)**	**(1,721)**
Total	**$ 3,768**	**$ 8,845**	**$ 2,132**	**$ 161**

	As of December 2014			
	Assets		Liabilities	
$ in millions	Resale agreements	Securities borrowed	Repurchase agreements	Securities loaned
Amounts included in the consolidated statements of financial condition				
Gross carrying value	$ 160,644	$ 171,384	$114,879	$ 9,150
Counterparty netting	(26,664)	(3,580)	(26,664)	(3,580)
Total	133,980 [1]	167,804 [1]	88,215	5,570
Amounts not offset in the consolidated statements of financial condition				
Counterparty netting	(3,834)	(641)	(3,834)	(641)
Collateral	(124,528)	(154,058)	(78,457)	(4,882)
Total	$ 5,618	$ 13,105	$ 5,924	$ 47

1. As of December 2015 and December 2014, the firm had $13.40 billion and $6.04 billion, respectively, of securities received under resale agreements, and $5.54 billion and $7.08 billion, respectively, of securities borrowed transactions that were segregated to satisfy certain regulatory requirements. These securities are included in "Cash and securities segregated for regulatory and other purposes."

In the tables above:

- Substantially all of the gross carrying values of these arrangements are subject to enforceable netting agreements.
- Where the firm has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.

Gross Carrying Value of Repurchase Agreements and Securities Loaned

The tables below present the gross carrying value of repurchase agreements and securities loaned by class of collateral pledged.

	As of December 2015	
$ in millions	**Repurchase agreements**	**Securities loaned**
Commercial paper, certificates of deposit, time deposits and other money market instruments	**$ 806**	**$ —**
U.S. government and federal agency obligations	**54,856**	**101**
Non-U.S. government and agency obligations	**31,547**	**2,465**
Securities backed by commercial real estate	**269**	**—**
Securities backed by residential real estate	**2,059**	**—**
Corporate debt securities	**6,877**	**30**
State and municipal obligations	**609**	**—**
Other debt obligations	**101**	**—**
Equities and convertible debentures	**17,836**	**3,583**
Total	**$114,960**	**$6,179**

	As of December 2014	
$ in millions	Repurchase agreements	Securities loaned
Commercial paper, certificates of deposit, time deposits and other money market instruments	$ 900	$ —
U.S. government and federal agency obligations	56,788	123
Non-U.S. government and agency obligations	27,169	3,463
Securities backed by commercial real estate	419	—
Securities backed by residential real estate	1,574	—
Corporate debt securities	8,028	26
State and municipal obligations	984	—
Other debt obligations	562	—
Equities and convertible debentures	18,455	5,538
Total	$114,879	$9,150

The table below presents the gross carrying value of repurchase agreements and securities loaned by maturity date.

	As of December 2015	
$ in millions	**Repurchase agreements**	**Securities loaned**
No stated maturity and overnight	**$ 30,901**	**$4,275**
2 - 30 days	**35,686**	**1,437**
31 - 90 days	**16,035**	**—**
91 days - 1 year	**25,691**	**467**
Greater than 1 year	**6,647**	**—**
Total	**$114,960**	**$6,179**

In the table above:

- Repurchase agreements and securities loaned that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Repurchase agreements and securities loaned that are redeemable prior to maturity at the option of the holders are reflected at the earliest dates such options become exercisable.

Other Secured Financings

In addition to repurchase agreements and securities loaned transactions, the firm funds certain assets through the use of other secured financings and pledges financial instruments and other assets as collateral in these transactions. These other secured financings consist of:

- Liabilities of consolidated VIEs;
- Transfers of assets accounted for as financings rather than sales (primarily collateralized central bank financings, pledged commodities, bank loans and mortgage whole loans); and
- Other structured financing arrangements.

Other secured financings include arrangements that are nonrecourse. As of December 2015 and December 2014, nonrecourse other secured financings were $2.20 billion and $1.94 billion, respectively.

The firm has elected to apply the fair value option to substantially all other secured financings because the use of fair value eliminates non-economic volatility in earnings that would arise from using different measurement attributes. See Note 8 for further information about other secured financings that are accounted for at fair value.

Other secured financings that are not recorded at fair value are recorded based on the amount of cash received plus accrued interest, which generally approximates fair value. While these financings are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these financings been included in the firm's fair value hierarchy, they would have been primarily classified in level 2 as of December 2015 and December 2014.

The tables below present information about other secured financings.

	As of December 2015		
$ in millions	**U.S. Dollar**	**Non-U.S. Dollar**	**Total**
Other secured financings (short-term):			
At fair value	**$ 7,952**	**$ 5,448**	**$13,400**
At amortized cost	**514**	**319**	**833**
Weighted average interest rates	***2.93%***	***3.83%***	
Other secured financings (long-term):			
At fair value	**6,702**	**3,105**	**9,807**
At amortized cost	**370**	**343**	**713**
Weighted average interest rates	***2.87%***	***1.54%***	
Total [1]	**$15,538**	**$ 9,215**	**$24,753**
Amount of other secured financings collateralized by:			
Financial instruments [2]	**$14,862**	**$ 8,872**	**$23,734**
Other assets	**676**	**343**	**1,019**

	As of December 2014		
$ in millions	U.S. Dollar	Non-U.S. Dollar	Total
Other secured financings (short-term):			
At fair value	$ 7,887	$ 7,668	$15,555
At amortized cost	5	—	5
Weighted average interest rates	*4.33%*	*—%*	
Other secured financings (long-term):			
At fair value	3,290	2,605	5,895
At amortized cost	580	774	1,354
Weighted average interest rates	*2.69%*	*2.31%*	
Total [1]	$11,762	$11,047	$22,809
Amount of other secured financings collateralized by:			
Financial instruments [2]	$11,460	$10,483	$21,943
Other assets	302	564	866

1. Includes $334 million and $974 million related to transfers of financial assets accounted for as financings rather than sales as of December 2015 and December 2014, respectively. Such financings were collateralized by financial assets included in "Financial instruments owned, at fair value" of $336 million and $995 million as of December 2015 and December 2014, respectively.

2. Includes $14.98 billion and $10.24 billion of other secured financings collateralized by financial instruments owned, at fair value as of December 2015 and December 2014, respectively, and includes $8.76 billion and $11.70 billion of other secured financings collateralized by financial instruments received as collateral and repledged as of December 2015 and December 2014, respectively.

In the tables above:

- Short-term secured financings include financings maturing within one year of the financial statement date and financings that are redeemable within one year of the financial statement date at the option of the holder.
- Weighted average interest rates exclude secured financings at fair value and include the effect of hedging activities. See Note 7 for further information about hedging activities.

The table below presents other secured financings by maturity date.

$ in millions	**As of December 2015**
Other secured financings (short-term)	**$14,233**
Other secured financings (long-term):	
2017	**5,651**
2018	**2,814**
2019	**482**
2020	**953**
2021 - thereafter	**620**
Total other secured financings (long-term)	**10,520**
Total other secured financings	**$24,753**

In the table above:

- Long-term secured financings that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Long-term secured financings that are redeemable prior to maturity at the option of the holders are reflected at the earliest dates such options become exercisable.

Collateral Received and Pledged

The firm receives cash and securities (e.g., U.S. government and federal agency, other sovereign and corporate obligations, as well as equities and convertible debentures) as collateral, primarily in connection with resale agreements, securities borrowed, derivative transactions and customer margin loans. The firm obtains cash and securities as collateral on an upfront or contingent basis for derivative instruments and collateralized agreements to reduce its credit exposure to individual counterparties.

In many cases, the firm is permitted to deliver or repledge financial instruments received as collateral when entering into repurchase agreements and securities loaned transactions, primarily in connection with secured client financing activities. The firm is also permitted to deliver or repledge these financial instruments in connection with other secured financings, collateralized derivative transactions and firm or customer settlement requirements.

The firm also pledges certain financial instruments owned, at fair value in connection with repurchase agreements, securities loaned transactions and other secured financings, and other assets (primarily real estate and cash) in connection with other secured financings to counterparties who may or may not have the right to deliver or repledge them.

The table below presents financial instruments at fair value received as collateral that were available to be delivered or repledged and were delivered or repledged by the firm.

	As of December	
$ in millions	**2015**	2014
Collateral available to be delivered or repledged [1]	**$636,684**	$630,046
Collateral that was delivered or repledged	**496,240**	474,057

1. As of December 2015 and December 2014, amounts exclude $13.40 billion and $6.04 billion, respectively, of securities received under resale agreements, and $5.54 billion and $7.08 billion, respectively, of securities borrowed transactions that contractually had the right to be delivered or repledged, but were segregated to satisfy certain regulatory requirements.

The table below presents information about assets pledged.

	As of December	
$ in millions	**2015**	2014
Financial instruments owned, at fair value pledged to counterparties that:		
Had the right to deliver or repledge	**$ 54,426**	$ 64,473
Did not have the right to deliver or repledge	**63,880**	68,027
Other assets pledged to counterparties that:		
Did not have the right to deliver or repledge	**1,841**	1,304

Note 11.

Securitization Activities

The firm securitizes residential and commercial mortgages, corporate bonds, loans and other types of financial assets by selling these assets to securitization vehicles (e.g., trusts, corporate entities and limited liability companies) or through a resecuritization. The firm acts as underwriter of the beneficial interests that are sold to investors. The firm's residential mortgage securitizations are primarily in connection with government agency securitizations.

Beneficial interests issued by securitization entities are debt or equity securities that give the investors rights to receive all or portions of specified cash inflows to a securitization vehicle and include senior and subordinated interests in principal, interest and/or other cash inflows. The proceeds from the sale of beneficial interests are used to pay the transferor for the financial assets sold to the securitization vehicle or to purchase securities which serve as collateral.

The firm accounts for a securitization as a sale when it has relinquished control over the transferred assets. Prior to securitization, the firm accounts for assets pending transfer at fair value and therefore does not typically recognize significant gains or losses upon the transfer of assets. Net revenues from underwriting activities are recognized in connection with the sales of the underlying beneficial interests to investors.

For transfers of assets that are not accounted for as sales, the assets remain in "Financial instruments owned, at fair value" and the transfer is accounted for as a collateralized financing, with the related interest expense recognized over the life of the transaction. See Notes 10 and 23 for further information about collateralized financings and interest expense, respectively.

The firm generally receives cash in exchange for the transferred assets but may also have continuing involvement with transferred assets, including ownership of beneficial interests in securitized financial assets, primarily in the form of senior or subordinated securities. The firm may also purchase senior or subordinated securities issued by securitization vehicles (which are typically VIEs) in connection with secondary market-making activities.

The primary risks included in beneficial interests and other interests from the firm's continuing involvement with securitization vehicles are the performance of the underlying collateral, the position of the firm's investment in the capital structure of the securitization vehicle and the market yield for the security. Substantially all of these interests are accounted for at fair value, are included in "Financial instruments owned, at fair value" and are classified in level 2 of the fair value hierarchy. See Notes 5 through 8 for further information about fair value measurements.

The table below presents the amount of financial assets securitized and the cash flows received on retained interests in securitization entities in which the firm had continuing involvement.

	Year Ended December		
$ in millions	**2015**	2014	2013
Residential mortgages	**$10,479**	$19,099	$29,772
Commercial mortgages	**6,043**	2,810	6,086
Other financial assets	**—**	1,009	—
Total	**$16,522**	$22,918	$35,858
Cash flows on retained interests	**$ 174**	$ 215	$ 249

The tables below present the firm's continuing involvement in nonconsolidated securitization entities to which the firm sold assets, as well as the total outstanding principal amount of transferred assets in which the firm has continuing involvement.

	As of December 2015		
$ in millions	**Outstanding Principal Amount**	**Fair Value of Retained Interests**	**Fair Value of Purchased Interests**
U.S. government agency-issued collateralized mortgage obligations	**$39,088**	**$ 846**	**$ 20**
Other residential mortgage-backed	**2,195**	**154**	**17**
Other commercial mortgage-backed	**6,842**	**115**	**28**
CDOs, CLOs and other	**2,732**	**44**	**7**
Total	**$50,857**	**$1,159**	**$ 72**

	As of December 2014		
$ in millions	Outstanding Principal Amount	Fair Value of Retained Interests	Fair Value of Purchased Interests
U.S. government agency-issued collateralized mortgage obligations	$56,792	$2,140	$ —
Other residential mortgage-backed	2,273	144	5
Other commercial mortgage-backed	3,313	86	45
CDOs, CLOs and other	4,299	59	17
Total	$66,677	$2,429	$ 67

In the tables above:

- The outstanding principal amount is presented for the purpose of providing information about the size of the securitization entities in which the firm has continuing involvement and is not representative of the firm's risk of loss.
- For retained or purchased interests, the firm's risk of loss is limited to the fair value of these interests.
- Purchased interests represent senior and subordinated interests, purchased in connection with secondary market-making activities, in securitization entities in which the firm also holds retained interests.
- Substantially all of the total outstanding principal amount and total fair value of retained interests as of December 2015 relate to securitizations during 2012 and thereafter, and substantially all of the total outstanding principal amount and total fair value of retained interests as of December 2014 relate to securitizations during 2011 and thereafter.

In addition to the interests in the tables above, the firm had other continuing involvement in the form of derivative transactions and commitments with certain nonconsolidated VIEs. The carrying value of these derivatives and commitments was a net asset of $92 million and $115 million as of December 2015 and December 2014, respectively. The notional amounts of these derivatives and commitments are included in maximum exposure to loss in the nonconsolidated VIE table in Note 12.

The table below presents the weighted average key economic assumptions used in measuring the fair value of mortgage-backed retained interests and the sensitivity of this fair value to immediate adverse changes of 10% and 20% in those assumptions.

	As of December	
$ in millions	**2015**	2014
Fair value of retained interests	**$ 1,115**	$ 2,370
Weighted average life (years)	**7.5**	7.6
Constant prepayment rate	**10.4%**	13.2%
Impact of 10% adverse change	**$ (22)**	$ (33)
Impact of 20% adverse change	**(43)**	(66)
Discount rate	**5.5%**	4.1%
Impact of 10% adverse change	**$ (28)**	$ (50)
Impact of 20% adverse change	**(55)**	(97)

In the table above:

- Amounts do not reflect the benefit of other financial instruments that are held to mitigate risks inherent in these retained interests.
- Changes in fair value based on an adverse variation in assumptions generally cannot be extrapolated because the relationship of the change in assumptions to the change in fair value is not usually linear.
- The impact of a change in a particular assumption is calculated independently of changes in any other assumption. In practice, simultaneous changes in assumptions might magnify or counteract the sensitivities disclosed above.
- The constant prepayment rate is included only for positions for which it is a key assumption in the determination of fair value.
- The discount rate for retained interests that relate to U.S. government agency-issued collateralized mortgage obligations does not include any credit loss.
- Expected credit loss assumptions are reflected in the discount rate for the remainder of retained interests.

The firm has other retained interests not reflected in the table above with a fair value of $44 million and a weighted average life of 3.5 years as of December 2015, and a fair value of $59 million and a weighted average life of 3.6 years as of December 2014. Due to the nature and current fair value of certain of these retained interests, the weighted average assumptions for constant prepayment and discount rates and the related sensitivity to adverse changes are not meaningful as of December 2015 and December 2014. The firm's maximum exposure to adverse changes in the value of these interests is the carrying value of $44 million and $59 million as of December 2015 and December 2014, respectively.

Note 12.

Variable Interest Entities

VIEs generally finance the purchase of assets by issuing debt and equity securities that are either collateralized by or indexed to the assets held by the VIE. The debt and equity securities issued by a VIE may include tranches of varying levels of subordination. The firm's involvement with VIEs includes securitization of financial assets, as described in Note 11, and investments in and loans to other types of VIEs, as described below. See Note 11 for additional information about securitization activities, including the definition of beneficial interests. See Note 3 for the firm's consolidation policies, including the definition of a VIE.

The firm is principally involved with VIEs through the following business activities:

Mortgage-Backed VIEs and Corporate CDO and CLO VIEs. The firm sells residential and commercial mortgage loans and securities to mortgage-backed VIEs and corporate bonds and loans to corporate CDO and CLO VIEs and may retain beneficial interests in the assets sold to these VIEs. The firm purchases and sells beneficial interests issued by mortgage-backed and corporate CDO and CLO VIEs in connection with market-making activities. In addition, the firm may enter into derivatives with certain of these VIEs, primarily interest rate swaps, which are typically not variable interests. The firm generally enters into derivatives with other counterparties to mitigate its risk from derivatives with these VIEs.

Certain mortgage-backed and corporate CDO and CLO VIEs, usually referred to as synthetic CDOs or credit-linked note VIEs, synthetically create the exposure for the beneficial interests they issue by entering into credit derivatives, rather than purchasing the underlying assets. These credit derivatives may reference a single asset, an index, or a portfolio/basket of assets or indices. See Note 7 for further information about credit derivatives. These VIEs use the funds from the sale of beneficial interests and the premiums received from credit derivative counterparties to purchase securities which serve to collateralize the beneficial interest holders and/or the credit derivative counterparty. These VIEs may enter into other derivatives, primarily interest rate swaps, which are typically not variable interests. The firm may be a counterparty to derivatives with these VIEs and generally enters into derivatives with other counterparties to mitigate its risk.

Real Estate, Credit-Related and Other Investing VIEs. The firm purchases equity and debt securities issued by and makes loans to VIEs that hold real estate, performing and nonperforming debt, distressed loans and equity securities. The firm typically does not sell assets to, or enter into derivatives with, these VIEs.

Other Asset-Backed VIEs. The firm structures VIEs that issue notes to clients, and purchases and sells beneficial interests issued by other asset-backed VIEs in connection with market-making activities. In addition, the firm may enter into derivatives with certain other asset-backed VIEs, primarily total return swaps on the collateral assets held by these VIEs under which the firm pays the VIE the return due to the note holders and receives the return on the collateral assets owned by the VIE. The firm generally can be removed as the total return swap counterparty. The firm generally enters into derivatives with other counterparties to mitigate its risk from derivatives with these VIEs. The firm typically does not sell assets to the other asset-backed VIEs it structures.

Principal-Protected Note VIEs. The firm structures VIEs that issue principal-protected notes to clients. These VIEs own portfolios of assets, principally with exposure to hedge funds. Substantially all of the principal protection on the notes issued by these VIEs is provided by the asset portfolio rebalancing that is required under the terms of the notes. The firm enters into total return swaps with these VIEs under which the firm pays the VIE the return due to the principal-protected note holders and receives the return on the assets owned by the VIE. The firm may enter into derivatives with other counterparties to mitigate the risk it has from the derivatives it enters into with these VIEs. The firm also obtains funding through these VIEs.

Other VIEs. Other primarily includes nonconsolidated power-related and investment fund VIEs. The firm purchases debt and equity securities issued by VIEs that hold power-related assets, and may provide commitments to these VIEs. The firm also makes equity investments in certain of the investment fund VIEs it manages, and is entitled to receive fees from these VIEs. The firm typically does not sell assets to, or enter into derivatives with, these VIEs.

VIE Consolidation Analysis

A variable interest in a VIE is an investment (e.g., debt or equity securities) or other interest (e.g., derivatives or loans and lending commitments) in a VIE that will absorb portions of the VIE's expected losses and/or receive portions of the VIE's expected residual returns.

The firm's variable interests in VIEs include senior and subordinated debt in residential and commercial mortgage-backed and other asset-backed securitization entities, CDOs and CLOs; loans and lending commitments; limited and general partnership interests; preferred and common equity; derivatives that may include foreign currency, equity and/or credit risk; guarantees; and certain of the fees the firm receives from investment funds. Certain interest rate, foreign currency and credit derivatives the firm enters into with VIEs are not variable interests because they create rather than absorb risk.

The enterprise with a controlling financial interest in a VIE is known as the primary beneficiary and consolidates the VIE. The firm determines whether it is the primary beneficiary of a VIE by performing an analysis that principally considers:

- Which variable interest holder has the power to direct the activities of the VIE that most significantly impact the VIE's economic performance;
- Which variable interest holder has the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE;
- The VIE's purpose and design, including the risks the VIE was designed to create and pass through to its variable interest holders;
- The VIE's capital structure;
- The terms between the VIE and its variable interest holders and other parties involved with the VIE; and
- Related-party relationships.

The firm reassesses its initial evaluation of whether an entity is a VIE when certain reconsideration events occur. The firm reassesses its determination of whether it is the primary beneficiary of a VIE on an ongoing basis based on current facts and circumstances.

Nonconsolidated VIEs

The table below presents information about nonconsolidated VIEs in which the firm holds variable interests.

	Nonconsolidated VIEs as of December	
$ in millions	**2015**	2014
Mortgage-backed [1]		
Assets in VIEs	**$62,672**	$ 78,107
Carrying value of variable interests - assets	**2,439**	4,348
Maximum Exposure to Loss		
Retained interests	**1,115**	2,370
Purchased interests	**1,324**	1,978
Commitments and guarantees	**40**	—
Derivatives	**222**	392
Total maximum exposure to loss	**2,701**	4,740
Corporate CDOs and CLOs		
Assets in VIEs	**6,493**	8,317
Carrying value of variable interests - assets	**624**	463
Carrying value of variable interests - liabilities	**29**	3
Maximum Exposure to Loss		
Retained interests	**3**	4
Purchased interests	**106**	184
Commitments and guarantees	**647**	—
Derivatives	**2,633**	2,053
Loans and investments	**265**	—
Total maximum exposure to loss	**3,654**	2,241
Real estate, credit-related and other investing		
Assets in VIEs	**9,793**	8,720
Carrying value of variable interests - assets	**3,557**	3,051
Carrying value of variable interests - liabilities	**3**	3
Maximum Exposure to Loss		
Commitments and guarantees	**570**	604
Loans and investments	**3,557**	3,051
Total maximum exposure to loss	**4,127**	3,655
Other asset-backed		
Assets in VIEs	**7,026**	8,253
Carrying value of variable interests - assets	**265**	509
Carrying value of variable interests - liabilities	**145**	16
Maximum Exposure to Loss		
Retained interests	**41**	55
Purchased interests	**98**	322
Commitments and guarantees	**500**	213
Derivatives	**4,075**	3,221
Total maximum exposure to loss	**4,714**	3,811
Other		
Assets in VIEs	**4,161**	5,677
Carrying value of variable interests - assets	**286**	290
Maximum Exposure to Loss		
Commitments and guarantees	**263**	307
Derivatives	**6**	88
Loans and investments	**286**	290
Total maximum exposure to loss	**555**	685
Total nonconsolidated VIEs		
Assets in VIEs	**90,145**	109,074
Carrying value of variable interests - assets	**7,171**	8,661
Carrying value of variable interests - liabilities	**177**	22
Maximum Exposure to Loss		
Retained interests	**1,159**	2,429
Purchased interests	**1,528**	2,484
Commitments and guarantees [2]	**2,020**	1,124
Derivatives [2]	**6,936**	5,754
Loans and investments	**4,108**	3,341
Total maximum exposure to loss	**$15,751**	$ 15,132

1. Assets in VIEs and maximum exposure to loss include $4.08 billion and $502 million, respectively, as of December 2015, and $3.57 billion and $662 million, respectively, as of December 2014, related to CDOs backed by mortgage obligations.
2. Includes $1.52 billion and $1.64 billion as of December 2015 and December 2014, respectively, related to commitments and derivative transactions with VIEs to which the firm transferred assets.

The firm's exposure to the obligations of VIEs is generally limited to its interests in these entities. In certain instances, the firm provides guarantees, including derivative guarantees, to VIEs or holders of variable interests in VIEs.

In the table above, nonconsolidated VIEs are aggregated based on principal business activity. The nature of the firm's variable interests can take different forms, as described in the rows under maximum exposure to loss. In the table above:

- The maximum exposure to loss excludes the benefit of offsetting financial instruments that are held to mitigate the risks associated with these variable interests.
- For retained and purchased interests, and loans and investments, the maximum exposure to loss is the carrying value of these interests.
- For commitments and guarantees, and derivatives, the maximum exposure to loss is the notional amount, which does not represent anticipated losses and also has not been reduced by unrealized losses already recorded. As a result, the maximum exposure to loss exceeds liabilities recorded for commitments and guarantees, and derivatives provided to VIEs.

The carrying values of the firm's variable interests in nonconsolidated VIEs are included in the consolidated statement of financial condition as follows:

- Substantially all assets held by the firm related to mortgage-backed and corporate CDO and CLO VIEs are included in "Financial instruments owned, at fair value." Substantially all liabilities held by the firm related to corporate CDO and CLO VIEs are included in "Financial instruments sold, but not yet purchased, at fair value;"
- Substantially all assets held by the firm related to other asset-backed VIEs are included in "Financial instruments owned, at fair value" and "Loans Receivable." Substantially all liabilities held by the firm related to other asset-backed VIEs are included in "Financial instruments sold, but not yet purchased, at fair value;"
- Substantially all assets held by the firm related to real estate, credit-related and other investing VIEs are included in "Financial instruments owned, at fair value," "Loans receivable," and "Other assets." Substantially all liabilities held by the firm related to real estate, credit-related and other investing VIEs are included in "Other liabilities and accrued expenses" and "Financial Instruments sold, but not yet purchased, at fair value;" and
- Substantially all assets held by the firm related to other VIEs are included in "Financial instruments owned, at fair value."

Consolidated VIEs

The table below presents the carrying amount and classification of assets and liabilities in consolidated VIEs, excluding the benefit of offsetting financial instruments that are held to mitigate the risks associated with the firm's variable interests.

	Consolidated VIEs as of December	
$ in millions	**2015**	2014
Real estate, credit-related and other investing		
Assets		
Cash and cash equivalents	**$ 374**	$ 218
Cash and securities segregated for regulatory and other purposes	**49**	19
Receivables from brokers, dealers and clearing organizations	**1**	—
Loans receivable	**1,534**	589
Financial instruments owned, at fair value	**1,585**	2,608
Other assets	**456**	349
Total	**3,999**	3,783
Liabilities		
Other secured financings	**332**	419
Payables to customers and counterparties	**2**	—
Financial instruments sold, but not yet purchased, at fair value	**16**	10
Unsecured long-term borrowings	**—**	12
Other liabilities and accrued expenses	**556**	906
Total	**906**	1,347
CDOs, mortgage-backed and other asset-backed		
Assets		
Financial instruments owned, at fair value	**572**	121
Other assets	**15**	—
Total	**587**	121
Liabilities		
Other secured financings	**113**	99
Payables to customers and counterparties	**432**	—
Financial instruments sold, but not yet purchased, at fair value	**—**	8
Total	**545**	107
Principal-protected notes		
Assets		
Cash and securities segregated for regulatory and other purposes	**—**	31
Financial instruments owned, at fair value	**126**	276
Total	**126**	307
Liabilities		
Other secured financings	**413**	439
Unsecured short-term borrowings, including the current portion of unsecured long-term borrowings	**416**	1,090
Unsecured long-term borrowings	**312**	103
Total	**1,141**	1,632
Total consolidated VIEs		
Assets		
Cash and cash equivalents	**374**	218
Cash and securities segregated for regulatory and other purposes	**49**	50
Receivables from brokers, dealers and clearing organizations	**1**	—
Loans receivable	**1,534**	589
Financial instruments owned, at fair value	**2,283**	3,005
Other assets	**471**	349
Total	**4,712**	4,211
Liabilities		
Other secured financings	**858**	957
Payables to customers and counterparties	**434**	—
Financial instruments sold, but not yet purchased, at fair value	**16**	18
Unsecured short-term borrowings, including the current portion of unsecured long-term borrowings	**416**	1,090
Unsecured long-term borrowings	**312**	115
Other liabilities and accrued expenses	**556**	906
Total	**$2,592**	$3,086

In the table above:

- Consolidated VIEs are aggregated based on principal business activity and their assets and liabilities are presented net of intercompany eliminations. The majority of the assets in principal-protected notes VIEs are intercompany and are eliminated in consolidation.
- VIEs in which the firm holds a majority voting interest are excluded if (i) the VIE meets the definition of a business and (ii) the VIE's assets can be used for purposes other than the settlement of its obligations.
- Substantially all the assets can only be used to settle obligations of the VIE. The liabilities of real estate, credit-related and other investing VIEs, and CDOs, mortgage-backed and other asset-backed VIEs do not have recourse to the general credit of the firm.

Note 13.

Other Assets

Other assets are generally less liquid, non-financial assets. The table below presents other assets by type.

	As of December	
$ in millions	**2015**	2014
Property, leasehold improvements and equipment	**$ 9,956**	$ 9,344
Goodwill and identifiable intangible assets	**4,148**	4,160
Income tax-related assets	**5,548**	5,181
Equity-method investments [1]	**258**	360
Miscellaneous receivables and other [2]	**5,308** [3]	3,156
Total	**$25,218**	$22,201

1. Excludes investments accounted for at fair value under the fair value option where the firm would otherwise apply the equity method of accounting of $6.59 billion and $6.62 billion as of December 2015 and December 2014, respectively, all of which are included in "Financial instruments owned, at fair value." The firm has generally elected the fair value option for such investments acquired after the fair value option became available.
2. Includes $581 million and $461 million of investments in qualified affordable housing projects as of December 2015 and December 2014, respectively.
3. Includes $1.96 billion of assets classified as held for sale related to certain of the firm's consolidated investments in Europe.

Assets Held for Sale

In the fourth quarter of 2015, the firm classified certain consolidated investments in Europe within its Investing & Lending segment as held for sale. As of December 2015, assets and liabilities related to these investments were included in "Other assets" and "Other liabilities and accrued expenses," respectively. Assets related to these investments were $1.96 billion as of December 2015 and substantially all consisted of "Property, leasehold improvements and equipment." Liabilities related to these investments were $783 million as of December 2015 and substantially all consisted of "Other secured financings" carried at fair value under the fair value option.

Property, Leasehold Improvements and Equipment

Property, leasehold improvements and equipment in the table above is net of accumulated depreciation and amortization of $7.77 billion and $8.98 billion as of December 2015 and December 2014, respectively. Property, leasehold improvements and equipment included $5.93 billion and $5.81 billion as of December 2015 and December 2014, respectively, related to property, leasehold improvements and equipment that the firm uses in connection with its operations. The remainder is held by investment entities, including VIEs, consolidated by the firm. Substantially all property and equipment is depreciated on a straight-line basis over the useful life of the asset. Leasehold improvements are amortized on a straight-line basis over the useful life of the improvement or the term of the lease, whichever is shorter. Certain costs of software developed or obtained for internal use are capitalized and amortized on a straight-line basis over the useful life of the software.

Goodwill and Identifiable Intangible Assets

The tables below present the carrying values of goodwill and identifiable intangible assets.

	Goodwill as of December	
$ in millions	**2015**	2014
Investment Banking:		
Financial Advisory	**$ 98**	$ 98
Underwriting	**183**	183
Institutional Client Services:		
Fixed Income, Currency and Commodities Client Execution	**269**	269
Equities Client Execution	**2,402**	2,403
Securities Services	**105**	105
Investing & Lending	**2**	—
Investment Management	**598**	587
Total	**$3,657**	$3,645

	Identifiable Intangible Assets as of December	
$ in millions	**2015**	2014
Institutional Client Services:		
Fixed Income, Currency and Commodities Client Execution	**$ 92**	$138
Equities Client Execution	**193**	246
Investing & Lending	**75**	18
Investment Management	**131**	113
Total	**$491**	$515

Goodwill. Goodwill is the cost of acquired companies in excess of the fair value of net assets, including identifiable intangible assets, at the acquisition date.

Goodwill is assessed for impairment annually in the fourth quarter or more frequently if events occur or circumstances change that indicate an impairment may exist. When assessing goodwill for impairment, first, qualitative factors are assessed to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the results of the qualitative assessment are not conclusive, a quantitative goodwill test is performed. The quantitative goodwill test consists of two steps:

- The first step compares the estimated fair value of each reporting unit with its estimated net book value (including goodwill and identifiable intangible assets). If the reporting unit's estimated fair value exceeds its estimated net book value, goodwill is not impaired.
- If the estimated fair value of a reporting unit is less than its estimated net book value, the second step of the goodwill test is performed to measure the amount of impairment, if any. An impairment is equal to the excess of the carrying amount of goodwill over its fair value.

Goodwill was tested for impairment, using a quantitative test, during the fourth quarter of 2015. The estimated fair value of each of the reporting units exceeded its respective net book value. Accordingly, goodwill was not impaired and step two of the quantitative goodwill test was not performed.

To estimate the fair value of each reporting unit, a relative value technique was used because the firm believes market participants would use this technique to value the firm's reporting units. The relative value technique applies observable price-to-earnings multiples or price-to-book multiples and projected return on equity of comparable competitors to reporting units' net earnings or net book value. The net book value of each reporting unit reflects an allocation of total shareholders' equity and represents the estimated amount of total shareholders' equity required to support the activities of the reporting unit under currently applicable regulatory capital requirements.

Identifiable Intangible Assets. The table below presents the gross carrying amount, accumulated amortization and net carrying amount of identifiable intangible assets and their weighted average remaining useful lives.

	As of December		
$ in millions	**2015**	Weighted Average Remaining Useful Lives *(years)*	2014
Customer lists			
Gross carrying amount	**$ 1,072**		$1,036
Accumulated amortization	**(777)**		(715)
Net carrying amount	**295**	**6**	321
Commodities-related			
Gross carrying amount	**185**		216
Accumulated amortization	**(94)**		(78)
Net carrying amount	**91** [1]	**7**	138
Other			
Gross carrying amount	**264**		200
Accumulated amortization	**(159)**		(144)
Net carrying amount	**105** [2]	**6**	56
Total			
Gross carrying amount	**1,521**		1,452
Accumulated amortization	**(1,030)**		(937)
Net carrying amount	**$ 491**	**6**	$ 515

1. Primarily includes commodities-related transportation rights.

2. Primarily includes intangible assets related to acquired leases.

Substantially all of the firm's identifiable intangible assets are considered to have finite useful lives and are amortized over their estimated useful lives using the straight-line method or based on economic usage for certain commodities-related intangibles.

The tables below present details about amortization of identifiable intangible assets.

	Year Ended December		
$ in millions	**2015**	2014	2013
Amortization	**$132**	$217	$205

$ in millions **Estimated future amortization**	**As of December 2015**
2016	**$130**
2017	**117**
2018	**100**
2019	**68**
2020	**21**

Impairments

The firm tests property, leasehold improvements and equipment, identifiable intangible assets and other assets for impairment whenever events or changes in circumstances suggest that an asset's or asset group's carrying value may not be fully recoverable. To the extent the carrying value of an asset exceeds the projected undiscounted cash flows expected to result from the use and eventual disposal of the asset or asset group, the firm determines the asset is impaired and records an impairment equal to the difference between the estimated fair value and the carrying value of the asset or asset group. In addition, the firm will recognize an impairment prior to the sale of an asset if the carrying value of the asset exceeds its estimated fair value.

During 2015, the firm recorded impairments of $103 million, substantially all of which were attributable to consolidated investments and included in the firm's Investing & Lending segment. The impairments generally reflected challenging market conditions for certain companies in the energy industry resulting from continued low energy commodity prices. These impairments consisted of $81 million related to property, leasehold improvements and equipment, which was included in "Depreciation and amortization," and $22 million related to other assets, which was included in "Other Expenses."

During 2014, primarily as a result of deterioration in market and operating conditions related to certain of the firm's consolidated investments and the firm's exchange-traded fund lead market maker (LMM) rights, the firm determined that certain assets were impaired and recorded impairments of $360 million, all of which were included in "Depreciation and amortization." These impairments consisted of $268 million related to property, leasehold improvements and equipment, substantially all of which was attributable to a consolidated investment in Latin America, $70 million related to identifiable intangible assets, primarily attributable to the firm's LMM rights, and $22 million related to goodwill as a result of the sale of Metro International Trade Services (Metro). The impairments related to property, leasehold improvements and equipment and goodwill were included within the firm's Investing & Lending segment and the impairments related to identifiable intangible assets were principally included within the firm's Institutional Client Services segment.

The impairments represented the excess of the carrying values of these assets over their estimated fair values, substantially all of which are calculated using level 3 measurements. These fair values were calculated using a combination of discounted cash flow analyses and relative value analyses, including the estimated cash flows expected to result from the use and eventual disposition of these assets.

Note 14.

Deposits

The table below presents deposits held in U.S. and non-U.S. offices, substantially all of which were interest-bearing. Substantially all U.S. deposits were held at Goldman Sachs Bank USA (GS Bank USA) and substantially all non-U.S. deposits were held at Goldman Sachs International Bank (GSIB).

	As of December	
$ in millions	**2015**	2014
U.S. offices	**$81,920**	$69,142
Non-U.S. offices	**15,599**	13,738
Total	**$97,519**	$82,880

The table below presents maturities of time deposits held in U.S. and non-U.S. offices.

	As of December 2015		
$ in millions	**U.S.**	**Non-U.S.**	**Total**
2016	**$ 8,572**	**$8,692**	**$17,264**
2017	**6,213**	**119**	**6,332**
2018	**3,975**	**7**	**3,982**
2019	**3,931**	**—**	**3,931**
2020	**3,191**	**—**	**3,191**
2021 - thereafter	**8,196**	**116**	**8,312**
Total	**$34,078** [1]	**$8,934** [2]	**$43,012** [3]

1. Includes $1.92 billion greater than $100,000, of which $741 million matures within three months, $730 million matures within three to six months, $326 million matures within six to twelve months, and $127 million matures after twelve months.
2. Includes $6.98 billion greater than $100,000.
3. Includes $14.68 billion of time deposits accounted for at fair value under the fair value option. See Note 8 for further information about deposits accounted for at fair value.

As of December 2015 and December 2014, deposits include $54.51 billion and $49.29 billion, respectively, of savings and demand deposits, which have no stated maturity, and were recorded based on the amount of cash received plus accrued interest, which approximates fair value. In addition, the firm designates certain derivatives as fair value hedges to convert substantially all of its time deposits not accounted for at fair value from fixed-rate obligations into floating-rate obligations. Accordingly, the carrying value of time deposits approximated fair value as of December 2015 and December 2014. While these savings and demand deposits and time deposits are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these deposits been included in the firm's fair value hierarchy, they would have been classified in level 2 as of December 2015 and December 2014.

Note 15.

Short-Term Borrowings

The table below presents details about the firm's short-term borrowings.

	As of December	
$ in millions	**2015**	2014
Other secured financings (short-term)	**$14,233**	$15,560
Unsecured short-term borrowings	**42,787**	44,539
Total	**$57,020**	$60,099

See Note 10 for information about other secured financings.

Unsecured short-term borrowings include the portion of unsecured long-term borrowings maturing within one year of the financial statement date and unsecured long-term borrowings that are redeemable within one year of the financial statement date at the option of the holder.

The firm accounts for promissory notes, commercial paper and certain hybrid financial instruments at fair value under the fair value option. See Note 8 for further information about unsecured short-term borrowings that are accounted for at fair value. The carrying value of unsecured short-term borrowings that are not recorded at fair value generally approximates fair value due to the short-term nature of the obligations. While these unsecured short-term borrowings are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these borrowings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015 and December 2014.

The table below presents details about the firm's unsecured short-term borrowings.

	As of December	
$ in millions	**2015**	2014
Current portion of unsecured long-term borrowings [1]	**$25,373**	$25,125
Hybrid financial instruments	**12,956**	14,083
Promissory notes	**—**	338
Commercial paper	**208**	617
Other short-term borrowings	**4,250**	4,376
Total	**$42,787**	$44,539
Weighted average interest rate [2]	**1.52%**	1.52%

1. Includes $24.11 billion and $23.82 billion as of December 2015 and December 2014, respectively, issued by Group Inc.
2. The weighted average interest rates for these borrowings include the effect of hedging activities and exclude financial instruments accounted for at fair value under the fair value option. See Note 7 for further information about hedging activities.

Note 16.
Long-Term Borrowings

The table below presents details about the firm's long-term borrowings.

	As of December	
$ in millions	**2015**	2014
Other secured financings (long-term)	**$ 10,520**	$ 7,249
Unsecured long-term borrowings	**175,422**	167,302
Total	**$185,942**	$174,551

See Note 10 for information about other secured financings.

The tables below present unsecured long-term borrowings extending through 2061 and consisting principally of senior borrowings.

	As of December 2015		
$ in millions	**U.S. Dollar**	**Non-U.S. Dollar**	**Total**
Fixed-rate obligations [1]			
Group Inc.	**$ 90,076**	**$29,808**	**$119,884**
Subsidiaries	**2,114**	**895**	**3,009**
Floating-rate obligations [2]			
Group Inc.	**27,881**	**16,916**	**44,797**
Subsidiaries	**5,662**	**2,070**	**7,732**
Total	**$125,733**	**$49,689**	**$175,422**

	As of December 2014		
$ in millions	U.S. Dollar	Non-U.S. Dollar	Total
Fixed-rate obligations [1]			
Group Inc.	$ 86,255	$34,070	$120,325
Subsidiaries	3,062	710	3,772
Floating-rate obligations [2]			
Group Inc.	23,396	14,590	37,986
Subsidiaries	4,137	1,082	5,219
Total	$116,850	$50,452	$167,302

1. Interest rates on U.S. dollar-denominated debt ranged from 1.60% to 10.04% (with a weighted average rate of 4.89%) and 1.55% to 10.04% (with a weighted average rate of 5.08%) as of December 2015 and December 2014, respectively. Interest rates on non-U.S. dollar-denominated debt ranged from 0.40% to 13.00% (with a weighted average rate of 3.81%) and 0.02% to 13.00% (with a weighted average rate of 4.06%) as of December 2015 and December 2014, respectively.

2. Floating interest rates generally are based on LIBOR or OIS. Equity-linked and indexed instruments are included in floating-rate obligations.

The table below presents unsecured long-term borrowings by maturity date.

	As of December 2015		
$ in millions	**Group Inc.**	**Subsidiaries**	**Total**
2017	**$ 22,744**	**$ 2,618**	**$ 25,362**
2018	**23,262**	**1,869**	**25,131**
2019	**15,010**	**1,025**	**16,035**
2020	**17,606**	**349**	**17,955**
2021 - thereafter	**86,059**	**4,880**	**90,939**
Total [1]	**$164,681**	**$10,741**	**$175,422**

1. Includes $8.34 billion of adjustments to the carrying value of certain unsecured long-term borrowings resulting from the application of hedge accounting by year of maturity as follows: $436 million in 2017, $614 million in 2018, $407 million in 2019, $443 million in 2020, and $6.44 billion in 2021 and thereafter.

In the table above:

- Unsecured long-term borrowings maturing within one year of the financial statement date and unsecured long-term borrowings that are redeemable within one year of the financial statement date at the option of the holders are excluded from the table as they are included as unsecured short-term borrowings.
- Unsecured long-term borrowings that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Unsecured long-term borrowings that are redeemable prior to maturity at the option of the holders are reflected at the earliest dates such options become exercisable.

The firm designates certain derivatives as fair value hedges to convert a majority of the amount of its fixed-rate unsecured long-term borrowings not accounted for at fair value into floating-rate obligations. Accordingly, excluding the cumulative impact of changes in the firm's credit spreads, the carrying value of unsecured long-term borrowings approximated fair value as of December 2015 and December 2014. See Note 7 for further information about hedging activities. For unsecured long-term borrowings for which the firm did not elect the fair value option, the cumulative impact due to changes in the firm's own credit spreads would be an increase of less than 1% and an increase of 2% in the carrying value of such borrowings as of December 2015 and December 2014, respectively. As these borrowings are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP, their fair value is not included in the firm's fair value hierarchy in Notes 6 through 8. Had these borrowings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015 and December 2014.

The tables below present unsecured long-term borrowings, after giving effect to hedging activities that converted a majority of the amount of fixed-rate obligations to floating-rate obligations.

	As of December 2015		
$ in millions	**Group Inc.**	**Subsidiaries**	**Total**
Fixed-rate obligations			
At fair value	**$ —**	**$ 21**	**$ 21**
At amortized cost [1]	**52,448**	**2,569**	**55,017**
Floating-rate obligations			
At fair value	**16,194**	**6,058**	**22,252**
At amortized cost [1]	**96,039**	**2,093**	**98,132**
Total	**$164,681**	**$10,741**	**$175,422**

	As of December 2014		
$ in millions	Group Inc.	Subsidiaries	Total
Fixed-rate obligations			
At fair value	$ —	$ 861	$ 861
At amortized cost [1]	31,232	2,440	33,672
Floating-rate obligations			
At fair value	11,662	3,482	15,144
At amortized cost [1]	115,417	2,208	117,625
Total	$158,311	$ 8,991	$167,302

1. The weighted average interest rates on the aggregate amounts were 2.73% (4.33% related to fixed-rate obligations and 1.84% related to floating-rate obligations) and 2.68% (5.09% related to fixed-rate obligations and 2.01% related to floating-rate obligations) as of December 2015 and December 2014, respectively. These rates exclude financial instruments accounted for at fair value under the fair value option.

Subordinated Borrowings

Unsecured long-term borrowings include subordinated debt and junior subordinated debt. Junior subordinated debt is junior in right of payment to other subordinated borrowings, which are junior to senior borrowings. As of December 2015 and December 2014, subordinated debt had maturities ranging from 2017 to 2045, and 2017 to 2038, respectively.

The tables below present subordinated borrowings.

	As of December 2015		
$ in millions	**Par Amount**	**Carrying Amount**	**Rate [1]**
Subordinated debt [2]	**$18,004**	**$20,784**	**3.79%**
Junior subordinated debt	**1,359**	**1,817**	**5.77%**
Total subordinated borrowings	**$19,363**	**$22,601**	**3.93%**

	As of December 2014		
$ in millions	Par Amount	Carrying Amount	Rate [1]
Subordinated debt [2]	$14,254	$17,236	3.77%
Junior subordinated debt	1,582	2,121	6.21%
Total subordinated borrowings	$15,836	$19,357	4.02%

1. Weighted average interest rates after giving effect to fair value hedges used to convert these fixed-rate obligations into floating-rate obligations. See Note 7 for further information about hedging activities. See below for information about interest rates on junior subordinated debt.

2. Par amount and carrying amount of subordinated debt issued by Group Inc. were $17.47 billion and $20.25 billion, respectively, as of December 2015, and $13.68 billion and $16.67 billion, respectively, as of December 2014.

Junior Subordinated Debt

Junior Subordinated Debt Held by 2012 Trusts. In 2012, the Vesey Street Investment Trust I and the Murray Street Investment Trust I (together, the 2012 Trusts) issued an aggregate of $2.25 billion of senior guaranteed trust securities to third parties. The proceeds of that offering were used to purchase $1.75 billion of junior subordinated debt issued by Group Inc. that pays interest semi-annually at a fixed annual rate of 4.647% and matures on March 9, 2017, and $500 million of junior subordinated debt issued by Group Inc. that pays interest semi-annually at a fixed annual rate of 4.404% and matures on September 1, 2016. During 2014, the firm exchanged $175 million of the senior guaranteed trust securities held by the firm for $175 million of junior subordinated debt held by the Murray Street Investment Trust I. Following the exchange, these senior guaranteed trust securities and junior subordinated debt were extinguished.

The 2012 Trusts purchased the junior subordinated debt from Goldman Sachs Capital II and Goldman Sachs Capital III (APEX Trusts). The APEX Trusts used the proceeds from such sales to purchase shares of Group Inc.'s Perpetual Non-Cumulative Preferred Stock, Series E (Series E Preferred Stock) and Perpetual Non-Cumulative Preferred Stock, Series F (Series F Preferred Stock). See Note 19 for more information about the Series E and Series F Preferred Stock.

The 2012 Trusts are required to pay distributions on their senior guaranteed trust securities in the same amounts and on the same dates that they are scheduled to receive interest on the junior subordinated debt they hold, and are required to redeem their respective senior guaranteed trust securities upon the maturity or earlier redemption of the junior subordinated debt they hold.

The firm has the right to defer payments on the junior subordinated debt, subject to limitations. During any such deferral period, the firm will not be permitted to, among other things, pay dividends on or make certain repurchases of its common or preferred stock. However, as Group Inc. fully and unconditionally guarantees the payment of the distribution and redemption amounts when due on a senior basis on the senior guaranteed trust securities issued by the 2012 Trusts, if the 2012 Trusts are unable to make scheduled distributions to the holders of the senior guaranteed trust securities, under the guarantee, Group Inc. would be obligated to make those payments. As such, the $1.58 billion and the $500 million of junior subordinated debt held by the 2012 Trusts for the benefit of investors, included in "Unsecured long-term borrowings" and "Unsecured short-term borrowings," respectively, in the consolidated statements of financial condition, is not classified as subordinated borrowings.

The APEX Trusts and the 2012 Trusts are Delaware statutory trusts sponsored by the firm and wholly-owned finance subsidiaries of the firm for regulatory and legal purposes but are not consolidated for accounting purposes.

The firm has covenanted in favor of the holders of Group Inc.'s 6.345% junior subordinated debt due February 15, 2034, that, subject to certain exceptions, the firm will not redeem or purchase the capital securities issued by the APEX Trusts or shares of Group Inc.'s Series E or Series F Preferred Stock prior to specified dates in 2022 for a price that exceeds a maximum amount determined by reference to the net cash proceeds that the firm has received from the sale of qualifying securities.

Junior Subordinated Debt Issued in Connection with Trust Preferred Securities. Group Inc. issued $2.84 billion of junior subordinated debt in 2004 to Goldman Sachs Capital I (Trust), a Delaware statutory trust. The Trust issued $2.75 billion of guaranteed preferred beneficial interests (Trust Preferred Securities) to third parties and $85 million of common beneficial interests to Group Inc. and used the proceeds from the issuances to purchase the junior subordinated debt from Group Inc. During 2014 and the first quarter of 2015, the firm purchased $1.43 billion (par amount) of Trust Preferred Securities and delivered these securities, along with $44.2 million of common beneficial interests, to the Trust in exchange for a corresponding par amount of the junior subordinated debt. Following the exchanges, these Trust Preferred Securities, common beneficial interests and junior subordinated debt were extinguished. Subsequent to these extinguishments, the outstanding par amount of junior subordinated debt held by the Trust was $1.36 billion and the outstanding par amount of Trust Preferred Securities and common beneficial interests issued by the Trust was $1.32 billion and $40.8 million, respectively. The Trust is a wholly-owned finance subsidiary of the firm for regulatory and legal purposes but is not consolidated for accounting purposes.

The firm pays interest semi-annually on the junior subordinated debt at an annual rate of 6.345% and the debt matures on February 15, 2034. The coupon rate and the payment dates applicable to the beneficial interests are the same as the interest rate and payment dates for the junior subordinated debt. The firm has the right, from time to time, to defer payment of interest on the junior subordinated debt, and therefore cause payment on the Trust's preferred beneficial interests to be deferred, in each case up to ten consecutive semi-annual periods. During any such deferral period, the firm will not be permitted to, among other things, pay dividends on or make certain repurchases of its common stock. The Trust is not permitted to pay any distributions on the common beneficial interests held by Group Inc. unless all dividends payable on the preferred beneficial interests have been paid in full.

Note 17.

Other Liabilities and Accrued Expenses

The table below presents other liabilities and accrued expenses by type.

	As of December	
$ in millions	**2015**	2014
Compensation and benefits	**$ 8,149**	$ 8,368
Noncontrolling interests [1]	**459**	404
Income tax-related liabilities	**1,280**	1,533
Employee interests in consolidated funds	**149**	176
Subordinated liabilities issued by consolidated VIEs	**501**	843
Accrued expenses and other [2]	**8,355** [3]	4,751
Total	**$18,893**	$16,075

1. Primarily relates to consolidated investment funds.
2. Substantially all of the increase from December 2014 to December 2015 relates to provisions for the agreement in principle with the Residential Mortgage-Backed Securities Working Group of the U.S. Financial Fraud Enforcement Task Force (RMBS Working Group). See Note 27 for further information about this agreement in principle.
3. Includes $783 million of liabilities classified as held for sale related to certain of the firm's consolidated investments in Europe. See Note 13 for further information.

Note 18.

Commitments, Contingencies and Guarantees

Commitments

The table below presents the firm's commitments by type.

	As of December	
$ in millions	**2015**	2014
Commitments to extend credit		
Commercial lending:		
Investment-grade	**$ 72,428**	$ 63,634
Non-investment-grade	**41,277**	29,605
Warehouse financing	**3,453**	2,710
Total commitments to extend credit	**117,158**	95,949
Contingent and forward starting resale and securities borrowing agreements	**28,874**	35,225
Forward starting repurchase and secured lending agreements	**5,878**	8,180
Letters of credit	**249**	308
Investment commitments	**6,054**	5,164
Other	**6,944**	6,321
Total commitments	**$165,157**	$151,147

The table below presents the firm's commitments by period of expiration.

	Commitment Amount by Period of Expiration as of December 2015			
$ in millions	**2016**	**2017 - 2018**	**2019 - 2020**	**2021- Thereafter**
Commitments to extend credit				
Commercial lending:				
Investment-grade	**$18,283**	**$14,530**	**$36,811**	**$ 2,804**
Non-investment-grade	**9,652**	**8,521**	**16,932**	**6,172**
Warehouse financing	**469**	**1,905**	**79**	**1,000**
Total commitments to extend credit	**28,404**	**24,956**	**53,822**	**9,976**
Contingent and forward starting resale and securities borrowing agreements	**28,839**	**35**	**—**	**—**
Forward starting repurchase and secured lending agreements	**5,878**	**—**	**—**	**—**
Letters of credit	**217**	**25**	**3**	**4**
Investment commitments	**4,600**	**336**	**24**	**1,094**
Other	**6,484**	**339**	**70**	**51**
Total commitments	**$74,422**	**$25,691**	**$53,919**	**$11,125**

Commitments to Extend Credit

The firm's commitments to extend credit are agreements to lend with fixed termination dates and depend on the satisfaction of all contractual conditions to borrowing. These commitments are presented net of amounts syndicated to third parties. The total commitment amount does not necessarily reflect actual future cash flows because the firm may syndicate all or substantial additional portions of these commitments. In addition, commitments can expire unused or be reduced or cancelled at the counterparty's request.

As of December 2015 and December 2014, $93.92 billion and $66.22 billion, respectively, of the firm's lending commitments were held for investment and were accounted for on an accrual basis. See Note 9 for further information about such commitments. In addition, as of December 2015 and December 2014, $9.92 billion and $3.12 billion, respectively, of the firm's lending commitments were held for sale and were accounted for at the lower of cost or fair value.

The firm accounts for the remaining commitments to extend credit at fair value. Losses, if any, are generally recorded, net of any fees in "Other principal transactions."

Commercial Lending. The firm's commercial lending commitments are extended to investment-grade and non-investment-grade corporate borrowers. Commitments to investment-grade corporate borrowers are principally used for operating liquidity and general corporate purposes. The firm also extends lending commitments in connection with contingent acquisition financing and other types of corporate lending as well as commercial real estate financing. Commitments that are extended for contingent acquisition financing are often intended to be short-term in nature, as borrowers often seek to replace them with other funding sources.

Sumitomo Mitsui Financial Group, Inc. (SMFG) provides the firm with credit loss protection on certain approved loan commitments (primarily investment-grade commercial lending commitments). The notional amount of such loan commitments was $27.03 billion and $27.51 billion as of December 2015 and December 2014, respectively. The credit loss protection on loan commitments provided by SMFG is generally limited to 95% of the first loss the firm realizes on such commitments, up to a maximum of approximately $950 million. In addition, subject to the satisfaction of certain conditions, upon the firm's request, SMFG will provide protection for 70% of additional losses on such commitments, up to a maximum of $1.13 billion, of which $768 million of protection had been provided as of both December 2015 and December 2014. The firm also uses other financial instruments to mitigate credit risks related to certain commitments not covered by SMFG. These instruments primarily include credit default swaps that reference the same or similar underlying instrument or entity, or credit default swaps that reference a market index.

Warehouse Financing. The firm provides financing to clients who warehouse financial assets. These arrangements are secured by the warehoused assets, primarily consisting of consumer and corporate loans.

Contingent and Forward Starting Resale and Securities Borrowing Agreements/Forward Starting Repurchase and Secured Lending Agreements

The firm enters into resale and securities borrowing agreements and repurchase and secured lending agreements that settle at a future date, generally within three business days. The firm also enters into commitments to provide contingent financing to its clients and counterparties through resale agreements. The firm's funding of these commitments depends on the satisfaction of all contractual conditions to the resale agreement and these commitments can expire unused.

Letters of Credit

The firm has commitments under letters of credit issued by various banks which the firm provides to counterparties in lieu of securities or cash to satisfy various collateral and margin deposit requirements.

Investment Commitments

The firm's investment commitments of $6.05 billion and $5.16 billion as of December 2015 and December 2014, respectively, include commitments to invest in private equity, real estate and other assets directly and through funds that the firm raises and manages. Of these amounts, $2.86 billion and $2.87 billion as of December 2015 and December 2014, respectively, relate to commitments to invest in funds managed by the firm. If these commitments are called, they would be funded at market value on the date of investment.

Leases

The firm has contractual obligations under long-term noncancelable lease agreements for office space expiring on various dates through 2069. Certain agreements are subject to periodic escalation provisions for increases in real estate taxes and other charges.

The table below presents future minimum rental payments, net of minimum sublease rentals.

$ in millions	As of December 2015
2016	**$ 317**
2017	**313**
2018	**301**
2019	**258**
2020	**226**
2021 - thereafter	**1,160**
Total	**$2,575**

Rent charged to operating expense was $249 million for 2015, $309 million for 2014 and $324 million for 2013.

Operating leases include office space held in excess of current requirements. Rent expense relating to space held for growth is included in "Occupancy." The firm records a liability, based on the fair value of the remaining lease rentals reduced by any potential or existing sublease rentals, for leases where the firm has ceased using the space and management has concluded that the firm will not derive any future economic benefits. Costs to terminate a lease before the end of its term are recognized and measured at fair value on termination.

Contingencies

Legal Proceedings. See Note 27 for information about legal proceedings, including certain mortgage-related matters, and agreements the firm has entered into to toll the statute of limitations.

Certain Mortgage-Related Contingencies. There are multiple areas of focus by regulators, governmental agencies and others within the mortgage market that may impact originators, issuers, servicers and investors. There remains significant uncertainty surrounding the nature and extent of any potential exposure for participants in this market.

The firm has not been a significant originator of residential mortgage loans. The firm did purchase loans originated by others and generally received loan-level representations. During the period 2005 through 2008, the firm sold approximately $10 billion of loans to government-sponsored enterprises and approximately $11 billion of loans to other third parties. In addition, the firm transferred $125 billion of loans to trusts and other mortgage securitization vehicles. In connection with both sales of loans and securitizations, the firm provided loan level representations and/or assigned the loan level representations from the party from whom the firm purchased the loans.

The firm's exposure to claims for repurchase of residential mortgage loans based on alleged breaches of representations will depend on a number of factors such as the extent to which these claims are made within the statute of limitations taking into consideration the agreements to toll the statute of limitations the firm has entered into with trustees representing trusts. Based upon the large number of defaults in residential mortgages, including those sold or securitized by the firm, there is a potential for repurchase claims. However, the firm is not in a position to make a meaningful estimate of that exposure at this time.

Other Contingencies. In connection with the sale of Metro, the firm provided customary representations and warranties, and indemnities for breaches of these representations and warranties, to the buyer. The firm further agreed to provide indemnities to the buyer, which primarily relate to potential liabilities for legal or regulatory proceedings arising out of the conduct of Metro's business while the firm owned it.

Guarantees

The tables below present information about certain derivatives that meet the definition of a guarantee, securities lending indemnifications and certain other guarantees.

	As of December 2015		
$ in millions	**Derivatives**	**Securities lending indemnifications**	**Other financial guarantees**
Carrying Value of Net Liability	**$ 8,351**	**$ —**	**$ 76**
Maximum Payout/Notional Amount by Period of Expiration			
2016	**$640,288**	**$31,902**	**$ 611**
2017 - 2018	**168,784**	**—**	**1,402**
2019 - 2020	**67,643**	**—**	**1,772**
2021 - thereafter	**49,728**	**—**	**676**
Total	**$926,443**	**$31,902**	**$4,461**

	As of December 2014		
$ in millions	Derivatives	Securities lending indemnifications	Other financial guarantees
Carrying Value of Net Liability	$ 11,201	$ —	$ 119
Maximum Payout/Notional Amount by Period of Expiration			
2015	$351,308	$27,567	$ 471
2016 - 2017	150,989	—	935
2018 - 2019	51,927	—	1,390
2020 - thereafter	58,511	—	1,690
Total	$612,735	$27,567	$4,486

In the tables above:

- The maximum payout is based on the notional amount of the contract and does not represent anticipated losses.
- Amounts exclude certain commitments to issue standby letters of credit that are included in "Commitments to extend credit." See the tables in "Commitments" above for a summary of the firm's commitments.

Derivative Guarantees. The firm enters into various derivatives that meet the definition of a guarantee under U.S. GAAP, including written equity and commodity put options, written currency contracts and interest rate caps, floors and swaptions. These derivatives are risk managed together with derivatives that do not meet the definition of a guarantee, and therefore the amounts in the tables above do not reflect the firm's overall risk related to its derivative activities. Disclosures about derivatives are not required if they may be cash settled and the firm has no basis to conclude it is probable that the counterparties held the underlying instruments at inception of the contract. The firm has concluded that these conditions have been met for certain large, internationally active commercial and investment bank counterparties, central clearing counterparties and certain other counterparties. Accordingly, the firm has not included such contracts in the tables above. In addition, see Note 7 for information about credit derivatives that meet the definition of a guarantee, which are not included in the tables above.

Derivatives are accounted for at fair value and therefore the carrying value is considered the best indication of payment/performance risk for individual contracts. However, the carrying values in the tables above exclude the effect of counterparty and cash collateral netting.

Securities Lending Indemnifications. The firm, in its capacity as an agency lender, indemnifies most of its securities lending customers against losses incurred in the event that borrowers do not return securities and the collateral held is insufficient to cover the market value of the securities borrowed. Collateral held by the lenders in connection with securities lending indemnifications was $32.85 billion and $28.49 billion as of December 2015 and December 2014, respectively. Because the contractual nature of these arrangements requires the firm to obtain collateral with a market value that exceeds the value of the securities lent to the borrower, there is minimal performance risk associated with these guarantees.

Other Financial Guarantees. In the ordinary course of business, the firm provides other financial guarantees of the obligations of third parties (e.g., standby letters of credit and other guarantees to enable clients to complete transactions and fund-related guarantees). These guarantees represent obligations to make payments to beneficiaries if the guaranteed party fails to fulfill its obligation under a contractual arrangement with that beneficiary.

Guarantees of Securities Issued by Trusts. The firm has established trusts, including Goldman Sachs Capital I, the APEX Trusts, the 2012 Trusts, and other entities for the limited purpose of issuing securities to third parties, lending the proceeds to the firm and entering into contractual arrangements with the firm and third parties related to this purpose. The firm does not consolidate these entities. See Note 16 for further information about the transactions involving Goldman Sachs Capital I, the APEX Trusts, and the 2012 Trusts.

The firm effectively provides for the full and unconditional guarantee of the securities issued by these entities. Timely payment by the firm of amounts due to these entities under the guarantee, borrowing, preferred stock and related contractual arrangements will be sufficient to cover payments due on the securities issued by these entities.

Management believes that it is unlikely that any circumstances will occur, such as nonperformance on the part of paying agents or other service providers, that would make it necessary for the firm to make payments related to these entities other than those required under the terms of the guarantee, borrowing, preferred stock and related contractual arrangements and in connection with certain expenses incurred by these entities.

Indemnities and Guarantees of Service Providers. In the ordinary course of business, the firm indemnifies and guarantees certain service providers, such as clearing and custody agents, trustees and administrators, against specified potential losses in connection with their acting as an agent of, or providing services to, the firm or its affiliates.

The firm may also be liable to some clients or other parties for losses arising from its custodial role or caused by acts or omissions of third-party service providers, including sub-custodians and third-party brokers. In certain cases, the firm has the right to seek indemnification from these third-party service providers for certain relevant losses incurred by the firm. In addition, the firm is a member of payment, clearing and settlement networks as well as securities exchanges around the world that may require the firm to meet the obligations of such networks and exchanges in the event of member defaults and other loss scenarios.

In connection with its prime brokerage and clearing businesses, the firm agrees to clear and settle on behalf of its clients the transactions entered into by them with other brokerage firms. The firm's obligations in respect of such transactions are secured by the assets in the client's account as well as any proceeds received from the transactions cleared and settled by the firm on behalf of the client. In connection with joint venture investments, the firm may issue loan guarantees under which it may be liable in the event of fraud, misappropriation, environmental liabilities and certain other matters involving the borrower.

The firm is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the firm will have to make any material payments under these arrangements, and no material liabilities related to these guarantees and indemnifications have been recognized in the consolidated statements of financial condition as of December 2015 and December 2014.

Other Representations, Warranties and Indemnifications. The firm provides representations and warranties to counterparties in connection with a variety of commercial transactions and occasionally indemnifies them against potential losses caused by the breach of those representations and warranties. The firm may also provide indemnifications protecting against changes in or adverse application of certain U.S. tax laws in connection with ordinary-course transactions such as securities issuances, borrowings or derivatives.

In addition, the firm may provide indemnifications to some counterparties to protect them in the event additional taxes are owed or payments are withheld, due either to a change in or an adverse application of certain non-U.S. tax laws.

These indemnifications generally are standard contractual terms and are entered into in the ordinary course of business. Generally, there are no stated or notional amounts included in these indemnifications, and the contingencies triggering the obligation to indemnify are not expected to occur. The firm is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the firm will have to make any material payments under these arrangements, and no material liabilities related to these arrangements have been recognized in the consolidated statements of financial condition as of December 2015 and December 2014.

Guarantees of Subsidiaries. Group Inc. fully and unconditionally guarantees the securities issued by GS Finance Corp., a wholly-owned finance subsidiary of the firm.

Group Inc. has guaranteed the payment obligations of Goldman, Sachs & Co. (GS&Co.), GS Bank USA and Goldman Sachs Execution & Clearing, L.P. (GSEC), subject to certain exceptions.

In November 2008, the firm contributed subsidiaries into GS Bank USA, and Group Inc. agreed to guarantee the reimbursement of certain losses, including credit-related losses, relating to assets held by the contributed entities.

In addition, Group Inc. guarantees many of the obligations of its other consolidated subsidiaries on a transaction-by-transaction basis, as negotiated with counterparties. Group Inc. is unable to develop an estimate of the maximum payout under its subsidiary guarantees; however, because these guaranteed obligations are also obligations of consolidated subsidiaries, Group Inc.'s liabilities as guarantor are not separately disclosed.

Note 19.

Shareholders' Equity

Common Equity

Dividends declared per common share were $2.55 in 2015, $2.25 in 2014 and $2.05 in 2013. On January 19, 2016, Group Inc. declared a dividend of $0.65 per common share to be paid on March 30, 2016 to common shareholders of record on March 2, 2016.

The firm's share repurchase program is intended to help maintain the appropriate level of common equity. The share repurchase program is effected primarily through regular open-market purchases (which may include repurchase plans designed to comply with Rule 10b5-1), the amounts and timing of which are determined primarily by the firm's current and projected capital position, but which may also be influenced by general market conditions and the prevailing price and trading volumes of the firm's common stock. Prior to repurchasing common stock, the firm must receive confirmation that the Federal Reserve Board does not object to such capital actions.

The table below presents the amount of common stock repurchased by the firm under the share repurchase program.

	Year Ended December		
in millions, except per share amounts	**2015**	2014	2013
Common share repurchases	**22.1**	31.8	39.3
Average cost per share	**$189.41**	$171.79	$157.11
Total cost of common share repurchases	**$ 4,195**	$ 5,469	$ 6,175

Pursuant to the terms of certain share-based compensation plans, employees may remit shares to the firm or the firm may cancel restricted stock units (RSUs) or stock options to satisfy minimum statutory employee tax withholding requirements and the exercise price of stock options. Under these plans, during 2015, 2014 and 2013, employees remitted 35,217 shares, 174,489 shares and 161,211 shares with a total value of $6 million, $31 million and $25 million, and the firm cancelled 5.7 million, 5.8 million and 4.0 million of RSUs with a total value of $1.03 billion, $974 million and $599 million. Under these plans, the firm also cancelled 2.0 million and 15.6 million of stock options with a total value of $406 million and $2.65 billion during 2015 and 2014, respectively.

Preferred Equity

The tables below present details about the perpetual preferred stock issued and outstanding as of December 2015.

Series	Shares Authorized	Shares Issued	Shares Outstanding	Depositary Shares Per Share
A	50,000	30,000	29,999	1,000
B	50,000	32,000	32,000	1,000
C	25,000	8,000	8,000	1,000
D	60,000	54,000	53,999	1,000
E	17,500	17,500	17,500	N/A
F	5,000	5,000	5,000	N/A
I	34,500	34,000	34,000	1,000
J	46,000	40,000	40,000	1,000
K	32,200	28,000	28,000	1,000
L	52,000	52,000	52,000	25
M [1]	80,000	80,000	80,000	25
Total	**452,200**	**380,500**	**380,498**	

1. In April 2015, Group Inc. issued 80,000 shares of Series M perpetual 5.375% Fixed-to-Floating Rate Non-Cumulative Preferred Stock (Series M Preferred Stock).

Series	Liquidation Preference	Redemption Price Per Share	Redemption Value *($ in millions)*
A	$ 25,000	$25,000 plus declared and unpaid dividends	**$ 750**
B	25,000	$25,000 plus declared and unpaid dividends	**800**
C	25,000	$25,000 plus declared and unpaid dividends	**200**
D	25,000	$25,000 plus declared and unpaid dividends	**1,350**
E	100,000	$100,000 plus declared and unpaid dividends	**1,750**
F	100,000	$100,000 plus declared and unpaid dividends	**500**
I	25,000	$25,000 plus accrued and unpaid dividends	**850**
J	25,000	$25,000 plus accrued and unpaid dividends	**1,000**
K	25,000	$25,000 plus accrued and unpaid dividends	**700**
L	25,000	$25,000 plus accrued and unpaid dividends	**1,300**
M	25,000	$25,000 plus accrued and unpaid dividends	**2,000**
Total			**$11,200**

In the tables above:

- Each share of non-cumulative Series A, Series B, Series C and Series D Preferred Stock issued and outstanding is redeemable at the firm's option.
- Each share of non-cumulative Series E and Series F Preferred Stock issued and outstanding is redeemable at the firm's option, subject to certain covenant restrictions governing the firm's ability to redeem or purchase the preferred stock without issuing common stock or other instruments with equity-like characteristics. See Note 16 for information about the replacement capital covenants applicable to the Series E and Series F Preferred Stock.
- Each share of non-cumulative Series I Preferred Stock issued and outstanding is redeemable at the firm's option beginning November 10, 2017.
- Each share of non-cumulative Series J Preferred Stock issued and outstanding is redeemable at the firm's option beginning May 10, 2023.
- Each share of non-cumulative Series K Preferred Stock issued and outstanding is redeemable at the firm's option beginning May 10, 2024.
- Each share of non-cumulative Series L Preferred Stock issued and outstanding is redeemable at the firm's option beginning May 10, 2019.
- Each share of non-cumulative Series M Preferred Stock issued and outstanding is redeemable at the firm's option beginning May 10, 2020.
- All shares of preferred stock have a par value of $0.01 per share and, where applicable, each share of preferred stock is represented by the specified number of depositary shares.

Prior to redeeming preferred stock, the firm must receive confirmation that the Federal Reserve Board does not object to such capital actions. All series of preferred stock are pari passu and have a preference over the firm's common stock on liquidation. Dividends on each series of preferred stock, excluding Series L and Series M Preferred Stock, if declared, are payable quarterly in arrears. Dividends on Series L and Series M Preferred Stock, if declared, are payable semi-annually in arrears from the issuance date to, but excluding, May 10, 2019 and May 10, 2020, respectively, and quarterly thereafter. The firm's ability to declare or pay dividends on, or purchase, redeem or otherwise acquire, its common stock is subject to certain restrictions in the event that the firm fails to pay or set aside full dividends on the preferred stock for the latest completed dividend period.

The table below presents the dividend rates of the firm's perpetual preferred stock as of December 2015.

Series	Dividend Rate
A	3 month LIBOR + 0.75%, with floor of 3.75% per annum
B	6.20% per annum
C	3 month LIBOR + 0.75%, with floor of 4.00% per annum
D	3 month LIBOR + 0.67%, with floor of 4.00% per annum
E	3 month LIBOR + 0.77%, with floor of 4.00% per annum
F	3 month LIBOR + 0.77%, with floor of 4.00% per annum
I	5.95% per annum
J	5.50% per annum to, but excluding, May 10, 2023; 3 month LIBOR + 3.64% per annum thereafter
K	6.375% per annum to, but excluding, May 10, 2024; 3 month LIBOR + 3.55% per annum thereafter
L	5.70% per annum to, but excluding, May 10, 2019; 3 month LIBOR + 3.884% per annum thereafter
M	5.375% per annum to, but excluding, May 10, 2020; 3 month LIBOR + 3.922% per annum thereafter

The table below presents preferred dividends declared on the firm's preferred stock.

	Year Ended December					
	2015		2014		2013	
Series	***per share***	***$ in millions***	*per share*	*$ in millions*	*per share*	*$ in millions*
A	**$ 950.52**	**$ 28**	$ 945.32	$ 28	$ 947.92	$ 28
B	**1,550.00**	**50**	1,550.00	50	1,550.00	50
C	**1,013.90**	**8**	1,008.34	8	1,011.11	8
D	**1,013.90**	**54**	1,008.34	54	1,011.11	54
E	**4,055.55**	**71**	4,044.44	71	4,044.44	71
F	**4,055.55**	**20**	4,044.44	20	4,044.44	20
I	**1,487.52**	**51**	1,487.52	51	1,553.63	53
J	**1,375.00**	**55**	1,375.00	55	744.79	30
K	**1,593.76**	**45**	850.00	24	—	—
L	**1,425.00**	**74**	760.00	39	—	—
M	**735.33**	**59**	—	—	—	—
Total		**$515**		$400		$314

On January 8, 2016, Group Inc. declared dividends of $239.58, $387.50, $255.56, $255.56, $371.88, $343.75 and $398.44 per share of Series A Preferred Stock, Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock, Series I Preferred Stock, Series J Preferred Stock and Series K Preferred Stock, respectively, to be paid on February 10, 2016 to preferred shareholders of record on January 26, 2016. In addition, the firm declared dividends of $1,011.11 per each share of Series E Preferred Stock and Series F Preferred Stock, to be paid on March 1, 2016 to preferred shareholders of record on February 15, 2016.

Accumulated Other Comprehensive Loss

The tables below present accumulated other comprehensive loss, net of tax by type.

	December 2015		
$ in millions	**Balance, beginning of year**	**Other comprehensive income/(loss) adjustments, net of tax**	**Balance, end of year**
Currency translation	**$(473)**	**$(114)**	**$(587)**
Pension and postretirement liabilities	**(270)**	**139**	**(131)**
Accumulated other comprehensive income/(loss), net of tax	**$(743)**	**$ 25**	**$(718)**

	December 2014		
$ in millions	Balance, beginning of year	Other comprehensive income/(loss) adjustments, net of tax	Balance, end of year
Currency translation	$(364)	$(109)	$(473)
Pension and postretirement liabilities	(168)	(102)	(270)
Cash flow hedges	8	(8)	—
Accumulated other comprehensive loss, net of tax	$(524)	$(219)	$(743)

Note 20.

Regulation and Capital Adequacy

The Federal Reserve Board is the primary regulator of Group Inc., a bank holding company under the Bank Holding Company Act of 1956 (BHC Act) and a financial holding company under amendments to the BHC Act. As a bank holding company, the firm is subject to consolidated regulatory capital requirements which are calculated in accordance with the revised risk-based capital and leverage regulations of the Federal Reserve Board, subject to certain transitional provisions (Revised Capital Framework).

The risk-based capital requirements are expressed as capital ratios that compare measures of regulatory capital to risk-weighted assets (RWAs). Failure to comply with these requirements could result in restrictions being imposed by the firm's regulators. The firm's capital levels are also subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors. Furthermore, certain of the firm's subsidiaries are subject to separate regulations and capital requirements as described below.

Capital Framework

The regulations under the Revised Capital Framework are largely based on the Basel Committee's final capital framework for strengthening international capital standards (Basel III) and also implement certain provisions of the Dodd-Frank Act. Under the Revised Capital Framework, the firm is an "Advanced approach" banking organization.

As of December 2015, the firm calculated its Common Equity Tier 1 (CET1), Tier 1 capital and Total capital ratios in accordance with (i) the Standardized approach and market risk rules set out in the Revised Capital Framework (together, the Standardized Capital Rules) and (ii) the Advanced approach and market risk rules set out in the Revised Capital Framework (together, the Basel III Advanced Rules). The lower of each ratio calculated in (i) and (ii) is the ratio against which the firm's compliance with its minimum ratio requirements is assessed. Each of the ratios calculated in accordance with the Basel III Advanced Rules was lower than that calculated in accordance with the Standardized Capital Rules and therefore the Basel III Advanced ratios were the ratios that applied to the firm as of December 2015. The capital ratios that apply to the firm can change in future reporting periods as a result of these regulatory requirements.

As of December 2014, the firm calculated its CET1, Tier 1 capital and Total capital ratios using the Revised Capital Framework for regulatory capital, but RWAs were calculated in accordance with (i) the Basel I Capital Accord of the Basel Committee, incorporating the market risk requirements set out in the Revised Capital Framework, and adjusted for certain items related to capital deductions and for the phase-in of capital deductions (Hybrid Capital Rules), and (ii) the Basel III Advanced Rules. The lower of each ratio calculated in (i) and (ii) was the ratio against which the firm's compliance with its minimum ratio requirements was assessed. Each of the ratios calculated in accordance with the Basel III Advanced Rules was lower than that calculated in accordance with the Hybrid Capital Rules and therefore the Basel III Advanced ratios were the ratios that applied to the firm as of December 2014.

Regulatory Capital and Capital Ratios. The table below presents the minimum ratios required for the firm as of December 2015.

	Minimum Ratio
CET1 ratio	**4.5%**
Tier 1 capital ratio	**6.0%**
Total capital ratio [1]	**8.0%**
Tier 1 leverage ratio [2]	**4.0%**

1. In order to meet the quantitative requirements for being "well-capitalized" under the Federal Reserve Board's regulations, the firm must meet a higher required minimum Total capital ratio of 10.0%.
2. Tier 1 leverage ratio is defined as Tier 1 capital divided by quarterly average adjusted total assets (which includes adjustments for goodwill and identifiable intangible assets, and certain investments in nonconsolidated financial institutions).

Certain aspects of the Revised Capital Framework's requirements phase in over time (transitional provisions). These include the introduction of capital buffers (including surcharges) and certain deductions from regulatory capital (such as investments in nonconsolidated financial institutions). These deductions from regulatory capital are required to be phased in ratably per year from 2014 to 2018, with residual amounts not deducted during the transitional period subject to risk weighting. In addition, junior subordinated debt issued to trusts is being phased out of regulatory capital. The minimum CET1, Tier 1 and Total capital ratios that apply to the firm will increase as the transitional provisions phase in and capital buffers (including surcharges) are introduced.

Definition of Risk-Weighted Assets. As of December 2015, RWAs were calculated in accordance with both the Standardized Capital Rules and the Basel III Advanced Rules. The following is a comparison of RWA calculations under these rules:

- RWAs for credit risk in accordance with the Standardized Capital Rules are calculated in a different manner than the Basel III Advanced Rules. The primary difference is that the Standardized Capital Rules do not contemplate the use of internal models to compute exposure for credit risk on derivatives and securities financing transactions, whereas the Basel III Advanced Rules permit the use of such models, subject to supervisory approval. In addition, credit RWAs calculated in accordance with the Standardized Capital Rules utilize prescribed risk-weights which depend largely on the type of counterparty, rather than on internal assessments of the creditworthiness of such counterparties;
- RWAs for market risk in accordance with the Standardized Capital Rules and the Basel III Advanced Rules are generally consistent; and
- RWAs for operational risk are not required by the Standardized Capital Rules, whereas the Basel III Advanced Rules do include such a requirement.

As of December 2014, the firm calculated RWAs in accordance with both the Basel III Advanced Rules and the Hybrid Capital Rules described below.

Credit Risk

Credit RWAs are calculated based upon measures of exposure, which are then risk weighted. The following is a description of the calculation of credit RWAs in accordance with the Standardized Capital Rules, the Basel III Advanced Rules and the Hybrid Capital Rules:

- For credit RWAs calculated in accordance with the Standardized Capital Rules, the firm utilizes prescribed risk-weights which depend largely on the type of counterparty (e.g., whether the counterparty is a sovereign, bank, broker-dealer or other entity). The exposure measure for derivatives is based on a combination of positive net current exposure and a percentage of the notional amount of each derivative. The exposure measure for securities financing transactions is calculated to reflect adjustments for potential price volatility, the size of which depends on factors such as the type and maturity of the security, and whether it is denominated in the same currency as the other side of the financing transaction. The firm utilizes specific required formulaic approaches to measure exposure for securitizations and equities;
- For credit RWAs calculated in accordance with the Basel III Advanced Rules, the firm has been given permission by its regulators to compute risk-weights for wholesale and retail credit exposures in accordance with the Advanced Internal Ratings-Based approach. This approach is based on internal assessments of the creditworthiness of counterparties, with key inputs being the probability of default, loss given default and the effective maturity. The firm utilizes internal models to measure exposure for derivatives, securities financing transactions and eligible margin loans. The Revised Capital Framework requires that a bank holding company obtain prior written agreement from its regulators before using internal models for such purposes. The firm utilizes specific required formulaic approaches to measure exposure for securitizations and equities; and
- For credit RWAs calculated in accordance with the Hybrid Capital Rules, the firm utilized prescribed risk-weights depending on, among other things, the type of counterparty. The exposure measure for derivatives was based on a combination of positive net current exposure and a percentage of the notional amount of each derivative. The exposure measure for securities financing transactions was based on the carrying value without the application of potential price volatility adjustments required under the Standardized Capital Rules.

Market Risk

Market RWAs are calculated based on measures of exposure which include Value-at-Risk (VaR), stressed VaR, incremental risk and comprehensive risk based on internal models, and a standardized measurement method for specific risk. The market risk regulatory capital rules require that a bank holding company obtain prior written agreement from its regulators before using any internal model to calculate its risk-based capital requirement. The following is further information regarding the measures of exposure for market RWAs calculated in accordance with the Standardized Capital Rules, Basel III Advanced Rules and Hybrid Capital Rules:

- VaR is the potential loss in value of inventory positions, as well as certain other financial assets and financial liabilities, due to adverse market movements over a defined time horizon with a specified confidence level. For both risk management purposes and regulatory capital calculations the firm uses a single VaR model which captures risks including those related to interest rates, equity prices, currency rates and commodity prices. However, VaR used for regulatory capital requirements (regulatory VaR) differs from risk management VaR due to different time horizons and confidence levels (10-day and 99% for regulatory VaR vs. one-day and 95% for risk management VaR), as well as differences in the scope of positions on which VaR is calculated. In addition, the daily trading net revenues used to determine risk management VaR exceptions (i.e., comparing the daily trading net revenues to the VaR measure calculated as of the end of the prior business day) include intraday activity, whereas the Federal Reserve Board's regulatory capital rules require that intraday activity be excluded from daily trading net revenues when calculating regulatory VaR exceptions. Intraday activity includes bid/offer net revenues, which are more likely than not to be positive by their nature. As a result, there may be differences in the number of VaR exceptions and the amount of daily trading net revenues calculated for regulatory VaR compared to the amounts calculated for risk management VaR. The firm's positional losses observed on a single day did not exceed its 99% one-day regulatory VaR during 2015, but did exceed its 99% one-day regulatory VaR on three occasions during 2014. There was no change in the VaR multiplier used to calculate Market RWAs;
- Stressed VaR is the potential loss in value of inventory positions, as well as certain other financial assets and financial liabilities, during a period of significant market stress;
- Incremental risk is the potential loss in value of non-securitized inventory positions due to the default or credit migration of issuers of financial instruments over a one-year time horizon;
- Comprehensive risk is the potential loss in value, due to price risk and defaults, within the firm's credit correlation positions; and
- Specific risk is the risk of loss on a position that could result from factors other than broad market movements, including event risk, default risk and idiosyncratic risk. The standardized measurement method is used to determine specific risk RWAs, by applying supervisory defined risk-weighting factors after applicable netting is performed.

Operational Risk

Operational RWAs are only required to be included under the Basel III Advanced Rules. The firm has been given permission by its regulators to calculate operational RWAs in accordance with the "Advanced Measurement Approach," and therefore utilizes an internal risk-based model to quantify operational RWAs.

Consolidated Regulatory Capital Ratios

Capital Ratios and RWAs. Each of the ratios calculated in accordance with the Basel III Advanced Rules was lower than that calculated in accordance with the Standardized Rules as of December 2015 and therefore such lower ratios applied to the firm as of that date. Each of the ratios calculated in accordance with the Basel III Advanced Rules was lower than that calculated in accordance with the Hybrid Capital Rules as of December 2014 and therefore such lower ratios applied to the firm as of that date.

The table below presents the ratios calculated in accordance with both the Standardized and Basel III Advanced rules as of both December 2015 and December 2014. While the ratios calculated in accordance with the Standardized Capital Rules were not applicable until January 2015, the December 2014 ratios are presented in the table below for comparative purposes.

	As of December	
$ in millions	**2015**	2014
Common shareholders' equity	**$ 75,528**	$ 73,597
Deductions for goodwill and identifiable intangible assets, net of deferred tax liabilities	**(2,814)**	(2,787)
Deductions for investments in nonconsolidated financial institutions	**(864)**	(953)
Other adjustments	**(487)**	(27)
Common Equity Tier 1	**71,363**	69,830
Perpetual non-cumulative preferred stock	**11,200**	9,200
Junior subordinated debt issued to trusts	**330**	660
Deduction for investments in covered funds	**(413)**	—
Other adjustments	**(969)**	(1,257)
Tier 1 capital	**$ 81,511**	$ 78,433
Standardized Tier 2 and total capital		
Tier 1 capital	**$ 81,511**	$ 78,433
Qualifying subordinated debt	**15,132**	11,894
Junior subordinated debt issued to trusts	**990**	660
Allowance for losses on loans and lending commitments	**602**	316
Other adjustments	**(19)**	(9)
Standardized Tier 2 capital	**16,705**	12,861
Standardized total capital	**$ 98,216**	$ 91,294
Basel III Advanced Tier 2 and total capital		
Tier 1 capital	**$ 81,511**	$ 78,433
Standardized Tier 2 capital	**16,705**	12,861
Allowance for losses on loans and lending commitments	**(602)**	(316)
Basel III Advanced Tier 2 capital	**16,103**	12,545
Basel III Advanced total capital	**$ 97,614**	$ 90,978
RWAs		
Standardized	**$524,107**	$619,216
Basel III Advanced	**577,651**	570,313
CET1 ratio		
Standardized	**13.6%**	11.3%
Basel III Advanced	**12.4%**	12.2%
Tier 1 capital ratio		
Standardized	**15.6%**	12.7%
Basel III Advanced	**14.1%**	13.8%
Total capital ratio		
Standardized	**18.7%**	14.7%
Basel III Advanced	**16.9%**	16.0%
Tier 1 leverage ratio	**9.3%**	9.0%

In the table above:

- The deductions for goodwill and identifiable intangible assets, net of deferred tax liabilities, include goodwill of $3.66 billion and $3.65 billion as of December 2015 and December 2014, respectively, and identifiable intangible assets of $196 million (40% of $491 million) and $103 million (20% of $515 million) as of December 2015 and December 2014, respectively, net of associated deferred tax liabilities of $1.04 billion and $961 million as of December 2015 and December 2014, respectively. Goodwill is fully deducted from CET1, while the deduction for identifiable intangible assets is required to be phased into CET1 ratably over five years from 2014 to 2018. The balance that is not deducted during the transitional period is risk weighted.
- The deductions for investments in nonconsolidated financial institutions represent the amount by which the firm's investments in the capital of nonconsolidated financial institutions exceed certain prescribed thresholds. The deduction for such investments is required to be phased into CET1 ratably over five years from 2014 to 2018. As of December 2015 and December 2014, CET1 reflects 40% and 20% of the deduction, respectively. The balance that is not deducted during the transitional period is risk weighted.
- The deduction for investments in covered funds represents the firm's aggregate investments in applicable covered funds, as permitted by the Volcker Rule, that were purchased after December 2013. Substantially all of these investments in covered funds were purchased in connection with the firm's market-making activities. This deduction became effective in July 2015 and is not subject to a transition period. See Note 6 for further information about the Volcker Rule.
- Other adjustments within CET1 and Tier 1 capital primarily include accumulated other comprehensive loss, credit valuation adjustments on derivative liabilities, debt valuation adjustments, the overfunded portion of the firm's defined benefit pension plan obligation net of associated deferred tax liabilities, disallowed deferred tax assets and other required credit risk-based deductions. The deductions for such items are generally required to be phased into CET1 ratably over five years from 2014 to 2018. As of December 2015 and December 2014, CET1 reflects 40% and 20% of such deductions, respectively. The balance that is not deducted from CET1 during the transitional period is generally deducted from Tier 1 capital within other adjustments.

- Junior subordinated debt issued to trusts is reflected in both Tier 1 capital (25%) and Tier 2 capital (75%) as of December 2015. Such percentages were 50% for both Tier 1 and Tier 2 capital as of December 2014. Junior subordinated debt issued to trusts is reduced by the amount of trust preferred securities purchased by the firm and will be fully phased out of Tier 1 capital into Tier 2 capital by 2016, and then out of Tier 2 capital by 2022. See Note 16 for additional information about the firm's junior subordinated debt issued to trusts and trust preferred securities purchased by the firm.
- Qualifying subordinated debt represents subordinated debt issued by Group Inc. with an original term to maturity of five years or greater. The outstanding amount of subordinated debt qualifying for Tier 2 capital is reduced upon reaching a remaining maturity of five years. See Note 16 for additional information about the firm's subordinated debt.

The tables below present changes in CET1, Tier 1 capital and Tier 2 capital for the period ended December 2015 and the period from December 31, 2013 to December 31, 2014.

	Period Ended December 2015	
$ in millions	**Standardized**	**Basel III Advanced**
Common Equity Tier 1		
Beginning balance	**$69,830**	**$69,830**
Increased deductions due to transitional provisions [1]	**(1,368)**	**(1,368)**
Increase in common shareholders' equity	**1,931**	**1,931**
Change in deduction for goodwill and identifiable intangible assets, net of deferred tax liabilities	**75**	**75**
Change in deduction for investments in nonconsolidated financial institutions	**1,059**	**1,059**
Change in other adjustments	**(164)**	**(164)**
Ending balance	**$71,363**	**$71,363**
Tier 1 capital		
Beginning balance	**$78,433**	**$78,433**
Increased deductions due to transitional provisions [1]	**(1,073)**	**(1,073)**
Other net increase in CET1	**2,901**	**2,901**
Redesignation of junior subordinated debt issued to trusts	**(330)**	**(330)**
Increase in perpetual non-cumulative preferred stock	**2,000**	**2,000**
Deduction for investments in covered funds	**(413)**	**(413)**
Change in other adjustments	**(7)**	**(7)**
Ending balance	**81,511**	**81,511**
Tier 2 capital		
Beginning balance	**12,861**	**12,545**
Increased deductions due to transitional provisions [1]	**(53)**	**(53)**
Increase in qualifying subordinated debt	**3,238**	**3,238**
Redesignation of junior subordinated debt issued to trusts	**330**	**330**
Change in the allowance for losses on loans and lending commitments	**286**	**—**
Change in other adjustments	**43**	**43**
Ending balance	**16,705**	**16,103**
Total capital	**$98,216**	**$97,614**

1. Represents the increased phase-in of deductions from 20% to 40%, effective January 2015.

$ in millions	Period Ended December 2014
Common Equity Tier 1	
Balance, December 31, 2013	$63,248
Change in CET1 related to the transition to the Revised Capital Framework [1]	3,177
Increase in common shareholders' equity	2,330
Change in deduction for goodwill and identifiable intangible assets, net of deferred tax liabilities	144
Change in deduction for investments in nonconsolidated financial institutions	839
Change in other adjustments	92
Balance, December 31, 2014	$69,830
Tier 1 capital	
Balance, December 31, 2013	$72,471
Change in CET1 related to the transition to the Revised Capital Framework [1]	3,177
Change in Tier 1 capital related to the transition to the Revised Capital Framework [2]	(443)
Other net increase in CET1	3,405
Increase in perpetual non-cumulative preferred stock	2,000
Redesignation of junior subordinated debt issued to trusts and decrease related to trust preferred securities purchased by the firm	(1,403)
Change in other adjustments	(774)
Balance, December 31, 2014	78,433
Tier 2 capital	
Balance, December 31, 2013	13,632
Change in Tier 2 capital related to the transition to the Revised Capital Framework [3]	(197)
Decrease in qualifying subordinated debt	(879)
Trust preferred securities purchased by the firm, net of redesignation of junior subordinated debt issued to trusts	(27)
Change in other adjustments	16
Balance, December 31, 2014	12,545
Total capital	$90,978

1. Includes $3.66 billion related to the transition to the Revised Capital Framework on January 1, 2014 as well as $(479) million related to the firm's application of the Basel III Advanced Rules on April 1, 2014.
2. Includes $(219) million related to the transition to the Revised Capital Framework on January 1, 2014 as well as $(224) million related to the firm's application of the Basel III Advanced Rules on April 1, 2014.
3. Includes $(2) million related to the transition to the Revised Capital Framework on January 1, 2014 as well as $(195) million related to the firm's application of the Basel III Advanced Rules on April 1, 2014.

In the table above, "Change in CET1 related to the transition to the Revised Capital Framework" primarily reflects the change in the treatment of equity investments in certain nonconsolidated entities. The Revised Capital Framework requires only a portion of such investments that exceed certain prescribed thresholds to be treated as deductions from CET1 and the remainder are risk-weighted, subject to the applicable transitional provisions. As of December 2013, in accordance with the previous capital regulations, these equity investments were treated as deductions.

The tables below present the components of RWAs calculated in accordance with the Standardized and Basel III Advanced rules as of December 2015 and December 2014.

	Standardized Capital Rules as of December	
$ in millions	**2015**	2014
Credit RWAs		
Derivatives	**$136,841**	$180,771
Commitments, guarantees and loans	**111,391**	89,783
Securities financing transactions [1]	**71,392**	92,116
Equity investments	**37,687**	38,526
Other [2]	**62,807**	71,499
Total Credit RWAs	**420,118**	472,695
Market RWAs		
Regulatory VaR	**12,000**	10,238
Stressed VaR	**21,738**	29,625
Incremental risk	**9,513**	16,950
Comprehensive risk	**5,725**	9,855
Specific risk	**55,013**	79,853
Total Market RWAs	**103,989**	146,521
Total RWAs	**$524,107**	$619,216

	Basel III Advanced Rules as of December	
$ in millions	**2015**	2014
Credit RWAs		
Derivatives	**$113,671**	$122,501
Commitments, guarantees and loans	**114,523**	95,209
Securities financing transactions [1]	**14,901**	15,618
Equity investments	**40,110**	40,146
Other [2]	**60,877**	54,470
Total Credit RWAs	**344,082**	327,944
Market RWAs		
Regulatory VaR	**12,000**	10,238
Stressed VaR	**21,738**	29,625
Incremental risk	**9,513**	16,950
Comprehensive risk	**4,717**	8,150
Specific risk	**55,013**	79,918
Total Market RWAs	**102,981**	144,881
Total Operational RWAs	**130,588**	97,488
Total RWAs	**$577,651**	$570,313

1. Represents resale and repurchase agreements and securities borrowed and loaned transactions.

2. Includes receivables, other assets, and cash and cash equivalents.

The table below presents changes in RWAs calculated in accordance with the Standardized and Basel III Advanced rules for the period ended December 2015.

	Period Ended December 2015	
$ in millions	**Standardized**	**Basel III Advanced**
Risk-Weighted Assets		
Beginning balance	**$619,216**	**$570,313**
Credit RWAs		
Increased deductions due to transitional provisions [1]	**(1,073)**	**(1,073)**
Increase/(decrease) in derivatives	**(43,930)**	**(8,830)**
Increase/(decrease) in commitments, guarantees and loans	**21,608**	**19,314**
Increase/(decrease) in securities financing transactions	**(20,724)**	**(717)**
Increase/(decrease) in equity investments	**131**	**934**
Change in other	**(8,589)**	**6,510**
Change in Credit RWAs	**(52,577)**	**16,138**
Market RWAs		
Increase/(decrease) in regulatory VaR	**1,762**	**1,762**
Increase/(decrease) in stressed VaR	**(7,887)**	**(7,887)**
Increase/(decrease) in incremental risk	**(7,437)**	**(7,437)**
Increase/(decrease) in comprehensive risk	**(4,130)**	**(3,433)**
Increase/(decrease) in specific risk	**(24,840)**	**(24,905)**
Change in Market RWAs	**(42,532)**	**(41,900)**
Operational RWAs		
Increase/(decrease) in operational risk	**—**	**33,100**
Change in Operational RWAs	**—**	**33,100**
Ending balance	**$524,107**	**$577,651**

1. Represents the increased phase-in of deductions from 20% to 40%, effective January 2015.

Standardized Credit RWAs as of December 2015 decreased by $52.58 billion compared with December 2014, reflecting decreases in derivatives and securities financing transactions, primarily due to lower exposures. These decreases were partially offset by an increase in lending activity. Standardized Market RWAs as of December 2015 decreased by $42.53 billion compared with December 2014, primarily due to decreased specific risk, as a result of reduced risk exposures.

Basel III Advanced Credit RWAs as of December 2015 increased by $16.14 billion compared with December 2014, primarily reflecting an increase in lending activity. This increase was partially offset by a decrease in RWAs related to derivatives, due to lower counterparty credit risk. Basel III Advanced Market RWAs as of December 2015 decreased by $41.90 billion compared with December 2014, primarily due to decreased specific risk, as a result of reduced risk exposures. Basel III Advanced Operational RWAs as of December 2015 increased by $33.10 billion compared with December 2014, substantially all of which is associated with mortgage-related legal matters and regulatory proceedings.

See "Definition of Risk-Weighted Assets" above for a description of the calculations of Credit RWAs, Market RWAs and Operational RWAs, including the differences in the calculation of Credit RWAs under each of the Standardized Capital Rules and the Basel III Advanced Rules.

The table below presents changes in RWAs from December 31, 2013 to December 31, 2014. As of December 31, 2013, the firm was subject to the capital regulations of the Federal Reserve Board that were based on the Basel Committee's Basel I Capital Accord, including the revised market risk capital requirements.

$ in millions	Period Ended December 2014
Risk-weighted assets	
Balance, December 31, 2013	$433,226
Credit RWAs	
Change related to the transition to the Revised Capital Framework [1]	69,101
Decrease in derivatives	(24,109)
Increase in commitments, guarantees and loans	18,208
Decrease in securities financing transactions	(2,782)
Decrease in equity investments	(2,728)
Increase in other	2,007
Change in Credit RWAs	59,697
Market RWAs	
Change related to the transition to the Revised Capital Framework	1,626
Decrease in regulatory VaR	(5,175)
Decrease in stressed VaR	(11,512)
Increase in incremental risk	7,487
Decrease in comprehensive risk	(6,617)
Decrease in specific risk	(5,907)
Change in Market RWAs	(20,098)
Operational RWAs	
Change related to the transition to the Revised Capital Framework	88,938
Increase in operational risk	8,550
Change in Operational RWAs	97,488
Ending balance (Basel III Advanced)	$570,313

1. Includes $26.67 billion of RWA changes related to the transition to the Revised Capital Framework on January 1, 2014 and $42.43 billion of changes to the calculation of credit RWAs in accordance with the Basel III Advanced Rules related to the firm's application of the Basel III Advanced Rules on April 1, 2014.

Credit RWAs as of December 2014 increased by $59.70 billion compared with December 2013, primarily due to increased risk weightings related to counterparty credit risk for derivative exposures and the inclusion of RWAs for equity investments in certain nonconsolidated entities, both resulting from the transition to the Revised Capital Framework. Market RWAs as of December 2014 decreased by $20.10 billion compared with December 2013, primarily due to a decrease in stressed VaR, reflecting reduced fixed income and equities exposures. Operational RWAs as of December 2014 increased by $97.49 billion compared with December 2013, substantially all of which was due to the transition to the Revised Capital Framework.

Bank Subsidiaries

Regulatory Capital Ratios. GS Bank USA, an FDIC-insured, New York State-chartered bank and a member of the Federal Reserve System, is supervised and regulated by the Federal Reserve Board, the FDIC, the New York State Department of Financial Services and the Consumer Financial Protection Bureau, and is subject to regulatory capital requirements that are calculated in substantially the same manner as those applicable to bank holding companies. For purposes of assessing the adequacy of its capital, GS Bank USA calculates its capital ratios in accordance with the risk-based capital and leverage requirements applicable to state member banks. Those requirements are based on the Revised Capital Framework described above. GS Bank USA is an Advanced approach banking organization under the Revised Capital Framework.

Under the regulatory framework for prompt corrective action applicable to GS Bank USA, in order to meet the quantitative requirements for being a "well-capitalized" depository institution, GS Bank USA must meet higher minimum requirements than the minimum ratios in the table below. The table below presents the minimum ratios and "well-capitalized" minimum ratios required for GS Bank USA as of December 2015.

	Minimum Ratio	"Well-capitalized" Minimum Ratio
CET1 ratio	**4.5%**	**6.5%**
Tier 1 capital ratio	**6.0%**	**8.0%**
Total capital ratio	**8.0%**	**10.0%**
Tier 1 leverage ratio	**4.0%**	**5.0%**

GS Bank USA was in compliance with its minimum capital requirements and the "well-capitalized" minimum ratios as of December 2015 and December 2014. GS Bank USA's capital levels and prompt corrective action classification are also subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors. Failure to comply with these capital requirements could result in restrictions being imposed by GS Bank USA's regulators.

As of December 2015, similar to the firm, GS Bank USA is required to calculate each of the CET1, Tier 1 capital and Total capital ratios in accordance with both the Standardized Capital Rules and Basel III Advanced Rules. The lower of each ratio calculated in accordance with the Standardized Capital Rules and Basel III Advanced Rules is the ratio against which GS Bank USA's compliance with its minimum ratio requirements is assessed. Each of the ratios calculated in accordance with the Standardized Capital Rules was lower than that calculated in accordance with the Basel III Advanced Rules and therefore the Standardized Capital ratios were the ratios that applied to GS Bank USA as of December 2015. The capital ratios that apply to GS Bank USA can change in future reporting periods as a result of these regulatory requirements.

As of December 2014, GS Bank USA was required to calculate each of the CET1, Tier 1 capital and Total capital ratios in accordance with both the Basel III Advanced Rules and Hybrid Capital Rules. The lower of each ratio calculated in accordance with the Basel III Advanced Rules and the Hybrid Capital Rules was the ratio against which GS Bank USA's compliance with its minimum ratio requirements was assessed. Each of the ratios calculated in accordance with the Hybrid Capital Rules was lower than that calculated in accordance with the Basel III Advanced Rules and therefore the Hybrid Capital ratios were the ratios that applied to GS Bank USA as of December 2014.

The table below presents the ratios for GS Bank USA calculated in accordance with both the Standardized and Basel III Advanced rules as of both December 2015 and December 2014, and with the Hybrid Capital Rules as of December 2014. While the ratios calculated in accordance with the Standardized Capital Rules were not applicable until January 2015, the December 2014 ratios are presented in the table below for comparative purposes.

	As of December	
$ in millions	**2015**	2014
Standardized		
Common Equity Tier 1	**$ 23,017**	$ 21,293
Tier 1 capital	**23,017**	21,293
Tier 2 capital	**2,311**	2,182
Total capital	**$ 25,328**	$ 23,475
RWAs	**$202,197**	$200,605
CET1 ratio	**11.4%**	10.6%
Tier 1 capital ratio	**11.4%**	10.6%
Total capital ratio	**12.5%**	11.7%
Basel III Advanced		
Common Equity Tier 1	**$ 23,017**	$ 21,293
Tier 1 capital	**23,017**	21,293
Standardized Tier 2 capital	**2,311**	2,182
Allowance for losses on loans and lending commitments	**(311)**	(182)
Tier 2 capital	**2,000**	2,000
Total capital	**$ 25,017**	$ 23,293
RWAs	**$131,059**	$141,978
CET1 ratio	**17.6%**	15.0%
Tier 1 capital ratio	**17.6%**	15.0%
Total capital ratio	**19.1%**	16.4%
Hybrid		
RWAs	**N/A**	$149,963
CET1 ratio	**N/A**	14.2%
Tier 1 capital ratio	**N/A**	14.2%
Total capital ratio	**N/A**	15.7%
Tier 1 leverage ratio	**16.4%**	17.3%

The firm's principal non-U.S. bank subsidiary, GSIB, is a wholly-owned credit institution, regulated by the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA) and is subject to minimum capital requirements. As of December 2015 and December 2014, GSIB was in compliance with all regulatory capital requirements.

Broker-Dealer Subsidiaries

U.S. Regulated Broker-Dealer Subsidiaries. The firm's U.S. regulated broker-dealer subsidiaries include GS&Co. and GSEC. GS&Co. and GSEC are registered U.S. broker-dealers and futures commission merchants, and are subject to regulatory capital requirements, including those imposed by the SEC, the U.S. Commodity Futures Trading Commission (CFTC), the Chicago Mercantile Exchange, the Financial Industry Regulatory Authority, Inc. (FINRA) and the National Futures Association. Rule 15c3-1 of the SEC and Rule 1.17 of the CFTC specify uniform minimum net capital requirements, as defined, for their registrants, and also effectively require that a significant part of the registrants' assets be kept in relatively liquid form. GS&Co. and GSEC have elected to calculate their minimum capital requirements in accordance with the "Alternative Net Capital Requirement" as permitted by Rule 15c3-1.

As of December 2015 and December 2014, GS&Co. had regulatory net capital, as defined by Rule 15c3-1, of $14.75 billion and $14.83 billion, respectively, which exceeded the amount required by $12.37 billion and $12.46 billion, respectively. As of December 2015 and December 2014, GSEC had regulatory net capital, as defined by Rule 15c3-1, of $1.71 billion and $1.67 billion, respectively, which exceeded the amount required by $1.59 billion and $1.53 billion, respectively.

In addition to its alternative minimum net capital requirements, GS&Co. is also required to hold tentative net capital in excess of $1 billion and net capital in excess of $500 million in accordance with the market and credit risk standards of Appendix E of Rule 15c3-1. GS&Co. is also required to notify the SEC in the event that its tentative net capital is less than $5 billion. As of December 2015 and December 2014, GS&Co. had tentative net capital and net capital in excess of both the minimum and the notification requirements.

Non-U.S. Regulated Broker-Dealer Subsidiaries. The firm's principal non-U.S. regulated broker-dealer subsidiaries include Goldman Sachs International (GSI) and Goldman Sachs Japan Co., Ltd. (GSJCL). GSI, the firm's U.K. broker-dealer, is regulated by the PRA and the FCA. GSJCL, the firm's Japanese broker-dealer, is regulated by Japan's Financial Services Agency. These and certain other non-U.S. subsidiaries of the firm are also subject to capital adequacy requirements promulgated by authorities of the countries in which they operate. As of December 2015 and December 2014, these subsidiaries were in compliance with their local capital adequacy requirements.

Restrictions on Payments

Group Inc.'s ability to withdraw capital from its regulated subsidiaries is limited by minimum equity capital requirements applicable to those subsidiaries, provisions of applicable law and regulations and other regulatory restrictions that limit the ability of those subsidiaries to declare and pay dividends without prior regulatory approval even if the relevant subsidiary would satisfy the equity capital requirements applicable to it after giving effect to the dividend. For example, the Federal Reserve Board, the FDIC and the New York State Department of Financial Services have authority to prohibit or to limit the payment of dividends by the banking organizations they supervise (including GS Bank USA) if, in the relevant regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in the light of the financial condition of the banking organization.

As of December 2015 and December 2014, Group Inc. was required to maintain $48.09 billion and $33.62 billion, respectively, of minimum equity capital in its regulated subsidiaries in order to satisfy the regulatory requirements of such subsidiaries. The increased requirement is primarily a result of higher regulatory capital requirements in GS Bank USA, reflecting the implementation of the Standardized Capital Rules.

Other

The deposits of GS Bank USA are insured by the FDIC to the extent provided by law. The Federal Reserve Board requires that GS Bank USA maintain cash reserves with the Federal Reserve Bank of New York. The amount deposited by GS Bank USA held at the Federal Reserve Bank of New York was $49.36 billion and $38.68 billion as of December 2015 and December 2014, respectively, which exceeded required reserve amounts by $49.25 billion and $38.57 billion as of December 2015 and December 2014, respectively.

Note 21.

Earnings Per Common Share

Basic earnings per common share (EPS) is calculated by dividing net earnings applicable to common shareholders by the weighted average number of common shares outstanding. Common shares outstanding includes common stock and RSUs for which no future service is required as a condition to the delivery of the underlying common stock. Diluted EPS includes the determinants of basic EPS and, in addition, reflects the dilutive effect of the common stock deliverable for stock options, warrants and for RSUs for which future service is required as a condition to the delivery of the underlying common stock.

The table below presents the computations of basic and diluted EPS.

	Year Ended December		
in millions, except per share amounts	**2015**	2014	2013
Numerator for basic and diluted EPS — net earnings applicable to common shareholders	**$5,568**	$8,077	$7,726
Denominator for basic EPS — weighted average number of common shares	**448.9**	458.9	471.3
Effect of dilutive securities:			
RSUs	**5.3**	6.1	7.2
Stock options and warrants	**4.4**	8.2	21.1
Dilutive potential common shares	**9.7**	14.3	28.3
Denominator for diluted EPS — weighted average number of common shares and dilutive potential common shares	**458.6**	473.2	499.6
Basic EPS	**$12.35**	$17.55	$16.34
Diluted EPS	**12.14**	17.07	15.46

In the table above, unvested share-based awards that have non-forfeitable rights to dividends or dividend equivalents are treated as a separate class of securities in calculating EPS. The impact of applying this methodology was a reduction in basic EPS of $0.05 for 2015, 2014 and 2013.

The diluted EPS computations in the table above do not include antidilutive RSUs and common shares underlying antidilutive stock options of 6.0 million for 2015, 2014 and 2013.

Note 22.

Transactions with Affiliated Funds

The firm has formed numerous nonconsolidated investment funds with third-party investors. As the firm generally acts as the investment manager for these funds, it is entitled to receive management fees and, in certain cases, advisory fees or incentive fees from these funds. Additionally, the firm invests alongside the third-party investors in certain funds.

The tables below present fees earned from affiliated funds, fees receivable from affiliated funds and the aggregate carrying value of the firm's interests in affiliated funds.

	Year Ended December		
$ in millions	**2015**	2014	2013
Fees earned from funds	**$3,293**	$3,232	$2,897

	As of December	
$ in millions	**2015**	2014
Fees receivable from funds	**$ 599**	$ 724
Aggregate carrying value of interests in funds	**7,768**	9,099

As of December 2015 and December 2014, the firm had outstanding guarantees on behalf of its funds of $300 million and $304 million, respectively. This amount primarily related to a guarantee that the firm has voluntarily provided in connection with a financing agreement with a third-party lender executed by one of the firm's real estate funds that is not covered by the Volcker Rule. As of December 2015 and December 2014, the firm had no outstanding loans or commitments to extend credit to affiliated funds.

The Volcker Rule restricts the firm from providing financial support to covered funds (as defined in the rule) after the expiration of any applicable conformance period. As a general matter, in the ordinary course of business, the firm does not expect to provide additional voluntary financial support to any covered funds but may choose to do so with respect to funds that are not subject to the Volcker Rule; however, in the event that such support is provided, the amount is not expected to be material.

In addition, in the ordinary course of business, the firm may also engage in other activities with its affiliated funds including, among others, securities lending, trade execution, market making, custody, and acquisition and bridge financing. See Note 18 for the firm's investment commitments related to these funds.

Note 23.
Interest Income and Interest Expense

Interest is recorded over the life of the instrument on an accrual basis based on contractual interest rates. The table below presents the firm's sources of interest income and interest expense.

	Year Ended December		
$ in millions	**2015**	2014	2013
Interest income			
Deposits with banks	**$ 161**	$ 164	$ 186
Securities borrowed, securities purchased under agreements to resell and federal funds sold [1]	**10**	(81)	43
Financial instruments owned, at fair value	**5,842**	7,452	8,159
Loans receivable	**1,191**	708	296
Other interest [2]	**1,248**	1,361	1,376
Total interest income	**8,452**	9,604	10,060
Interest expense			
Deposits	**408**	333	387
Securities loaned and securities sold under agreements to repurchase	**330**	431	576
Financial instruments sold, but not yet purchased, at fair value	**1,319**	1,741	2,054
Short-term secured and unsecured borrowings	**429**	447	394
Long-term secured and unsecured borrowings	**3,878**	3,460	3,752
Other interest [3]	**(976)**	(855)	(495)
Total interest expense	**5,388**	5,557	6,668
Net interest income	**$3,064**	$4,047	$ 3,392

1. Includes rebates paid and interest income on securities borrowed.
2. Includes interest income on customer debit balances and other interest-earning assets.
3. Includes rebates received on other interest-bearing liabilities and interest expense on customer credit balances.

Note 24.
Income Taxes

Provision for Income Taxes

Income taxes are provided for using the asset and liability method under which deferred tax assets and liabilities are recognized for temporary differences between the financial reporting and tax bases of assets and liabilities. The firm reports interest expense related to income tax matters in "Provision for taxes" and income tax penalties in "Other expenses."

The tables below present the components of the provision for taxes and a reconciliation of the U.S. federal statutory income tax rate to the firm's effective income tax rate.

	Year Ended December		
$ in millions	**2015**	2014	2013
Current taxes			
U.S. federal	**$1,116**	$1,908	$2,589
State and local	**(12)** [1]	576	466
Non-U.S.	**1,166**	901	613
Total current tax expense	**2,270**	3,385	3,668
Deferred taxes			
U.S. federal	**397**	190	(188)
State and local	**62**	38	67
Non-U.S.	**(34)**	267	150
Total deferred tax expense	**425**	495	29
Provision for taxes	**$2,695**	$3,880	$3,697

1. Includes the impact of a settlement of state and local examinations.

	Year Ended December		
	2015	2014	2013
U.S. federal statutory income tax rate	**35.0%**	35.0%	35.0%
State and local taxes, net of U.S. federal income tax effects	**0.3%** [2]	3.2%	4.1%
Tax credits	**(1.7)%**	(1.1)%	(1.0)%
Non-U.S. operations [1]	**(12.1)%**	(5.8)%	(5.6)%
Tax-exempt income, including dividends	**(0.7)%**	(0.3)%	(0.5)%
Non-deductible legal expenses	**10.2%** [3]	—	—
Other	**(0.3)%**	0.4%	(0.5)%
Effective income tax rate	**30.7%**	31.4%	31.5%

1. Includes the impact of permanently reinvested earnings.
2. Includes the impact of a settlement of state and local examinations.
3. Substantially all of the non-deductible legal expenses relate to provisions for the agreement in principle with the RMBS Working Group. See Note 27 for further information about this agreement in principle.

Deferred Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities. These temporary differences result in taxable or deductible amounts in future years and are measured using the tax rates and laws that will be in effect when such differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets to the amount that more likely than not will be realized and primarily relate to the ability to utilize losses in various tax jurisdictions. Tax assets and liabilities are presented as a component of "Other assets" and "Other liabilities and accrued expenses," respectively.

The table below presents the significant components of deferred tax assets and liabilities, excluding the impact of netting within tax jurisdictions.

	As of December	
$ in millions	**2015**	2014
Deferred tax assets		
Compensation and benefits	**$2,744**	$3,032
ASC 740 asset related to unrecognized tax benefits	**197**	172
Non-U.S. operations	**1,200**	1,418
Net operating losses	**426**	336
Occupancy-related	**80**	78
Other comprehensive income-related	**521**	277
Other, net	**836**	545
Subtotal	**6,004**	5,858
Valuation allowance	**(73)**	(64)
Total deferred tax assets	**$5,931**	$5,794
Depreciation and amortization	**$1,254**	$1,176
Unrealized gains	**853**	406
Total deferred tax liabilities	**$2,107**	$1,582

The firm has recorded deferred tax assets of $426 million and $336 million as of December 2015 and December 2014, respectively, in connection with U.S. federal, state and local and foreign net operating loss carryforwards. The firm also recorded a valuation allowance of $24 million and $26 million as of December 2015 and December 2014, respectively, related to these net operating loss carryforwards.

As of December 2015, the U.S. federal and foreign net operating loss carryforwards were $106 million and $1.48 billion, respectively. If not utilized, the U.S. federal net operating loss carryforward will begin to expire in 2016. The foreign net operating loss carryforwards can be carried forward indefinitely. State and local net operating loss carryforwards of $798 million will begin to expire in 2016. If these carryforwards expire, they will not have a material impact on the firm's results of operations. The firm had no foreign tax credit carryforwards and no related net deferred income tax assets as of December 2015 and December 2014.

The firm had no capital loss carryforwards and no related net deferred income tax assets as of December 2015 and December 2014.

The valuation allowance increased by $9 million during 2015 and decreased by $119 million during 2014. The increase in 2015 was primarily due to an increase in deferred tax assets from which the firm does not expect to realize any benefit. The decrease in 2014 was primarily due to a decrease in deferred tax assets from which the firm does not expect to realize any benefit.

The firm permanently reinvests eligible earnings of certain foreign subsidiaries and, accordingly, does not accrue any U.S. income taxes that would arise if such earnings were repatriated. As of December 2015 and December 2014, this policy resulted in an unrecognized net deferred tax liability of $5.66 billion and $4.66 billion, respectively, attributable to reinvested earnings of $28.55 billion and $24.88 billion, respectively.

Unrecognized Tax Benefits

The firm recognizes tax positions in the financial statements only when it is more likely than not that the position will be sustained on examination by the relevant taxing authority based on the technical merits of the position. A position that meets this standard is measured at the largest amount of benefit that will more likely than not be realized on settlement. A liability is established for differences between positions taken in a tax return and amounts recognized in the financial statements.

The accrued liability for interest expense related to income tax matters and income tax penalties was $101 million as of both December 2015 and December 2014. The firm recognized interest expense and income tax penalties of $17 million, $45 million and $53 million for 2015, 2014 and 2013, respectively. It is reasonably possible that unrecognized tax benefits could change significantly during the twelve months subsequent to December 2015 due to potential audit settlements. However, at this time it is not possible to estimate any potential change.

The table below presents the changes in the liability for unrecognized tax benefits. This liability is included in "Other liabilities and accrued expenses." See Note 17 for further information.

	As of December		
$ in millions	**2015**	2014	2013
Balance, beginning of year	**$ 871**	$ 1,765	$2,237
Increases based on tax positions related to the current year	**65**	204	144
Increases based on tax positions related to prior years	**158**	263	149
Decreases based on tax positions related to prior years	**(205)**	(241)	(471)
Decreases related to settlements	**(87)**	(1,112)	(299)
Exchange rate fluctuations	**23**	(8)	5
Balance, end of year	**$ 825**	$ 871	$1,765
Related deferred income tax asset	**197**	172	475
Net unrecognized tax benefit	**$ 628**	$ 699	$1,290

Regulatory Tax Examinations

The firm is subject to examination by the U.S. Internal Revenue Service (IRS) and other taxing authorities in jurisdictions where the firm has significant business operations, such as the United Kingdom, Japan, Hong Kong, Korea and various states, such as New York. The tax years under examination vary by jurisdiction. The firm does not expect completion of these audits to have a material impact on the firm's financial condition but it may be material to operating results for a particular period, depending, in part, on the operating results for that period.

The table below presents the earliest tax years that remain subject to examination by major jurisdiction.

Jurisdiction	As of December 2015
U.S. Federal	**2008**
New York State and City	**2007**
United Kingdom	**2014**
Japan	**2010**
Hong Kong	**2006**
Korea	**2010**

The U.S. Federal examinations of fiscal 2008 through calendar 2010 have been finalized, but the settlement is subject to review by the Joint Committee of Taxation. The examinations of 2011 and 2012 began in 2013.

The firm has been accepted into the Compliance Assurance Process program by the IRS for the 2013, 2014, 2015 and 2016 tax years. This program allows the firm to work with the IRS to identify and resolve potential U.S. federal tax issues before the filing of tax returns. The 2013 tax year is the first year that was examined under the program, and 2013 and 2014 remain subject to post-filing review.

New York State and City examinations of fiscal 2007 through calendar 2010 began in 2013. New York State and City examinations of 2011 through 2014 began in 2015.

All years including and subsequent to the years in the table above remain open to examination by the taxing authorities. The firm believes that the liability for unrecognized tax benefits it has established is adequate in relation to the potential for additional assessments.

Note 25.

Business Segments

The firm reports its activities in the following four business segments: Investment Banking, Institutional Client Services, Investing & Lending and Investment Management.

Basis of Presentation

In reporting segments, certain of the firm's business lines have been aggregated where they have similar economic characteristics and are similar in each of the following areas: (i) the nature of the services they provide, (ii) their methods of distribution, (iii) the types of clients they serve and (iv) the regulatory environments in which they operate.

The cost drivers of the firm taken as a whole — compensation, headcount and levels of business activity — are broadly similar in each of the firm's business segments. Compensation and benefits expenses in the firm's segments reflect, among other factors, the overall performance of the firm as well as the performance of individual businesses. Consequently, pre-tax margins in one segment of the firm's business may be significantly affected by the performance of the firm's other business segments.

The firm allocates assets (including allocations of global core liquid assets and cash, secured client financing and other assets), revenues and expenses among the four business segments. Due to the integrated nature of these segments, estimates and judgments are made in allocating certain assets, revenues and expenses. The allocation process is based on the manner in which management currently views the performance of the segments. Transactions between segments are based on specific criteria or approximate third-party rates. Total operating expenses include charitable contributions that have not been allocated to individual business segments.

Management believes that the information in the table below provides a reasonable representation of each segment's contribution to consolidated pre-tax earnings and total assets.

	Year Ended or as of December		
$ in millions	**2015**	2014	2013
Investment Banking			
Financial Advisory	**$ 3,470**	$ 2,474	$ 1,978
Equity underwriting	**1,546**	1,750	1,659
Debt underwriting	**2,011**	2,240	2,367
Total Underwriting	**3,557**	3,990	4,026
Total net revenues	**7,027**	6,464	6,004
Operating expenses	**3,713**	3,688	3,479
Pre-tax earnings	**$ 3,314**	$ 2,776	$ 2,525
Segment assets	**$ 2,564**	$ 1,844	$ 1,900
Institutional Client Services			
Fixed Income, Currency and Commodities Client Execution	**$ 7,322**	$ 8,461	$ 8,651
Equities client execution	**3,028**	2,079	2,594
Commissions and fees	**3,156**	3,153	3,103
Securities services	**1,645**	1,504	1,373
Total Equities	**7,829**	6,736	7,070
Total net revenues	**15,151**	15,197	15,721 [4]
Operating expenses	**13,938**	10,880	11,792
Pre-tax earnings	**$ 1,213**	$ 4,317	$ 3,929
Segment assets	**$663,394**	$695,674	$787,896
Investing & Lending			
Equity securities	**$ 3,781**	$ 4,579	$ 4,974
Debt securities and loans	**1,655**	2,246	2,044
Total net revenues [1]	**5,436**	6,825	7,018
Operating expenses	**2,402**	2,819	2,686
Pre-tax earnings	**$ 3,034**	$ 4,006	$ 4,332
Segment assets	**$179,428**	$143,790	$109,250
Investment Management			
Management and other fees	**$ 4,887**	$ 4,800	$ 4,386
Incentive fees	**780**	776	662
Transaction revenues	**539**	466	415
Total net revenues	**6,206**	6,042	5,463
Operating expenses	**4,841**	4,647	4,357
Pre-tax earnings	**$ 1,365**	$ 1,395	$ 1,106
Segment assets	**$ 16,009**	$ 14,534	$ 12,078
Total net revenues	**$ 33,820**	$ 34,528	$ 34,206
Total operating expenses [2, 3]	**25,042**	22,171	22,469
Total pre-tax earnings	**$ 8,778**	$ 12,357	$ 11,737
Total assets	**$861,395**	$855,842	$911,124

1. Net revenues related to the firm's consolidated investments, previously reported in other net revenues within Investing & Lending, are now reported in equity securities and debt securities and loans, as results from these activities ($391 million for 2015) are no longer significant principally due to the sale of Metro in the fourth quarter of 2014. Reclassifications have been made to previously reported amounts to conform to the current presentation.
2. Includes net provisions for litigation and regulatory proceedings of $4.01 billion (of which $3.37 billion was related to the agreement in principle with the RMBS Working Group) for 2015, $754 million for 2014 and $962 million for 2013. See Note 27 for further information about this agreement in principle.
3. Includes charitable contributions that have not been allocated to the firm's segments of $148 million for 2015, $137 million for 2014 and $155 million for 2013.
4. Includes $37 million of realized gains on available-for-sale securities.

The segment information presented in the table above is prepared according to the following methodologies:

- Revenues and expenses directly associated with each segment are included in determining pre-tax earnings.
- Net revenues in the firm's segments include allocations of interest income and interest expense to specific securities, commodities and other positions in relation to the cash generated by, or funding requirements of, such underlying positions. Net interest is included in segment net revenues as it is consistent with the way in which management assesses segment performance.
- Overhead expenses not directly allocable to specific segments are allocated ratably based on direct segment expenses.

The table below presents the amounts of net interest income by segment included in net revenues.

	Year Ended December		
$ in millions	**2015**	2014	2013
Investment Banking	**$ —**	$ —	$ —
Institutional Client Services	**2,471**	3,679	3,250
Investing & Lending	**418**	237	25
Investment Management	**175**	131	117
Total net interest income	**$3,064**	$4,047	$3,392

The table below presents the amounts of depreciation and amortization expense by segment included in pre-tax earnings.

	Year Ended December		
$ in millions	**2015**	2014	2013
Investment Banking	**$ 123**	$ 135	$ 144
Institutional Client Services	**462**	525	571
Investing & Lending	**253**	530	441
Investment Management	**153**	147	166
Total depreciation and amortization	**$ 991**	$1,337	$1,322

Geographic Information

Due to the highly integrated nature of international financial markets, the firm manages its businesses based on the profitability of the enterprise as a whole. The methodology for allocating profitability to geographic regions is dependent on estimates and management judgment because a significant portion of the firm's activities require cross-border coordination in order to facilitate the needs of the firm's clients.

Geographic results are generally allocated as follows:

- Investment Banking: location of the client and investment banking team.
- Institutional Client Services: Fixed Income, Currency and Commodities Client Execution, and Equities (excluding Securities Services): location of the market-making desk; Securities Services: location of the primary market for the underlying security.
- Investing & Lending: Investing: location of the investment; Lending: location of the client.
- Investment Management: location of the sales team.

The table below presents the total net revenues, pre-tax earnings and net earnings of the firm by geographic region allocated based on the methodology referred to above, as well as the percentage of total net revenues, pre-tax earnings and net earnings (excluding Corporate) for each geographic region. In the table below, Asia includes Australia and New Zealand.

	Year Ended December					
$ in millions	**2015**		2014		2013	
Net revenues						
Americas	**$19,202**	**56%**	$20,062	58%	$19,858	58%
Europe, Middle East and Africa	**8,981**	**27%**	9,057	26%	8,828	26%
Asia	**5,637**	**17%**	5,409	16%	5,520	16%
Total net revenues	**$33,820**	**100%**	$34,528	100%	$34,206	100%
Pre-tax earnings						
Americas	**$ 3,359**[2]	**37%**	$ 7,144	57%	$ 6,794	57%
Europe, Middle East and Africa	**3,364**	**38%**	3,338	27%	3,230	27%
Asia	**2,203**	**25%**	2,012	16%	1,868	16%
Subtotal	**8,926**	**100%**	12,494	100%	11,892	100%
Corporate [1]	**(148)**		(137)		(155)	
Total pre-tax earnings	**$ 8,778**		$12,357		$11,737	
Net earnings						
Americas	**$ 1,587**	**26%**	$ 4,558	53%	$ 4,425	54%
Europe, Middle East and Africa	**2,914**	**47%**	2,576	30%	2,377	29%
Asia	**1,686**	**27%**	1,434	17%	1,345	17%
Subtotal	**6,187**	**100%**	8,568	100%	8,147	100%
Corporate [1]	**(104)**		(91)		(107)	
Total net earnings	**$ 6,083**		$ 8,477		$ 8,040	

1. Includes charitable contributions that have not been allocated to the firm's geographic regions.
2. Includes provisions of $3.37 billion recorded during 2015 for the agreement in principle with the RMBS Working Group. See Note 27 for further information about this agreement in principle.

Note 26.

Credit Concentrations

Credit concentrations may arise from market making, client facilitation, investing, underwriting, lending and collateralized transactions and may be impacted by changes in economic, industry or political factors. The firm seeks to mitigate credit risk by actively monitoring exposures and obtaining collateral from counterparties as deemed appropriate.

While the firm's activities expose it to many different industries and counterparties, the firm routinely executes a high volume of transactions with asset managers, investment funds, commercial banks, brokers and dealers, clearing houses and exchanges, which results in significant credit concentrations.

In the ordinary course of business, the firm may also be subject to a concentration of credit risk to a particular counterparty, borrower or issuer, including sovereign issuers, or to a particular clearing house or exchange.

The table below presents the credit concentrations in cash instruments held by the firm.

	As of December	
$ in millions	**2015**	2014
U.S. government and federal agency obligations [1]	**$63,844**	$69,170
% of total assets	**7.4%**	8.1%
Non-U.S. government and agency obligations [1]	**$31,772**	$37,059
% of total assets	**3.7%**	4.3%

1. Included in "Financial instruments owned, at fair value" and "Cash and securities segregated for regulatory and other purposes."

As of December 2015 and December 2014, the firm did not have credit exposure to any other counterparty that exceeded 2% of total assets.

To reduce credit exposures, the firm may enter into agreements with counterparties that permit the firm to offset receivables and payables with such counterparties and/or enable the firm to obtain collateral on an upfront or contingent basis. Collateral obtained by the firm related to derivative assets is principally cash and is held by the firm or a third-party custodian. Collateral obtained by the firm related to resale agreements and securities borrowed transactions is primarily U.S. government and federal agency obligations and non-U.S. government and agency obligations. See Note 10 for further information about collateralized agreements and financings.

The table below presents U.S. government and federal agency obligations, and non-U.S. government and agency obligations, that collateralize resale agreements and securities borrowed transactions (including those in "Cash and securities segregated for regulatory and other purposes"). Because the firm's primary credit exposure on such transactions is to the counterparty to the transaction, the firm would be exposed to the collateral issuer only in the event of counterparty default.

	As of December	
$ in millions	**2015**	2014
U.S. government and federal agency obligations	**$107,198**	$103,263
Non-U.S. government and agency obligations [1]	**74,326**	71,302

1. Principally consists of securities issued by the governments of France, the United Kingdom, Japan and Germany.

Note 27.

Legal Proceedings

The firm is involved in a number of judicial, regulatory and arbitration proceedings (including those described below) concerning matters arising in connection with the conduct of the firm's businesses. Many of these proceedings are in early stages, and many of these cases seek an indeterminate amount of damages.

Under ASC 450, an event is "reasonably possible" if "the chance of the future event or events occurring is more than remote but less than likely" and an event is "remote" if "the chance of the future event or events occurring is slight." Thus, references to the upper end of the range of reasonably possible loss for cases in which the firm is able to estimate a range of reasonably possible loss mean the upper end of the range of loss for cases for which the firm believes the risk of loss is more than slight.

With respect to matters described below for which management has been able to estimate a range of reasonably possible loss where (i) actual or potential plaintiffs have claimed an amount of money damages, (ii) the firm is being, or threatened to be, sued by purchasers in an underwriting and is not being indemnified by a party that the firm believes will pay any judgment, or (iii) the purchasers are demanding that the firm repurchase securities, management has estimated the upper end of the range of reasonably possible loss as being equal to (a) in the case of (i), the amount of money damages claimed, (b) in the case of (ii), the difference between the initial sales price of the securities that the firm sold in such underwriting and the estimated lowest subsequent price of such securities and (c) in the case of (iii), the price that purchasers paid for the securities less the estimated value, if any, as of December 2015 of the relevant securities, in each of cases (i), (ii) and (iii), taking into account any factors believed to be relevant to the particular matter or matters of that type. As of the date hereof, the firm has estimated the upper end of the range of reasonably possible aggregate loss for such matters and for any other matters described below where management has been able to estimate a range of reasonably possible aggregate loss to be approximately $2.0 billion in excess of the aggregate reserves for such matters.

Management is generally unable to estimate a range of reasonably possible loss for matters other than those included in the estimate above, including where (i) actual or potential plaintiffs have not claimed an amount of money damages, except in those instances where management can otherwise determine an appropriate amount, (ii) matters are in early stages, (iii) matters relate to regulatory investigations or reviews, except in those instances where management can otherwise determine an appropriate amount, (iv) there is uncertainty as to the likelihood of a class being certified or the ultimate size of the class, (v) there is uncertainty as to the outcome of pending appeals or motions, (vi) there are significant factual issues to be resolved, and/or (vii) there are novel legal issues presented. For example, the firm's potential liabilities with respect to future mortgage-related "put-back" claims described below may ultimately result in an increase in the firm's liabilities, but are not included in management's estimate of reasonably possible loss. As another example, the firm's potential liabilities with respect to the investigations and reviews described below under "Regulatory Investigations and Reviews and Related Litigation" also generally are not included in management's estimate of reasonably possible loss. However, management does not believe, based on currently available information, that the outcomes of such other matters will have a material adverse effect on the firm's financial condition, though the outcomes could be material to the firm's operating results for any particular period, depending, in part, upon the operating results for such period. See Note 18 for further information about mortgage-related contingencies.

Mortgage-Related Matters. Beginning in April 2010, a number of purported securities law class actions were filed in the U.S. District Court for the Southern District of New York challenging the adequacy of Group Inc.'s public disclosure of, among other things, the firm's activities in the CDO market, the firm's conflict of interest management, and the SEC investigation that led to GS&Co. entering into a consent agreement with the SEC, settling all claims made against GS&Co. by the SEC in connection with the ABACUS 2007-AC1 CDO offering (ABACUS 2007-AC1 transaction), pursuant to which GS&Co. paid $550 million of disgorgement and civil penalties. The consolidated amended complaint filed on July 25, 2011, which names as defendants Group Inc. and certain officers and employees of Group Inc. and its affiliates, generally alleges violations of Sections 10(b) and 20(a) of the Exchange Act and seeks unspecified damages. On June 21, 2012, the district court dismissed the claims based on Group Inc.'s not disclosing that it had received a "Wells" notice from the staff of the SEC related to the ABACUS 2007-AC1 transaction, but permitted the plaintiffs' other claims to proceed. The district court granted class certification on September 24, 2015, but the appellate court granted defendants' petition for review on January 26, 2016. On February 1, 2016, the district court stayed proceedings in the district court pending the appellate court's decision.

In June 2012, the Board received a demand from a shareholder that the Board investigate and take action relating to the firm's mortgage-related activities and to stock sales by certain directors and executives of the firm. On February 15, 2013, this shareholder filed a putative shareholder derivative action in New York Supreme Court, New York County, against Group Inc. and certain current or former directors and employees, based on these activities and stock sales. The derivative complaint includes allegations of breach of fiduciary duty, unjust enrichment, abuse of control, gross mismanagement and corporate waste, and seeks, among other things, unspecified monetary damages, disgorgement of profits and certain corporate governance and disclosure reforms. On May 28, 2013, Group Inc. informed the shareholder that the Board completed its investigation and determined to refuse the demand. On June 20, 2013, the shareholder made a books and records demand requesting materials relating to the Board's determination. The parties have agreed to stay proceedings in the putative derivative action pending resolution of the books and records demand.

In addition, the Board has received books and records demands from several shareholders for materials relating to, among other subjects, the firm's mortgage servicing and foreclosure activities, participation in federal programs providing assistance to financial institutions and homeowners, loan sales to Fannie Mae and Freddie Mac, mortgage-related activities and conflicts management.

GS&Co., Goldman Sachs Mortgage Company and GS Mortgage Securities Corp. and three current or former Goldman Sachs employees are defendants in a putative class action commenced on December 11, 2008 in the U.S. District Court for the Southern District of New York brought on behalf of purchasers of various mortgage pass-through certificates and asset-backed certificates issued by various securitization trusts established by the firm and underwritten by GS&Co. in 2007. On June 3, 2010, another investor filed a separate putative class action asserting substantively similar allegations relating to one other offering and thereafter moved to further amend its amended complaint to add claims with respect to two additional offerings. On December 30, 2015, the district court preliminarily approved a settlement covering both actions. The firm has paid the full amount of the proposed settlement into an escrow account.

On September 30, 2010, a class action was filed in the U.S. District Court for the Southern District of New York against GS&Co., Group Inc. and two former GS&Co. employees on behalf of investors in $823 million of notes issued in 2006 and 2007 by two synthetic CDOs (Hudson Mezzanine 2006-1 and 2006-2). On November 2, 2015, the parties reached a settlement in principle, subject to documentation and court approval. The firm has reserved the full amount of the proposed settlement.

Various alleged purchasers of, and counterparties and providers of credit enhancement involved in transactions relating to, mortgage pass-through certificates, CDOs and other mortgage-related products (including ACA Financial Guaranty Corp., Aozora Bank, Ltd., Basis Yield Alpha Fund (Master), the Charles Schwab Corporation, CIFG Assurance of North America, Inc., the FDIC (as receiver for Guaranty Bank), IKB Deutsche Industriebank AG, Massachusetts Mutual Life Insurance Company, Texas County & District Retirement System and the Tennessee Consolidated Retirement System) have filed complaints in state and federal court against firm affiliates, generally alleging that the offering documents for the securities that they purchased contained untrue statements of material fact and material omissions and generally seeking rescission and/or damages. Certain of these complaints allege fraud and seek punitive damages. Certain of these complaints also name other firms as defendants.

Norges Bank Investment Management and Selective Insurance Company have threatened to assert claims of various types against the firm in connection with the sale of mortgage-related securities. The firm has entered into agreements with one of these entities to toll the relevant statute of limitations.

As of the date hereof, the aggregate amount of mortgage-related securities sold to plaintiffs in active and threatened cases described in the preceding two paragraphs where those plaintiffs are seeking rescission of such securities was approximately $3.3 billion (which does not reflect adjustment for any subsequent paydowns or distributions or any residual value of such securities, statutory interest or any other adjustments that may be claimed). This amount does not include the potential claims by these or other purchasers in the same or other mortgage-related offerings that have not been described above, or claims that have been dismissed.

The firm has entered into agreements with Deutsche Bank National Trust Company and U.S. Bank National Association to toll the relevant statute of limitations with respect to claims for repurchase of residential mortgage loans based on alleged breaches of representations related to $11.1 billion original notional face amount of securitizations issued by trusts for which they act as trustees.

Group Inc., Litton Loan Servicing LP (Litton), Ocwen Financial Corporation and Arrow Corporate Member Holdings LLC (Arrow), a former subsidiary of Group Inc., are defendants in a putative class action pending since January 23, 2013 in the U.S. District Court for the Southern District of New York generally challenging the procurement manner and scope of "force-placed" hazard insurance arranged by Litton when homeowners failed to arrange for insurance as required by their mortgages. The complaint asserts claims for breach of contract, breach of fiduciary duty, misappropriation, conversion, unjust enrichment and violation of Florida unfair practices law, and seeks unspecified compensatory and punitive damages as well as declaratory and injunctive relief. An amended complaint, filed on November 19, 2013, added an additional plaintiff and RICO claims. On September 29, 2014, the court denied without prejudice and with leave to renew at a later date Group Inc.'s motion to sever the claims against it and certain other defendants. On February 2, 2016, the defendants' motion to dismiss the action as preempted by the "filed-rate doctrine" under a recent Second Circuit decision was granted with respect to certain of the plaintiffs. On January 15, 2016, Group Inc. and Arrow were added as defendants to a putative class action in the U.S. District Court for the Northern District of California based on substantially similar allegations, asserting RICO claims and violations of California's Unfair Competition Law, and seeking similar relief. On February 10, 2016, Group Inc., Litton and Arrow and the plaintiffs in the action pending in the Southern District of New York reached a settlement in principle, subject to documentation and court approval, which would resolve the remaining claims in both actions.

On January 14, 2016, the firm announced an agreement in principle, subject to definitive documentation, to resolve the ongoing investigation of the Residential Mortgage-Backed Securities Working Group of the U.S. Financial Fraud Enforcement Task Force. The agreement in principle will resolve actual and potential civil claims by the U.S. Department of Justice, the New York and Illinois Attorneys General, the National Credit Union Administration (as conservator for several failed credit unions) and the Federal Home Loan Banks of Chicago and Seattle, relating to the firm's securitization, underwriting and sale of residential mortgage-backed securities from 2005 to 2007. Under the terms of the agreement in principle, the firm will pay a $2.39 billion civil monetary penalty, make $875 million in cash payments and provide $1.80 billion in consumer relief. The consumer relief will be in the form of principal forgiveness for underwater homeowners and distressed borrowers; financing for construction, rehabilitation and preservation of affordable housing; and support for debt restructuring, foreclosure prevention and housing quality improvement programs, as well as land banks. The firm has established a reserve for its estimated obligations under the agreement in principle. See also "Regulatory Investigations and Reviews and Related Litigation" below. The firm has also received, and continues to receive, requests for information and/or subpoenas from, and is engaged in discussions with, federal, state and local regulators and law enforcement authorities as part of inquiries or investigations relating to the mortgage-related securitization process, subprime mortgages, CDOs, synthetic mortgage-related products, sales communications and particular transactions involving these products, and servicing and foreclosure activities, which may subject the firm to actions, including litigation, penalties and fines.

The firm may be the subject of additional putative shareholder derivative actions, purported class actions, rescission and "put-back" claims and other litigation, additional investor and shareholder demands, and additional regulatory and other investigations and actions with respect to mortgage-related offerings, loan sales, CDOs, and servicing and foreclosure activities. See Note 18 for information regarding mortgage-related contingencies not described in this Note 27.

GT Advanced Technologies Securities Litigation. GS&Co. is among the underwriters named as defendants in several putative securities class actions filed in October 2014 in the U.S. District Court for the District of New Hampshire. In addition to the underwriters, the defendants include certain directors and officers of GT Advanced Technologies Inc. (GT Advanced Technologies). As to the underwriters, the complaints generally allege misstatements and omissions in connection with the December 2013 offerings by GT Advanced Technologies of approximately $86 million of common stock and $214 million principal amount of convertible senior notes, assert claims under the federal securities laws, and seek compensatory damages in an unspecified amount and rescission. On July 20, 2015, the plaintiffs filed a consolidated amended complaint. On October 7, 2015, the defendants moved to dismiss. GS&Co. underwrote 3,479,769 shares of common stock and $75 million principal amount of notes for an aggregate offering price of approximately $105 million. On October 6, 2014, GT Advanced Technologies filed for Chapter 11 bankruptcy.

FireEye Securities Litigation. GS&Co. is among the underwriters named as defendants in several putative securities class actions, filed beginning in June 2014 in the California Superior Court, County of Santa Clara. In addition to the underwriters, the defendants include FireEye, Inc. (FireEye) and certain of its directors and officers. The complaints generally allege misstatements and omissions in connection with the offering materials for the March 2014 offering of approximately $1.15 billion of FireEye common stock, assert claims under the federal securities laws, and seek compensatory damages in an unspecified amount and rescission. On August 11, 2015, the court overruled the defendants' demurrers, which sought to have the consolidated amended complaint dismissed. On November 16, 2015, plaintiffs moved for class certification. On January 6, 2016, FireEye and its director and officer defendants filed a motion for judgment on the pleadings for lack of subject matter jurisdiction. GS&Co. underwrote 2,100,000 shares for a total offering price of approximately $172 million.

Cobalt International Energy Securities Litigation. Cobalt International Energy, Inc. (Cobalt), certain of its officers and directors (including employees of affiliates of Group Inc. who served as directors of Cobalt), affiliates of shareholders of Cobalt (including Group Inc.) and underwriters (including GS&Co.) for certain offerings of Cobalt's securities are defendants in a putative securities class action filed on November 30, 2014 in the U.S. District Court for the Southern District of Texas. The consolidated amended complaint, filed on May 1, 2015, asserts claims under the federal securities laws, seeks compensatory and rescissory damages in unspecified amounts and alleges material misstatements and omissions concerning Cobalt in connection with a $1.67 billion February 2012 offering of Cobalt common stock, a $1.38 billion December 2012 offering of Cobalt's convertible notes, a $1.00 billion January 2013 offering of Cobalt's common stock, a $1.33 billion May 2013 offering of Cobalt's common stock, and a $1.30 billion May 2014 offering of Cobalt's convertible notes. The consolidated amended complaint alleges that, among others, Group Inc. and GS&Co. are liable as controlling persons with respect to all five offerings. The consolidated amended complaint also seeks damages from GS&Co. in connection with its acting as an underwriter of 14,430,000 shares of common stock representing an aggregate offering price of approximately $465 million, $690 million principal amount of convertible notes, and approximately $508 million principal amount of convertible notes in the February 2012, December 2012 and May 2014 offerings, respectively, for an aggregate offering price of approximately $1.66 billion. On January 19, 2016, the court granted, with leave to replead, the underwriter defendants' motions to dismiss as to claims by plaintiffs who purchased Cobalt securities after April 30, 2013, but denied the motions to dismiss in all other respects.

Solazyme, Inc. Securities Litigation. GS&Co. is among the underwriters named as defendants in a putative securities class action filed on June 24, 2015 in the U.S. District Court for the Northern District of California. In addition to the underwriters, the defendants include Solazyme, Inc. (Solazyme) and certain of its directors and officers. As to the underwriters, the complaints generally allege misstatements and omissions in connection with March 2014 offerings by Solazyme of approximately $63 million of common stock and $150 million principal amount of convertible senior subordinated notes, assert claims under the federal securities laws, and seek compensatory damages in an unspecified amount and rescission. Plaintiffs filed an amended complaint on December 15, 2015, and defendants moved to dismiss on February 12, 2016. GS&Co. underwrote 3,450,000 shares of common stock and $150 million principal amount of notes for an aggregate offering price of approximately $187 million.

Employment-Related Matters. On September 15, 2010, a putative class action was filed in the U.S. District Court for the Southern District of New York by three female former employees alleging that Group Inc. and GS&Co. have systematically discriminated against female employees in respect of compensation, promotion, assignments, mentoring and performance evaluations. The complaint alleges a class consisting of all female employees employed at specified levels in specified areas by Group Inc. and GS&Co. since July 2002, and asserts claims under federal and New York City discrimination laws. The complaint seeks class action status, injunctive relief and unspecified amounts of compensatory, punitive and other damages. On July 17, 2012, the district court issued a decision granting in part Group Inc.'s and GS&Co.'s motion to strike certain of plaintiffs' class allegations on the ground that plaintiffs lacked standing to pursue certain equitable remedies and denying Group Inc.'s and GS&Co.'s motion to strike plaintiffs' class allegations in their entirety as premature. On March 21, 2013, the U.S. Court of Appeals for the Second Circuit held that arbitration should be compelled with one of the named plaintiffs, who as a managing director was a party to an arbitration agreement with the firm. On March 10, 2015, the magistrate judge to whom the district judge assigned the remaining plaintiffs' May 2014 motion for class certification recommended that the motion be denied in all respects. On August 3, 2015, the magistrate judge denied plaintiffs' motion for reconsideration of that recommendation and granted the plaintiffs' motion to intervene two female individuals, one of whom was employed by the firm as of September 2010 and the other of whom is a current employee of the firm. On August 17, 2015, the defendants appealed the magistrate judge's decision on intervention. On September 28, 2015, the defendants moved to dismiss the claims of an intervenor who is not a current employee of the firm for lack of standing.

Investment Management Services. Group Inc. and certain of its affiliates are parties to various civil litigation and arbitration proceedings and other disputes with clients relating to losses allegedly sustained as a result of the firm's investment management services. These claims generally seek, among other things, restitution or other compensatory damages and, in some cases, punitive damages.

Financial Advisory Services. Group Inc. and certain of its affiliates are from time to time parties to various civil litigation and arbitration proceedings and other disputes with clients and third parties relating to the firm's financial advisory activities. These claims generally seek, among other things, compensatory damages and, in some cases, punitive damages, and in certain cases allege that the firm did not appropriately disclose or deal with conflicts of interest.

Credit Derivatives Antitrust Matters. On December 4, 2015, the European Commission announced that it had closed antitrust proceedings against all banks, including Group Inc., involved in the European Commission's investigation, announced in April 2011, of numerous financial services companies in connection with the supply of data related to credit default swaps and in connection with profit sharing and fee arrangements for clearing of credit default swaps, including potential anti-competitive practices.

GS&Co. is among the numerous defendants in putative antitrust class actions relating to credit derivatives, filed beginning in May 2013 and consolidated in the U.S. District Court for the Southern District of New York. On October 29, 2015, the court preliminarily approved the settlement among GS&Co. and the plaintiffs. The firm has reserved the full amount of the proposed settlement.

Libya-Related Litigation. GSI is the defendant in an action filed on January 21, 2014 with the High Court of Justice in London by the Libyan Investment Authority, relating to nine derivative transactions between the plaintiff and GSI and seeking, among other things, rescission of the transactions and unspecified equitable compensation and damages exceeding $1 billion. On December 4, 2014, the Libyan Investment Authority filed an amended statement of claim.

Municipal Securities Matters. GS&Co. (along with, in some cases, other financial services firms) is named by municipalities, municipal-owned entities, state-owned agencies or instrumentalities and non-profit entities in a number of FINRA arbitrations and federal court cases based on GS&Co.'s role as underwriter of the claimants' issuances of an aggregate of approximately $1.9 billion of auction rate securities from 2003 through 2007 and as a broker-dealer with respect to auctions for these securities. The claimants generally allege that GS&Co. failed to disclose that it had a practice of placing cover bids in auctions, and/or failed to inform the claimant of the deterioration of the auction rate market beginning in the fall of 2007, and that, as a result, the claimant was forced to engage in a series of expensive refinancing and conversion transactions after the failure of the auction market in February 2008. Certain claimants also allege that GS&Co. advised them to enter into or continue with interest rate swaps in connection with their auction rate securities issuances, causing them to incur additional losses. The claims include breach of fiduciary duty, fraudulent concealment, negligent misrepresentation, breach of contract, violations of the Exchange Act and state securities laws, and breach of duties under the rules of the Municipal Securities Rulemaking Board and the NASD. Certain of the arbitrations have been enjoined in accordance with the exclusive forum selection clauses in the transaction documents. In addition, GS&Co. has filed motions with the FINRA Panels to dismiss the arbitrations, one of which has been granted, and has filed motions to dismiss two of the proceedings pending in federal court, one of which was granted but has been appealed and one of which was denied. GS&Co. has also reached settlements or settlements in principle in five actions and one action was voluntarily dismissed.

U.S. Treasury Securities-Related Litigation. GS&Co. is among the primary dealers named as defendants in several putative class actions relating to the market for U.S. Treasury securities, filed beginning in July 2015 and consolidated in the U.S. District Court for the Southern District of New York. The complaints generally allege that the defendants violated the federal antitrust laws and the Commodity Exchange Act in connection with an alleged conspiracy to manipulate the when-issued market and auctions for U.S. Treasury securities, as well as related futures and options, and seek declaratory and injunctive relief, treble damages in an unspecified amount and restitution.

Commodities-Related Litigation. GS&Co., GSI, J. Aron & Company and Metro, a previously consolidated subsidiary of Group Inc. that was sold in the fourth quarter of 2014, are among the defendants in a number of putative class actions filed beginning on August 1, 2013 and consolidated in the U.S. District Court for the Southern District of New York. The complaints generally allege violations of federal antitrust laws and state laws in connection with the storage of aluminum and aluminum trading. The complaints seek declaratory, injunctive and other equitable relief as well as unspecified monetary damages, including treble damages. On August 29, 2014, the court granted the Goldman Sachs defendants' motion to dismiss. Certain plaintiffs appealed on September 24, 2014, and the remaining plaintiffs sought to amend their complaints in October 2014. On March 26, 2015, the court granted in part and denied in part plaintiffs' motions for leave to amend their complaints, rejecting their monopolization claims and most state law claims but permitting their antitrust conspiracy claims and certain parallel state law and unjust enrichment claims to proceed, and the court directed the remaining plaintiffs to file their amended complaints, which they did on April 9, 2015.

GS Power, Metro and GSI are among the defendants named in putative class actions, filed beginning on May 23, 2014 in the U.S. District Court for the Southern District of New York, based on similar alleged violations of the federal antitrust laws in connection with the management of zinc storage facilities. On January 7, 2016, the court granted the defendants' motion to dismiss.

GSI is among the defendants named in putative class actions relating to trading in platinum and palladium, filed beginning on November 25, 2014, in the U.S. District Court for the Southern District of New York. The complaints generally allege that the defendants violated federal antitrust laws and the Commodity Exchange Act in connection with an alleged conspiracy to manipulate a benchmark for physical platinum and palladium prices and seek declaratory and injunctive relief as well as treble damages in an unspecified amount. On July 27, 2015, plaintiffs filed a second amended consolidated complaint, and on September 21, 2015, the defendants moved to dismiss.

ISDAFIX-Related Litigation. Group Inc. is among the defendants named in several putative class actions relating to trading in interest rate derivatives, filed beginning in September 2014 in the U.S. District Court for the Southern District of New York. The second consolidated amended complaint, filed on February 12, 2015, asserts claims under the federal antitrust laws and state common law in connection with an alleged conspiracy to manipulate the ISDAFIX benchmark and seeks declaratory and injunctive relief as well as treble damages in an unspecified amount. Defendants moved to dismiss the second consolidated amended complaint on April 13, 2015.

Currencies-Related Litigation. GS&Co. and Group Inc. are among the defendants named in several putative antitrust class actions relating to trading in the foreign exchange markets, filed beginning in December 2013 in the U.S. District Court for the Southern District of New York. The complaints generally allege that defendants violated federal antitrust laws in connection with an alleged conspiracy to manipulate the foreign currency exchange markets and seek declaratory and injunctive relief as well as treble damages in an unspecified amount. On February 13, 2014, the cases were consolidated into one action.

Beginning in February 2015, GS&Co. and Group Inc. were named as defendants in separate putative class actions filed in the U.S. District Court for the Southern District of New York, which were consolidated with the antitrust class actions described above on August 13, 2015. On December 15, 2015, the court preliminarily approved a settlement among GS&Co., Group Inc. and the plaintiffs in the consolidated action. The firm has paid the full amount of the proposed settlement into an escrow account.

On June 3, 2015, GS&Co. and Group Inc. were among the defendants named in a putative class action filed in the U.S. District Court for the Southern District of New York on behalf of certain ERISA employee benefit plans. As to the claims brought against GS&Co. and Group Inc., the amended complaint, filed on November 16, 2015, generally alleges that the defendants violated ERISA in connection with an alleged conspiracy to manipulate the foreign currency exchange markets, which caused losses to ERISA plans for which the defendants provided foreign exchange services or otherwise authorized the execution of foreign exchange services. The plaintiffs have moved for leave to file a second amended complaint containing substantially the same allegations. Plaintiffs seek declaratory and injunctive relief as well as restitution and disgorgement in an unspecified amount.

Group Inc., GS&Co. and Goldman Sachs Canada Inc. are among the defendants named in putative class actions related to trading in foreign exchange markets, filed beginning in September 2015 in the Superior Court of Justice in Ontario, Canada and the Superior Court of Quebec, Canada, on behalf of direct and indirect purchasers of foreign exchange instruments traded in Canada. The complaints generally allege a conspiracy to manipulate the foreign currency exchange markets and assert claims under Canada's Competition Act and common law. The Ontario and Quebec complaints seek, among other things, compensatory damages in the amounts of 1 billion Canadian dollars and 100 million Canadian dollars, respectively, as well as restitution and 50 million Canadian dollars in punitive, exemplary and aggravated damages.

Interest Rate Swap Antitrust Litigation. Group Inc., GS&Co., GSI, GS Bank USA and Goldman Sachs Financial Markets, L.P. are among the defendants named in a putative antitrust class action relating to the trading of interest rate swaps, filed on November 25, 2015 in the U.S. District Court for the Southern District of New York. The complaint generally alleges a conspiracy among the dealers and brokers since at least January 1, 2008 to preclude exchange trading of interest rate swaps. The complaint seeks declaratory and injunctive relief as well as treble damages in an unspecified amount.

Compensation-Related Litigation. On June 9, 2015, Group Inc. and certain of its current and former directors were named as defendants in a purported shareholder derivative action in the Court of Chancery of the State of Delaware. The derivative complaint alleges that excessive compensation has been paid to such directors since 2012. The derivative complaint includes allegations of breach of fiduciary duty and unjust enrichment and seeks, among other things, unspecified monetary damages, disgorgement of director compensation and reform of the firm's stock incentive plan. On September 30, 2015, the defendants moved to dismiss.

Regulatory Investigations and Reviews and Related Litigation. Group Inc. and certain of its affiliates are subject to a number of other investigations and reviews by, and in some cases have received subpoenas and requests for documents and information from, various governmental and regulatory bodies and self-regulatory organizations and litigation relating to various matters relating to the firm's businesses and operations, including:

- The 2008 financial crisis;
- The public offering process;
- The firm's investment management and financial advisory services;
- Conflicts of interest;
- Research practices, including research independence and interactions between research analysts and other firm personnel, including investment banking personnel, as well as third parties;
- Transactions involving municipal securities, including wall-cross procedures and conflict of interest disclosure with respect to state and municipal clients, the trading and structuring of municipal derivative instruments in connection with municipal offerings, political contribution rules, municipal advisory services and the possible impact of credit default swap transactions on municipal issuers;
- The offering, auction, sales, trading and clearance of corporate and government securities, currencies, commodities and other financial products and related sales and other communications and activities, including compliance with the SEC's short sale rule, algorithmic, high-frequency and quantitative trading, the firm's U.S. alternative trading system (dark pool), futures trading, options trading, when-issued trading, transaction reporting, technology systems and controls, securities lending practices, trading and clearance of credit derivative instruments, commodities activities and metals storage, private placement practices, allocations of and trading in securities, and trading activities and communications in connection with the establishment of benchmark rates, such as currency rates and the ISDAFIX benchmark rates;
- Compliance with the U.S. Foreign Corrupt Practices Act;
- The firm's hiring and compensation practices;
- The firm's system of risk management and controls; and
- Insider trading, the potential misuse and dissemination of material nonpublic information regarding corporate and governmental developments and the effectiveness of the firm's insider trading controls and information barriers.

Goldman Sachs is cooperating with all such regulatory investigations and reviews.

Note 28.

Employee Benefit Plans

The firm sponsors various pension plans and certain other postretirement benefit plans, primarily healthcare and life insurance. The firm also provides certain benefits to former or inactive employees prior to retirement.

Defined Benefit Pension Plans and Postretirement Plans

Employees of certain non-U.S. subsidiaries participate in various defined benefit pension plans. These plans generally provide benefits based on years of credited service and a percentage of the employee's eligible compensation. The firm maintains a defined benefit pension plan for certain U.K. employees. As of April 2008, the U.K. defined benefit plan was closed to new participants, but allows existing participants to continue to accrue benefits. In 2015, the firm notified plan participants that the U.K. defined benefit plan will no longer accrue future benefit accruals after March 31, 2016. The non-U.S. plans do not have a material impact on the firm's consolidated results of operations.

The firm also maintains a defined benefit pension plan for substantially all U.S. employees hired prior to November 1, 2003. As of November 2004, this plan was closed to new participants and frozen for existing participants. In addition, the firm maintains unfunded postretirement benefit plans that provide medical and life insurance for eligible retirees and their dependents covered under these programs. These plans do not have a material impact on the firm's consolidated results of operations.

The firm recognizes the funded status of its defined benefit pension and postretirement plans, measured as the difference between the fair value of the plan assets and the benefit obligation, in the consolidated statements of financial condition. As of December 2015, "Other assets" and "Other liabilities and accrued expenses" included $329 million (related to overfunded pension plans) and $561 million, respectively, related to these plans. As of December 2014, "Other assets" and "Other liabilities and accrued expenses" included $273 million (related to overfunded pension plans) and $739 million, respectively, related to these plans.

Defined Contribution Plans

The firm contributes to employer-sponsored U.S. and non-U.S. defined contribution plans. The firm's contribution to these plans was $231 million for 2015, $223 million for 2014 and $219 million for 2013.

Note 29.

Employee Incentive Plans

The cost of employee services received in exchange for a share-based award is generally measured based on the grant-date fair value of the award. Share-based awards that do not require future service (i.e., vested awards, including awards granted to retirement-eligible employees) are expensed immediately. Share-based awards that require future service are amortized over the relevant service period. Expected forfeitures are included in determining share-based employee compensation expense.

The firm pays cash dividend equivalents on outstanding RSUs. Dividend equivalents paid on RSUs are generally charged to retained earnings. Dividend equivalents paid on RSUs expected to be forfeited are included in compensation expense. The firm accounts for the tax benefit related to dividend equivalents paid on RSUs as an increase to additional paid-in capital.

The firm generally issues new shares of common stock upon delivery of share-based awards. In certain cases, primarily related to conflicted employment (as outlined in the applicable award agreements), the firm may cash settle share-based compensation awards accounted for as equity instruments. For these awards, whose terms allow for cash settlement, additional paid-in capital is adjusted to the extent of the difference between the value of the award at the time of cash settlement and the grant-date value of the award.

Stock Incentive Plan

The firm sponsors a stock incentive plan, The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (2015 SIP), which provides for grants of RSUs, restricted stock, dividend equivalent rights, incentive stock options, nonqualified stock options, stock appreciation rights, and other share-based awards, each of which may be subject to performance conditions. On May 21, 2015, shareholders approved the 2015 SIP. The 2015 SIP replaced The Goldman Sachs Amended and Restated Stock Incentive Plan (2013) (2013 SIP) previously in effect, and applies to awards granted on or after the date of approval.

As of December 2015, 83.8 million shares were available for grant under the 2015 SIP. If any shares of common stock underlying awards granted under the 2015 SIP or 2013 SIP are not delivered due to forfeiture, termination or cancellation or are surrendered or withheld, those shares will again become available to be delivered under the 2015 SIP. Shares available for grant are also subject to adjustment for certain changes in corporate structure as permitted under the 2015 SIP. The 2015 SIP is scheduled to terminate on the date of the annual meeting of shareholders that occurs in 2019.

Restricted Stock Units

The firm grants RSUs to employees under the 2015 SIP, which are valued based on the closing price of the underlying shares on the date of grant after taking into account a liquidity discount for any applicable post-vesting and delivery transfer restrictions. RSUs generally vest and underlying shares of common stock deliver as outlined in the applicable award agreements. Employee award agreements generally provide that vesting is accelerated in certain circumstances, such as on retirement, death, disability and conflicted employment. Delivery of the underlying shares of common stock is conditioned on the grantees satisfying certain vesting and other requirements outlined in the award agreements.

The table below presents the activity related to RSUs.

	Restricted Stock Units Outstanding		Weighted Average Grant-Date Fair Value of Restricted Stock Units Outstanding	
	Future Service Required	No Future Service Required	Future Service Required	No Future Service Required
Outstanding, December 2014	6,656,869 [4]	21,289,845	$143.07	$129.52
Granted [1, 2]	**4,193,176**	**10,450,094**	**164.23**	**158.58**
Forfeited	**(726,013)**	**(165,355)**	**152.06**	**147.10**
Delivered [3]	**—**	**(13,966,859)**	**—**	**125.29**
Vested [2]	**(4,474,876)**	**4,474,876**	**140.29**	**140.29**
Outstanding, December 2015	**5,649,156 [4]**	**22,082,601**	**159.82**	**148.00**

1. The weighted average grant-date fair value of RSUs granted during 2015, 2014 and 2013 was $160.19, $151.40 and $122.59, respectively. The fair value of the RSUs granted during 2015, 2014 and 2013 includes a liquidity discount of 9.2%, 13.8% and 13.7%, respectively, to reflect post-vesting and delivery transfer restrictions of up to 4 years.
2. The aggregate fair value of awards that vested during 2015, 2014 and 2013 was $2.40 billion, $2.39 billion and $2.26 billion, respectively.
3. Includes RSUs that were cash settled.
4. Includes restricted stock subject to future service requirements as of December 2015 and December 2014 of 6,354 and 20,651 shares, respectively.

In the first quarter of 2016, the firm granted to its employees 15.0 million year-end RSUs, of which 4.0 million RSUs require future service as a condition of delivery for the related shares of common stock. These awards are subject to additional conditions as outlined in the award agreements. Generally, shares underlying these awards, net of required withholding tax, deliver over a three-year period but are subject to post-vesting and delivery transfer restrictions through January 2021. These grants are not included in the table above.

Stock Options

Stock options generally vest as outlined in the applicable stock option agreement. In general, options expire on the tenth anniversary of the grant date, although they may be subject to earlier termination or cancellation under certain circumstances in accordance with the terms of the applicable stock option agreement and the SIP in effect at the time of grant.

The table below presents the activity related to outstanding stock options, all of which were granted in 2005 through 2008.

	Options Outstanding	Weighted Average Exercise Price	Aggregate Intrinsic Value *(in millions)*	Weighted Average Remaining Life *(years)*
Outstanding, December 2014	19,955,338	$120.40	$1,516	3.28
Exercised	**(5,199,063)**	**96.57**		
Outstanding, December 2015	**14,756,275**	**128.79**	**891**	**2.38**
Exercisable, December 2015	**14,756,275**	**128.79**	**891**	**2.38**

The total intrinsic value of options exercised during 2015, 2014 and 2013 was $531 million, $2.03 billion and $26 million, respectively.

The table below presents options outstanding.

Exercise Price	**Options Outstanding**	**Weighted Average Exercise Price**	**Weighted Average Remaining Life *(years)***
$ 75.00 - $ 89.99	**8,780,151**	**$ 78.78**	**3.00**
90.00 - 194.99	**—**	**—**	**—**
195.00 - 209.99	**5,976,124**	**202.27**	**1.48**
Outstanding, December 2015	**14,756,275**	**128.79**	**2.38**

As of December 2015, there was $440 million of total unrecognized compensation cost related to non-vested share-based compensation arrangements. This cost is expected to be recognized over a weighted average period of 1.54 years.

The table below presents the share-based compensation and the related excess tax benefit.

	Year Ended December		
$ in millions	**2015**	2014	2013
Share-based compensation	**$2,304**	$2,101	$2,039
Excess net tax benefit related to options exercised	**134**	549	3
Excess net tax benefit related to share-based awards [1]	**406**	788	94

1. Represents the net tax benefit recognized in additional paid-in capital on stock options exercised, the delivery of common stock underlying share-based awards and dividend equivalents paid on RSUs.

Note 30.

Parent Company

Group Inc. — Condensed Statements of Earnings

$ in millions	Year Ended December 2015	2014	2013
Revenues			
Dividends from subsidiaries			
Bank subsidiaries	**$ 32**	$ 16	$2,000
Nonbank subsidiaries	**3,181**	2,739	4,176
Undistributed earnings of subsidiaries	**3,506**	5,330	1,086
Other revenues	**(132)**	826	2,209
Total non-interest revenues	**6,587**	8,911	9,471
Interest income	**3,519**	3,769	4,048
Interest expense	**4,165**	3,802	4,161
Net interest loss	**(646)**	(33)	(113)
Net revenues, including net interest loss	**5,941**	8,878	9,358
Operating expenses			
Compensation and benefits	**498**	411	403
Other expenses	**188**	282	424
Total operating expenses	**686**	693	827
Pre-tax earnings	**5,255**	8,185	8,531
Provision/(benefit) for taxes	**(828)**	(292)	491
Net earnings	**6,083**	8,477	8,040
Preferred stock dividends	**515**	400	314
Net earnings applicable to common shareholders	**$5,568**	$8,077	$7,726

Group Inc. — Condensed Statements of Financial Condition

$ in millions	As of December 2015	2014
Assets		
Cash and cash equivalents		
With third-party banks	**$ 36**	$ 42
With subsidiary bank	**1,300**	—
Loans to and receivables from subsidiaries		
Bank subsidiaries	**9,494**	8,222
Nonbank subsidiaries [1]	**179,826**	171,121
Investments in subsidiaries and other affiliates		
Bank subsidiaries	**23,985**	22,393
Nonbank subsidiaries and other affiliates	**61,533**	57,311
Financial instruments owned, at fair value	**4,410**	11,812
Other assets	**7,472**	7,374
Total assets	**$288,056**	$278,275
Liabilities and shareholders' equity		
Payables to subsidiaries	**$ 591**	$ 129
Financial instruments sold, but not yet purchased, at fair value	**443**	169
Unsecured short-term borrowings		
With third parties [2]	**29,547**	31,021
With subsidiaries	**628**	1,955
Unsecured long-term borrowings		
With third parties [3]	**164,718**	158,359
With subsidiaries [4]	**3,854**	1,616
Other liabilities and accrued expenses	**1,547**	2,229
Total liabilities	**201,328**	195,478
Commitments, contingencies and guarantees		
Shareholders' equity		
Preferred stock	**11,200**	9,200
Common stock	**9**	9
Share-based awards	**4,151**	3,766
Additional paid-in capital	**51,340**	50,049
Retained earnings	**83,386**	78,984
Accumulated other comprehensive loss	**(718)**	(743)
Stock held in treasury, at cost	**(62,640)**	(58,468)
Total shareholders' equity	**86,728**	82,797
Total liabilities and shareholders' equity	**$288,056**	$278,275

Group Inc. — Condensed Statements of Cash Flows

$ in millions	Year Ended December 2015	2014	2013
Cash flows from operating activities			
Net earnings	**$ 6,083**	$ 8,477	$ 8,040
Adjustments to reconcile net earnings to net cash provided by operating activities			
Undistributed earnings of subsidiaries	**(3,506)**	(5,330)	(1,086)
Depreciation and amortization	**50**	42	15
Deferred income taxes	**86**	(4)	1,398
Share-based compensation	**178**	188	194
Gain related to extinguishment of junior subordinated debt	**(34)**	(289)	—
Changes in operating assets and liabilities			
Financial instruments owned, at fair value	**(620)**	6,766	(3,235)
Financial instruments sold, but not yet purchased, at fair value	**274**	(252)	183
Other, net	**(56)**	(5,793)	586
Net cash provided by operating activities	**2,455**	3,805	6,095
Cash flows from investing activities			
Purchase of property, leasehold improvements and equipment	**(33)**	(15)	(3)
Issuances of short-term loans to subsidiaries, net	**(24,417)**	(4,099)	(5,153)
Issuance of term loans to subsidiaries	**(8,632)**	(8,803)	(2,174)
Repayments of term loans by subsidiaries	**24,196**	3,979	7,063
Capital distributions from/(contributions to) subsidiaries, net	**(1,500)**	865	655
Net cash provided by/(used for) investing activities	**(10,386)**	(8,073)	388
Cash flows from financing activities			
Unsecured short-term borrowings, net	**(2,684)**	963	1,296
Proceeds from issuance of long-term borrowings	**42,795**	37,101	28,458
Repayment of long-term borrowings, including the current portion	**(27,726)**	(27,931)	(29,910)
Purchase of trust preferred securities and senior guaranteed trust securities	**(1)**	(1,801)	—
Common stock repurchased	**(4,135)**	(5,469)	(6,175)
Dividends and dividend equivalents paid on common stock, preferred stock and share-based awards	**(1,681)**	(1,454)	(1,302)
Proceeds from issuance of preferred stock, net of issuance costs	**1,993**	1,980	991
Proceeds from issuance of common stock, including exercise of share-based awards	**259**	123	65
Excess tax benefit related to share-based awards	**407**	782	98
Cash settlement of share-based awards	**(2)**	(1)	(1)
Net cash provided by/(used for) financing activities	**9,225**	4,293	(6,480)
Net increase in cash and cash equivalents	**1,294**	25	3
Cash and cash equivalents, beginning of year	**42**	17	14
Cash and cash equivalents, end of year	**$ 1,336**	$ 42	$ 17

SUPPLEMENTAL DISCLOSURES:

Cash payments for third-party interest, net of capitalized interest, were $3.54 billion, $4.31 billion and $2.78 billion for 2015, 2014 and 2013, respectively.

Cash payments for income taxes, net of refunds, were $1.28 billion, $2.35 billion and $3.21 billion for 2015, 2014 and 2013, respectively.

Non-cash activity:

During 2015, Group Inc. exchanged $262 million of Trust Preferred Securities and common beneficial interests held by Group Inc. for $296 million of Group Inc.'s junior subordinated debt held by the issuing trusts. Following the exchange, this junior subordinated debt was extinguished.

During 2015, Group Inc. exchanged $6.12 billion in financial instruments owned, at fair value, held by Group Inc. for $5.20 billion of loans to and $918 million of equity in certain of its subsidiaries.

During 2015, Group Inc. repurchased $60 million of its common stock for which settlement occurred and cash was paid in 2016.

During 2014, Group Inc. exchanged $1.58 billion of Trust Preferred Securities, common beneficial interests and senior guaranteed trust securities held by Group Inc. for $1.87 billion of Group Inc.'s junior subordinated debt held by the issuing trusts. Following the exchange, this junior subordinated debt was extinguished.

1. Primarily includes overnight loans, the proceeds of which can be used to satisfy the short-term obligations of Group Inc.
2. Includes $4.92 billion and $5.88 billion at fair value for 2015 and 2014, respectively.
3. Includes $16.19 billion and $11.66 billion at fair value for 2015 and 2014, respectively.
4. Unsecured long-term borrowings with subsidiaries by maturity date are $2.18 billion in 2017, $254 million in 2018, $108 million in 2019, $217 million in 2020, and $1.09 billion in 2021-thereafter.

THE GOLDMAN SACHS GROUP, INC. AND SUBSIDIARIES

Supplemental Financial Information

Quarterly Results (unaudited)

The tables below present the firm's unaudited quarterly results for 2015 and 2014. These quarterly results were prepared in accordance with U.S. GAAP and reflect all adjustments that are, in the opinion of management, necessary for a fair statement of the results. These adjustments are of a normal, recurring nature. The timing and magnitude of changes in the firm's discretionary compensation accruals (included in operating expenses) can have a significant effect on results in a given quarter.

	Three Months Ended			
in millions, except per share data	**December 2015**	**September 2015**	**June 2015**	**March 2015**
Non-interest revenues	**$6,573**	**$6,019**	**$8,406**	**$ 9,758**
Interest income	**2,148**	**2,119**	**2,150**	**2,035**
Interest expense	**1,448**	**1,277**	**1,487**	**1,176**
Net interest income	**700**	**842**	**663**	**859**
Net revenues, including net interest income	**7,273**	**6,861**	**9,069**	**10,617**
Operating expenses	**6,201**	**4,815**	**7,343**	**6,683**
Pre-tax earnings	**1,072**	**2,046**	**1,726**	**3,934**
Provision for taxes	**307**	**620**	**678**	**1,090**
Net earnings	**765**	**1,426**	**1,048**	**2,844**
Preferred stock dividends	**191**	**96**	**132**	**96**
Net earnings applicable to common shareholders	**$ 574**	**$1,330**	**$ 916**	**$ 2,748**
Earnings per common share				
Basic	**$ 1.28**	**$ 2.95**	**$ 2.01**	**$ 6.05**
Diluted	**1.27**	**2.90**	**1.98**	**5.94**
Dividends declared per common share	**0.65**	**0.65**	**0.65**	**0.60**

	Three Months Ended			
in millions, except per share data	December 2014	September 2014	June 2014	March 2014
Non-interest revenues	$ 6,727	$7,338	$8,125	$ 8,291
Interest income	2,134	2,297	2,579	2,594
Interest expense	1,173	1,248	1,579	1,557
Net interest income	961	1,049	1,000	1,037
Net revenues, including net interest income	7,688	8,387	9,125	9,328
Operating expenses	4,478	5,082	6,304	6,307
Pre-tax earnings	3,210	3,305	2,821	3,021
Provision for taxes	1,044	1,064	784	988
Net earnings	2,166	2,241	2,037	2,033
Preferred stock dividends	134	98	84	84
Net earnings applicable to common shareholders	$ 2,032	$2,143	$1,953	$ 1,949
Earnings per common share				
Basic	$ 4.50	$ 4.69	$ 4.21	$ 4.15
Diluted	4.38	4.57	4.10	4.02
Dividends declared per common share	0.60	0.55	0.55	0.55

Common Stock Price Range

The table below presents the high and low sales prices per share of the firm's common stock.

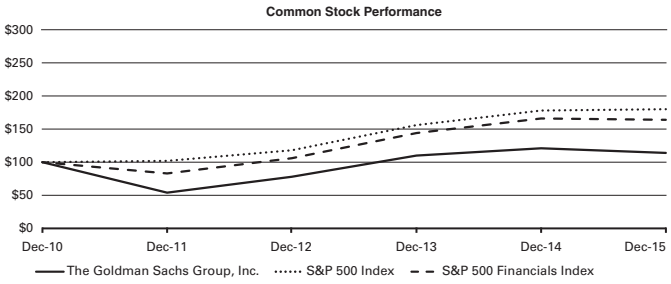
	Year Ended December					
	2015		2014		2013	
	High	**Low**	High	Low	High	Low
First quarter	**$195.73**	**$172.26**	$181.13	$159.77	$159.00	$129.62
Second quarter	**218.77**	**186.96**	171.08	151.65	168.20	137.29
Third quarter	**214.61**	**167.49**	188.58	161.53	170.00	149.28
Fourth quarter	**199.90**	**169.87**	198.06	171.26	177.44	152.83

As of February 5, 2016, there were 9,307 holders of record of the firm's common stock.

On February 5, 2016, the last reported sales price for the firm's common stock on the New York Stock Exchange was $156.47 per share.

Common Stock Performance

The following graph and table compare the performance of an investment in the firm's common stock from December 31, 2010 (the last trading day before the firm's 2011 fiscal year) through December 31, 2015, with the S&P 500 Index and the S&P 500 Financials Index. The graph and table assume $100 was invested on December 31, 2010 in each of the firm's common stock, the S&P 500 Index and the S&P 500 Financials Index, and the dividends were reinvested on the date of payment without payment of any commissions. The performance shown represents past performance and should not be considered an indication of future performance.



	As of December					
	2010	2011	2012	2013	2014	**2015**
The Goldman Sachs Group, Inc.	$100.00	$ 54.40	$ 77.99	$109.80	$121.64	**$114.59**
S&P 500 Index	100.00	102.11	118.44	156.78	178.22	**180.66**
S&P 500 Financials Index	100.00	82.94	106.78	144.78	166.76	**164.15**

Supplemental Financial Information

Selected Financial Data

	Year Ended or as of December				
	2015	2014	2013	2012	2011
Income statement data *($ in millions)*					
Non-interest revenues	**$ 30,756**	$ 30,481	$ 30,814	$ 30,283	$ 23,619
Interest income	**8,452**	9,604	10,060	11,381	13,174
Interest expense	**5,388**	5,557	6,668	7,501	7,982
Net interest income	**3,064**	4,047	3,392	3,880	5,192
Net revenues, including net interest income	**33,820**	34,528	34,206	34,163	28,811
Compensation and benefits	**12,678**	12,691	12,613	12,944	12,223
Non-compensation expenses	**12,364**	9,480	9,856	10,012	10,419
Pre-tax earnings	**$ 8,778**	$ 12,357	$ 11,737	$ 11,207	$ 6,169
Balance sheet data *($ in millions)*					
Total assets [1]	**$861,395**	$855,842	$911,124	$938,205	$923,022
Other secured financings (long-term)	**10,520**	7,249	7,524	8,965	8,179
Unsecured long-term borrowings	**175,422**	167,302	160,695	167,084	173,407
Total liabilities [1]	**774,667**	773,045	832,657	862,489	852,643
Total shareholders' equity	**86,728**	82,797	78,467	75,716	70,379
Common share data *(in millions, except per share amounts)*					
Earnings per common share					
Basic	**$ 12.35**	$ 17.55	$ 16.34	$ 14.63	$ 4.71
Diluted	**12.14**	17.07	15.46	14.13	4.51
Dividends declared per common share	**2.55**	2.25	2.05	1.77	1.40
Book value per common share	**171.03**	163.01	152.48	144.67	130.31
Common shares outstanding, including RSUs granted to employees with no future service requirements	**441.6**	451.5	467.4	480.5	516.3
Average common shares outstanding					
Basic	**448.9**	458.9	471.3	496.2	524.6
Diluted	**458.6**	473.2	499.6	516.1	556.9
Selected data *(unaudited)*					
Total staff					
Americas	**19,000**	17,400	16,600	16,400	17,200
Non-Americas	**17,800**	16,600	16,300	16,000	16,100
Total staff	**36,800**	34,000	32,900	32,400	33,300
Assets under supervision *($ in billions)*					
Asset class					
Alternative investments	**$ 148**	$ 143	$ 142	$ 151	$ 148
Equity	**252**	236	208	153	147
Fixed income	**546**	516	446	411	353
Long-term assets under supervision	**946**	895	796	715	648
Liquidity products	**306**	283	246	250	247
Total assets under supervision	**$ 1,252**	$ 1,178	$ 1,042	$ 965	$ 895

1. The impact of adopting ASU No. 2015-03 was a reduction to both total assets and total liabilities of $398 million, $383 million, $350 million and $203 million as of December 2014, December 2013, December 2012 and December 2011, respectively. See Note 3 to the consolidated financial statements for further information about ASU No. 2015-03.

Supplemental Financial Information

Statistical Disclosures

Distribution of Assets, Liabilities and Shareholders' Equity

The table below presents a summary of consolidated average balances and interest rates. Assets, liabilities and interest are classified as U.S. and non-U.S. based on the location of the legal entity in which the assets and liabilities are held.

	Year Ended December								
	2015			2014			2013		
$ in millions	**Average balance**	**Interest**	**Average rate**	Average balance	Interest	Average rate	Average balance	Interest	Average rate
Assets									
U.S.	**$ 57,846**	**$ 141**	**0.24%**	$ 53,606	$ 144	0.27%	$ 56,848	$ 167	0.29%
Non-U.S.	**5,360**	**20**	**0.37%**	5,529	20	0.36%	5,073	19	0.37%
Total deposits with banks	**63,206**	**161**	**0.25%**	59,135	164	0.28%	61,921	186	0.30%
U.S.	**178,496**	**(376)**	**(0.21)%**	193,555	(514)	(0.27)%	198,677	(289)	(0.15)%
Non-U.S.	**111,168**	**386**	**0.35%**	108,766	433	0.40%	129,071	332	0.26%
Total securities borrowed, securities purchased under agreements to resell and federal funds sold	**289,664**	**10**	**0.00%**	302,321	(81)	(0.03)%	327,748	43	0.01%
U.S.	**150,631**	**4,063**	**2.70%**	170,647	5,045	2.96%	182,158	5,353	2.94%
Non-U.S.	**97,152**	**1,779**	**1.83%**	101,163	2,407	2.38%	110,807	2,806	2.53%
Total financial instruments owned, at fair value [1]	**247,783**	**5,842**	**2.36%**	271,810	7,452	2.74%	292,965	8,159	2.78%
U.S.	**34,521**	**1,101**	**3.19%**	21,459	650	3.03%	9,736	268	2.75%
Non-U.S.	**2,440**	**90**	**3.69%**	966	58	6.00%	560	28	5.00%
Total loans receivable	**36,961**	**1,191**	**3.22%**	22,425	708	3.16%	10,296	296	2.87%
U.S.	**75,789**	**783**	**1.03%**	85,811	813	0.95%	81,759	796	0.97%
Non-U.S.	**54,773**	**465**	**0.85%**	54,922	548	1.00%	57,016	580	1.02%
Total other interest-earning assets [2]	**130,562**	**1,248**	**0.96%**	140,733	1,361	0.97%	138,775	1,376	0.99%
Total interest-earning assets	**768,176**	**8,452**	**1.10%**	796,424	9,604	1.21%	831,705	10,060	1.21%
Cash and due from banks	**6,352**			5,237			6,212		
Other non-interest-earning assets [1]	**99,421**			92,600			105,713		
Total assets [3]	**$873,949**			$894,261			$943,630		
Liabilities									
U.S.	**$ 73,063**	**$ 354**	**0.48%**	$ 62,595	$ 286	0.46%	$ 60,699	$ 352	0.58%
Non-U.S.	**13,885**	**54**	**0.39%**	10,569	47	0.44%	8,883	35	0.39%
Total interest-bearing deposits	**86,948**	**408**	**0.47%**	73,164	333	0.46%	69,582	387	0.56%
U.S.	**59,885**	**221**	**0.37%**	79,517	206	0.26%	114,884	242	0.21%
Non-U.S.	**29,777**	**109**	**0.37%**	52,394	225	0.43%	63,802	334	0.52%
Total securities loaned and securities sold under agreements to repurchase	**89,662**	**330**	**0.37%**	131,911	431	0.33%	178,686	576	0.32%
U.S.	**36,609**	**644**	**1.76%**	39,708	828	2.09%	37,923	671	1.77%
Non-U.S.	**36,066**	**675**	**1.87%**	42,511	913	2.15%	54,990	1,383	2.52%
Total financial instruments sold, but not yet purchased, at fair value [1]	**72,675**	**1,319**	**1.81%**	82,219	1,741	2.12%	92,913	2,054	2.21%
U.S.	**42,743**	**401**	**0.94%**	45,841	413	0.90%	40,511	365	0.90%
Non-U.S.	**14,447**	**28**	**0.19%**	18,751	34	0.18%	20,415	29	0.14%
Total short-term borrowings [4]	**57,190**	**429**	**0.75%**	64,592	447	0.69%	60,926	394	0.65%
U.S.	**172,160**	**3,722**	**2.16%**	164,568	3,327	2.02%	167,850	3,635	2.17%
Non-U.S.	**8,843**	**156**	**1.76%**	7,201	133	1.85%	6,088	117	1.92%
Total long-term borrowings [4]	**181,003**	**3,878**	**2.14%**	171,769	3,460	2.01%	173,938	3,752	2.16%
U.S.	**156,248**	**(1,378)**	**(0.88)%**	153,600	(1,222)	(0.80)%	144,888	(904)	(0.62)%
Non-U.S.	**62,672**	**402**	**0.64%**	62,311	367	0.59%	58,594	409	0.70%
Total other interest-bearing liabilities [5]	**218,920**	**(976)**	**(0.45)%**	215,911	(855)	(0.40)%	203,482	(495)	(0.24)%
Total interest-bearing liabilities	**706,398**	**5,388**	**0.76%**	739,566	5,557	0.75%	779,527	6,668	0.86%
Non-interest-bearing deposits	**1,986**			799			655		
Other non-interest-bearing liabilities [1]	**79,251**			73,057			86,095		
Total liabilities [3]	**787,635**			813,422			866,277		
Shareholders' equity									
Preferred stock	**10,585**			8,585			6,892		
Common stock	**75,729**			72,254			70,461		
Total shareholders' equity	**86,314**			80,839			77,353		
Total liabilities and shareholders' equity	**$873,949**			$894,261			$943,630		
Interest rate spread			**0.34%**			0.46%			0.35%
U.S.		**$ 1,748**	**0.35%**		$ 2,300	0.44%		$ 1,934	0.37%
Non-U.S.		**1,316**	**0.49%**		1,747	0.64%		1,458	0.48%
Net interest income and net yield on interest-earning assets		**3,064**	**0.40%**		4,047	0.51%		3,392	0.41%
Percentage of interest-earning assets and interest-bearing liabilities attributable to non-U.S. operations									
Assets			**35.26%**			34.07%			36.37%
Liabilities			**23.46%**			26.20%			27.30%

1. Derivative instruments and commodities are included in other non-interest-earning assets and other non-interest-bearing liabilities.
2. Primarily consists of certain receivables from customers and counterparties and cash and securities segregated for regulatory and other purposes.
3. The impact of adopting ASU No. 2015-03 was a reduction to both average total assets and average total liabilities of $402 million and $382 million for the year ended December 2014 and December 2013, respectively. See Note 3 to the consolidated financial statements for further information about ASU No. 2015-03.
4. Interest rates include the effects of interest rate swaps accounted for as hedges.
5. Substantially all consists of certain payables to customers and counterparties.

Changes in Net Interest Income, Volume and Rate Analysis

The table below presents an analysis of the effect on net interest income of volume and rate changes. In this analysis, changes due to volume/rate variance have been allocated to volume.

	Year Ended					
	December 2015 versus December 2014			December 2014 versus December 2013		
	Increase (decrease) due to change in:			Increase (decrease) due to change in:		
$ in millions	**Volume**	**Rate**	**Net Change**	Volume	Rate	Net Change
Interest-earning assets						
U.S.	**$ 10**	**$ (13)**	**$ (3)**	$ (9)	$ (14)	$ (23)
Non-U.S.	**(1)**	**1**	**—**	2	(1)	1
Total deposits with banks	**9**	**(12)**	**(3)**	(7)	(15)	(22)
U.S.	**32**	**106**	**138**	14	(239)	(225)
Non-U.S.	**8**	**(55)**	**(47)**	(81)	182	101
Total securities borrowed, securities purchased under agreements to resell and federal funds sold	**40**	**51**	**91**	(67)	(57)	(124)
U.S.	**(540)**	**(442)**	**(982)**	(340)	32	(308)
Non-U.S.	**(73)**	**(555)**	**(628)**	(229)	(170)	(399)
Total financial instruments owned, at fair value	**(613)**	**(997)**	**(1,610)**	(569)	(138)	(707)
U.S.	**416**	**35**	**451**	355	27	382
Non-U.S.	**54**	**(22)**	**32**	24	6	30
Total loans receivable	**470**	**13**	**483**	379	33	412
U.S.	**(103)**	**73**	**(30)**	38	(21)	17
Non-U.S.	**(1)**	**(82)**	**(83)**	(21)	(11)	(32)
Total other interest-earning assets	**(104)**	**(9)**	**(113)**	17	(32)	(15)
Change in interest income	**(198)**	**(954)**	**(1,152)**	(247)	(209)	(456)
Interest-bearing liabilities						
U.S.	**51**	**17**	**68**	9	(75)	(66)
Non-U.S.	**13**	**(6)**	**7**	7	5	12
Total interest-bearing deposits	**64**	**11**	**75**	16	(70)	(54)
U.S.	**(72)**	**87**	**15**	(92)	56	(36)
Non-U.S.	**(83)**	**(33)**	**(116)**	(49)	(60)	(109)
Total securities loaned and securities sold under agreements to repurchase	**(155)**	**54**	**(101)**	(141)	(4)	(145)
U.S.	**(55)**	**(129)**	**(184)**	37	120	157
Non-U.S.	**(121)**	**(117)**	**(238)**	(268)	(202)	(470)
Total financial instruments sold, but not yet purchased, at fair value	**(176)**	**(246)**	**(422)**	(231)	(82)	(313)
U.S.	**(29)**	**17**	**(12)**	48	—	48
Non-U.S.	**(8)**	**2**	**(6)**	(3)	8	5
Total short-term borrowings	**(37)**	**19**	**(18)**	45	8	53
U.S.	**164**	**231**	**395**	(66)	(242)	(308)
Non-U.S.	**29**	**(6)**	**23**	21	(5)	16
Total long-term borrowings	**193**	**225**	**418**	(45)	(247)	(292)
U.S.	**(23)**	**(133)**	**(156)**	(69)	(249)	(318)
Non-U.S.	**2**	**33**	**35**	22	(64)	(42)
Total other interest-bearing liabilities	**(21)**	**(100)**	**(121)**	(47)	(313)	(360)
Change in interest expense	**(132)**	**(37)**	**(169)**	(403)	(708)	(1,111)
Change in net interest income	**$ (66)**	**$(917)**	**$ (983)**	$ 156	$ 499	$ 655

Deposits

The table below presents a summary of the firm's interest-bearing deposits.

	Year Ended December		
$ in millions	**2015**	2014	2013
Average balances			
U.S.			
Savings	**$44,486**	$ 41,785	$ 39,411
Time	**28,577**	20,810	21,288
Total U.S.	**73,063**	62,595	60,699
Non-U.S.			
Demand	**5,703**	4,571	4,613
Time	**8,182**	5,998	4,270
Total Non-U.S.	**13,885**	10,569	8,883
Total	**$86,948**	$ 73,164	$ 69,582
Average interest rates			
U.S.			
Savings	**0.27%**	0.23%	0.30%
Time	**0.83%**	0.91%	1.09%
Total U.S.	**0.48%**	0.46%	0.58%
Non-U.S.			
Demand	**0.19%**	0.18%	0.22%
Time	**0.53%**	0.65%	0.59%
Total Non-U.S.	**0.39%**	0.44%	0.39%
Total	**0.47%**	0.46%	0.56%

Short-Term and Other Borrowed Funds

The table below presents a summary of the firm's securities loaned and securities sold under agreements to repurchase, and short-term borrowings. These borrowings generally mature within one year of the financial statement date and include borrowings that are redeemable at the option of the holder within one year of the financial statement date.

	As of December		
$ in millions	**2015**	2014	2013
Securities loaned and securities sold under agreements to repurchase			
Amounts outstanding at year-end	**$89,683**	$ 93,785	$183,527
Average outstanding during the year	**89,662**	131,911	178,686
Maximum month-end outstanding	**97,466**	178,049	196,393
Weighted average interest rate			
During the year	**0.37%**	0.33%	0.32%
At year-end	**0.39%**	0.31%	0.28%
Short-term borrowings			
Amounts outstanding at year-end [1]	**$57,020**	$ 60,099	$ 61,981
Average outstanding during the year	**57,190**	64,592	60,926
Maximum month-end outstanding	**60,522**	68,570	66,977
Weighted average interest rate [2]			
During the year	**0.75%**	0.69%	0.65%
At year-end	**0.80%**	0.68%	0.89%

1. Includes short-term secured financings of $14.23 billion, $15.56 billion and $17.29 billion as of December 2015, December 2014 and December 2013, respectively.

2. The weighted average interest rates for these borrowings include the effect of hedging activities.

Loan Portfolio

The table below presents a summary of the firm's loans receivable. Loans receivable are classified as U.S. and non-U.S. based on the location of the legal entity in which such loans are held.

	As of December				
$ in millions	**2015**	2014	2013	2012	2011
U.S.					
Corporate loans	**$19,909**	$14,020	$ 6,910	$2,187	$ 104
Loans to private wealth management clients	**12,824**	10,989	6,545	4,057	3,040
Loans backed by commercial real estate	**3,186**	1,876	727	245	198
Loans backed by residential real estate	**2,187**	311	—	—	—
Other loans	**3,495**	821	—	—	400
Total U.S.	**41,601**	28,017	14,182	6,489	3,742
Non-U.S.					
Corporate loans	**831**	290	131	—	—
Loans to private wealth management clients	**1,137**	300	13	14	22
Loans backed by commercial real estate	**2,085**	549	708	—	—
Loans backed by residential real estate	**129**	10	—	—	—
Other loans	**38**	—	—	—	—
Total non-U.S.	**4,220**	1,149	852	14	22
Total loans receivable, gross	**45,821**	29,166	15,034	6,503	3,764
Allowance for loan losses					
U.S.	**381**	205	115	24	8
Non-U.S.	**33**	23	24	—	—
Total allowance for loan losses	**414**	228	139	24	8
Total loans receivable	**$45,407**	$28,938	$14,895	$6,479	$3,756

Allowance for Loan Losses

The table below presents changes in the allowance for loan losses. In the table below, provisions and allowance for loan losses primarily relate to corporate loans and loans extended to private wealth management clients that are held in legal entities located in the U.S.

	As of December				
$ in millions	**2015**	2014	2013	2012	2011
Allowance for loan losses					
Balance, beginning of period	**$ 228**	$ 139	$ 24	$ 8	$ 5
Charge-offs	**(1)**	(3)	—	—	—
Provision for loan losses	**187**	92	115	16	3
Balance, end of period	**$ 414**	$ 228	$ 139	$ 24	$ 8

Maturities and Sensitivity to Changes in Interest Rates

The table below presents the firm's gross loans receivable by tenor and a distribution of such loans receivable between fixed and floating interest rates.

	Maturities and Sensitivity to Changes in Interest Rates as of December 2015			
$ in millions	Less than 1 year	1 - 5 years	Greater than 5 years	Total
U.S.				
Corporate loans	$ 1,382	$14,042	$4,485	$19,909
Loans to private wealth management clients	9,742	3,042	40	12,824
Loans backed by commercial real estate	284	2,658	244	3,186
Loans backed by residential real estate	440	960	787	2,187
Other loans	74	2,478	943	3,495
Total U.S.	11,922	23,180	6,499	41,601
Non-U.S.				
Corporate loans	411	303	117	831
Loans to private wealth management clients	1,137	—	—	1,137
Loans backed by commercial real estate	15	1,670	400	2,085
Loans backed by residential real estate	—	69	60	129
Other loans	—	31	7	38
Total non-U.S.	1,563	2,073	584	4,220
Total loans receivable, gross	13,485	25,253	7,083	45,821
Loans at fixed interest rates	16	917	1,279	2,212
Loans at variable interest rates	13,469	24,336	5,804	43,609
Total loans receivable, gross	$13,485	$25,253	$7,083	$45,821

Cross-border Outstandings

Cross-border outstandings are based on the Federal Financial Institutions Examination Council's (FFIEC) guidelines for reporting cross-border information and represent the amounts that the firm may not be able to obtain from a foreign country due to country-specific events, including unfavorable economic and political conditions, economic and social instability, and changes in government policies.

Credit exposure represents the potential for loss due to the default or deterioration in credit quality of a counterparty or an issuer of securities or other instruments the firm holds and is measured based on the potential loss in an event of non-payment by a counterparty. Credit exposure is reduced through the effect of risk mitigants, such as netting agreements with counterparties that permit the firm to offset receivables and payables with such counterparties or obtaining collateral from counterparties. The table below does not include all the effects of such risk mitigants and does not represent the firm's credit exposure.

The table below presents cross-border outstandings and commitments for each country in which cross-border outstandings exceed 0.75% of consolidated assets in accordance with the FFIEC guidelines and include cash, receivables, securities purchased under agreements to resell, securities borrowed and cash financial instruments, but exclude derivative instruments. Securities purchased under agreements to resell and securities borrowed are presented gross, without reduction for related securities collateral held. Margin loans (included in receivables) are presented based on the amount of collateral advanced by the counterparty. Substantially all commitments in the tables below consist of commitments to extend credit and forward starting resale and securities borrowing agreements.

$ in millions	Banks	Governments	Other	Total	Commitments
As of December 2015					
Cayman Islands	$ 1	$ —	$39,603	$39,604	$ 3,046
France	5,596	2,904	23,854	32,354	4,795
Japan	10,254	297	10,882	21,433	9,684
Germany	4,072	7,652	8,481	20,205	5,008
United Kingdom	2,170	42	11,361	13,573	15,075
Italy	4,326	3,691	2,647	10,664	2,634
Canada	1,173	253	8,290	9,716	1,404
China	2,189	254	6,069	8,512	111
As of December 2014					
Cayman Islands	$ 2	$ —	$35,829	$35,831	$ 2,658
France	4,730	4,932	18,261	27,923	12,214
Japan	13,862	373	10,763	24,998	11,413
Germany	5,362	4,479	10,629	20,470	4,631
United Kingdom	1,870	282	8,821	10,973	11,755
Italy	3,331	4,173	2,215	9,719	783
China	2,474	1,952	4,984	9,410	6
As of December 2013					
Cayman Islands	$ 12	$ 1	$35,969	$35,982	$ 1,671
Japan	23,026	123	11,981	35,130	5,086
France	12,427	2,871	16,567	31,865	12,060
Germany	5,148	4,336	7,793	17,277	4,716
Spain	7,002	2,281	2,491	11,774	1,069
United Kingdom	2,688	217	7,321	10,226	19,014
Netherlands	1,785	540	5,786	8,111	1,962

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

There were no changes in or disagreements with accountants on accounting and financial disclosure during the last two years.

Item 9A. Controls and Procedures

As of the end of the period covered by this report, an evaluation was carried out by Goldman Sachs' management, with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act). Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures were effective as of the end of the period covered by this report. In addition, no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) occurred during the fourth quarter of our year ended December 31, 2015 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting and the Report of Independent Registered Public Accounting Firm are set forth in Part II, Item 8 of the 2015 Form 10-K.

Item 9B. Other Information

On February 18, 2016, the Board of Directors of The Goldman Sachs Group, Inc. (Board) approved an amendment to our Amended and Restated By-Laws solely to specify that a group of funds that are under common management and funded primarily by a single employer or a "group of investment companies" as defined in the Investment Company Act of 1940 will be considered one "eligible holder" for purposes of the Company's proxy access bylaw.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information relating to our executive officers is included on page 45 of the 2015 Form 10-K. Information relating to our directors, including our audit committee and audit committee financial experts and the procedures by which shareholders can recommend director nominees, and our executive officers will be in our definitive Proxy Statement for our 2016 Annual Meeting of Shareholders, which will be filed within 120 days of the end of 2015 (2016 Proxy Statement) and is incorporated herein by reference. Information relating to our Code of Business Conduct and Ethics, which applies to our senior financial officers, is included under "Available Information" in Part I, Item 1 of the 2015 Form 10-K.

Item 11. Executive Compensation

Information relating to our executive officer and director compensation and the compensation committee of the Board will be in the 2016 Proxy Statement and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information relating to security ownership of certain beneficial owners of our common stock and information relating to the security ownership of our management will be in the 2016 Proxy Statement and is incorporated herein by reference.

The following table provides information as of December 31, 2015, the last day of 2015, regarding securities to be issued on exercise of outstanding stock options or pursuant to outstanding restricted stock units and securities remaining available for issuance under our equity compensation plans that were in effect during 2015.

	Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options and Rights (a)	Weighted Average Exercise Price of Outstanding Options (b)	Number of Securities Remaining Available For Future Issuance Under Equity Compensation Plans (c)
Equity compensation plans approved by security holders	The Goldman Sachs Amended and Restated Stock Incentive Plan (2015)	**42,572,669**	**$128.79**	**83,805,880**
Equity compensation plans not approved by security holders	None	—	—	—
Total		**42,572,669**		**83,805,880**

In the table above:

- The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (2015 SIP) was approved by our shareholders at our 2015 Annual Meeting of Shareholders. The 2015 SIP replaced The Goldman Sachs Amended and Restated Stock Incentive Plan (2013) (2013 SIP) previously in effect, and applies to awards granted on or after the date of approval. The 2013 SIP was approved by our shareholders at our 2013 Annual Meeting of Shareholders and was a successor plan to The Goldman Sachs Amended and Restated Stock Incentive Plan (2003 SIP). The 2003 SIP was approved by our shareholders at our 2003 Annual Meeting of Shareholders and was a successor plan to The Goldman Sachs 1999 Stock Incentive Plan (1999 SIP), which was approved by our shareholders immediately prior to our initial public offering in May 1999.
- The Number of Securities to be Issued Upon Exercise of Outstanding Options and Rights includes: (i) 14,756,275 shares of common stock that may be issued upon exercise of outstanding options and (ii) 27,816,394 shares that may be issued pursuant to outstanding restricted stock units. These awards are subject to vesting and other conditions to the extent set forth in the respective award agreements, and the underlying shares will be delivered net of any required tax withholding.
- The Weighted Average Exercise Price of Outstanding Options relates only to the options described above. Shares underlying restricted stock units are deliverable without the payment of any consideration, and therefore these awards have not been taken into account in calculating the weighted average exercise price.
- The Number of Securities Remaining Available For Future Issuance Under Equity Compensation Plans represents shares remaining to be issued under the 2015 SIP, excluding shares reflected in column (a). If any shares of common stock underlying awards granted under the 2015 SIP or 2013 SIP are not delivered due to forfeiture, termination or cancellation or are surrendered or withheld, those shares will again become available to be delivered under the 2015 SIP. Shares available for grant are also subject to adjustment for certain changes in corporate structure as permitted under the 2015 SIP. There are no shares remaining to be issued under the 1999 SIP, 2003 SIP or 2013 SIP other than those reflected in column (a).

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information regarding certain relationships and related transactions and director independence will be in the 2016 Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

Information regarding principal accounting fees and services will be in the 2016 Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this Report:

1. Consolidated Financial Statements

The consolidated financial statements required to be filed in the 2015 Form 10-K are included in Part II, Item 8 hereof.

2. Exhibits

2.1 Plan of Incorporation (incorporated by reference to the corresponding exhibit to the Registrant's Registration Statement on Form S-1 (No. 333-74449)).

3.1 Restated Certificate of Incorporation of The Goldman Sachs Group, Inc., amended as of April 28, 2015 (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2015).

3.2 Amended and Restated By-Laws of The Goldman Sachs Group, Inc., amended as of February 18, 2016.

4.1 Indenture, dated as of May 19, 1999, between The Goldman Sachs Group, Inc. and The Bank of New York, as trustee (incorporated by reference to Exhibit 6 to the Registrant's Registration Statement on Form 8-A, filed on June 29, 1999).

4.2 Subordinated Debt Indenture, dated as of February 20, 2004, between The Goldman Sachs Group, Inc. and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 28, 2003).

4.3 Warrant Indenture, dated as of February 14, 2006, between The Goldman Sachs Group, Inc. and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.34 to the Registrant's Post-Effective Amendment No. 3 to Form S-3, filed on March 1, 2006).

4.4 Senior Debt Indenture, dated as of December 4, 2007, among GS Finance Corp., as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.69 to the Registrant's Post-Effective Amendment No. 10 to Form S-3, filed on December 4, 2007).

4.5 Senior Debt Indenture, dated as of July 16, 2008, between The Goldman Sachs Group, Inc. and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.82 to the Registrant's Post-Effective Amendment No. 11 to Form S-3 (No. 333-130074), filed on July 17, 2008).

4.6 Senior Debt Indenture, dated as of October 10, 2008, among GS Finance Corp., as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York Mellon, as trustee (incorporated by reference to Exhibit 4.70 to the Registrant's Registration Statement on Form S-3 (No. 333-154173), filed on October 10, 2008).

4.7 First Supplemental Indenture, dated as of February 20, 2015, among GS Finance Corp., as issuer, The Goldman Sachs Group, Inc., as guarantor, and The Bank of New York Mellon, as trustee, with respect to the Senior Debt Indenture, dated as of October 10, 2008 (incorporated by reference to Exhibit 4.7 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014).

4.8 Ninth Supplemental Subordinated Debt Indenture, dated as of May 20, 2015, between The Goldman Sachs Group, Inc. and The Bank of New York Mellon, as trustee, with respect to the Subordinated Debt Indenture, dated as of February 20, 2004 (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on May 22, 2015).

Certain instruments defining the rights of holders of long-term debt securities of the Registrant and its subsidiaries are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. The Registrant hereby undertakes to furnish to the SEC, upon request, copies of any such instruments.

10.1 The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (incorporated by reference to Annex B to the Registrant's Definitive Proxy Statement on Schedule 14A, filed on April 10, 2015). †

10.2 The Goldman Sachs Amended and Restated Restricted Partner Compensation Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended February 24, 2006). †

10.3 Form of Employment Agreement for Participating Managing Directors (applicable to executive officers) (incorporated by reference to Exhibit 10.19 to the Registrant's Registration Statement on Form S-1 (No. 333-75213)). †

10.4 Form of Agreement Relating to Noncompetition and Other Covenants (incorporated by reference to Exhibit 10.20 to the Registrant's Registration Statement on Form S-1 (No. 333-75213)). †

10.5 Tax Indemnification Agreement, dated as of May 7, 1999, by and among The Goldman Sachs Group, Inc. and various parties (incorporated by reference to Exhibit 10.25 to the Registrant's Registration Statement on Form S-1 (No. 333-75213)).

10.6 Amended and Restated Shareholders' Agreement, effective as of January 15, 2015, among The Goldman Sachs Group, Inc. and various parties (incorporated by reference to Exhibit 10.6 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014).

10.7 Instrument of Indemnification (incorporated by reference to Exhibit 10.27 to the Registrant's Registration Statement on Form S-1 (No. 333-75213)).

10.8 Form of Indemnification Agreement (incorporated by reference to Exhibit 10.28 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 26, 1999).

10.9 Form of Indemnification Agreement (incorporated by reference to Exhibit 10.44 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 26, 1999).

10.10 Form of Indemnification Agreement, dated as of July 5, 2000 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended August 25, 2000).

10.11 Amendment No. 1, dated as of September 5, 2000, to the Tax Indemnification Agreement, dated as of May 7, 1999 (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the period ended August 25, 2000).

10.12 Letter, dated February 6, 2001, from The Goldman Sachs Group, Inc. to Mr. James A. Johnson (incorporated by reference to Exhibit 10.65 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 24, 2000). †

10.13 Letter, dated December 18, 2002, from The Goldman Sachs Group, Inc. to Mr. William W. George (incorporated by reference to Exhibit 10.39 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 29, 2002). †

10.14 Form of Amendment, dated November 27, 2004, to Agreement Relating to Noncompetition and Other Covenants, dated May 7, 1999 (incorporated by reference to Exhibit 10.32 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 26, 2004). †

10.15 The Goldman Sachs Group, Inc. Non-Qualified Deferred Compensation Plan for U.S. Participating Managing Directors (terminated as of December 15, 2008) (incorporated by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 30, 2007). †

10.16 Form of Year-End Option Award Agreement (incorporated by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 28, 2008). †

10.17 Amendments to 2005 and 2006 Year-End RSU and Option Award Agreements (incorporated by reference to Exhibit 10.44 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 30, 2007). †

10.18 Form of Non-Employee Director Option Award Agreement (incorporated by reference to Exhibit 10.34 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2009). †

10.19 Form of Non-Employee Director RSU Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.21 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.20 Ground Lease, dated August 23, 2005, between Battery Park City Authority d/b/a/ Hugh L. Carey Battery Park City Authority, as Landlord, and Goldman Sachs Headquarters LLC, as Tenant (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed on August 26, 2005).

10.21 General Guarantee Agreement, dated January 30, 2006, made by The Goldman Sachs Group, Inc. relating to certain obligations of Goldman, Sachs & Co. (incorporated by reference to Exhibit 10.45 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 25, 2005).

10.22 Goldman, Sachs & Co. Executive Life Insurance Policy and Certificate with Metropolitan Life Insurance Company for Participating Managing Directors (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended August 25, 2006). †

10.23 Form of Goldman, Sachs & Co. Executive Life Insurance Policy with Pacific Life & Annuity Company for Participating Managing Directors, including policy specifications and form of restriction on Policy Owner's Rights (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended August 25, 2006). †

10.24 Form of Second Amendment, dated November 25, 2006, to Agreement Relating to Noncompetition and Other Covenants, dated May 7, 1999, as amended effective November 27, 2004 (incorporated by reference to Exhibit 10.51 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 24, 2006). †

10.25 Description of PMD Retiree Medical Program (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the period ended February 29, 2008). †

10.26 Letter, dated June 28, 2008, from The Goldman Sachs Group, Inc. to Mr. Lakshmi N. Mittal (incorporated by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K, filed on June 30, 2008). †

10.27 General Guarantee Agreement, dated December 1, 2008, made by The Goldman Sachs Group, Inc. relating to certain obligations of Goldman Sachs Bank USA (incorporated by reference to Exhibit 4.80 to the Registrant's Post-Effective Amendment No. 2 to Form S-3, filed on March 19, 2009).

10.28 Guarantee Agreement, dated November 28, 2008 and amended effective as of January 1, 2010, between The Goldman Sachs Group, Inc. and Goldman Sachs Bank USA (incorporated by reference to Exhibit 10.51 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2009).

10.29 Form of One-Time RSU Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.32 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.30 Amendments to Certain Non-Employee Director Equity Award Agreements (incorporated by reference to Exhibit 10.69 to the Registrant's Annual Report on Form 10-K for the fiscal year ended November 28, 2008). †

10.31 Form of Year-End RSU Award Agreement (not fully vested) (pre-2015) (incorporated by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.32 Form of Year-End RSU Award Agreement (fully vested) (pre-2015) (incorporated by reference to Exhibit 10.37 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.33 Form of Year-End RSU Award Agreement (Base and/or Supplemental) (pre-2015) (incorporated by reference to Exhibit 10.38 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.34 Form of Year-End Short-Term RSU Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.39 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.35 Form of Year-End Restricted Stock Award Agreement (fully vested) (pre-2015) (incorporated by reference to Exhibit 10.41 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2013). †

10.36 Form of Year-End Restricted Stock Award Agreement (Base and/or Supplemental) (pre-2015) (incorporated by reference to Exhibit 10.41 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.37 Form of Year-End Short-Term Restricted Stock Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.42 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.38 Form of Fixed Allowance RSU Award Agreement (pre-2015) (incorporated by reference to Exhibit 10.43 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014). †

10.39 General Guarantee Agreement, dated March 2, 2010, made by The Goldman Sachs Group, Inc. relating to the obligations of Goldman Sachs Execution & Clearing, L.P. (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the period ended March 31, 2010).

10.40 Form of Deed of Gift (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2010). †

10.41 The Goldman Sachs Long-Term Performance Incentive Plan, dated December 17, 2010 (incorporated by reference to the Registrant's Current Report on Form 8-K, filed on December 23, 2010). †

10.42 Form of Performance-Based Restricted Stock Unit Award Agreement (pre-2015) (incorporated by reference to the Registrant's Current Report on Form 8-K, filed on December 23, 2010). †

10.43 Form of Performance-Based Option Award Agreement (incorporated by reference to the Registrant's Current Report on Form 8-K, filed on December 23, 2010). †

10.44 Form of Performance-Based Cash Compensation Award Agreement (pre-2015) (incorporated by reference to the Registrant's Current Report on Form 8-K, filed on December 23, 2010). †

10.45 Amended and Restated General Guarantee Agreement, dated November 21, 2011, made by The Goldman Sachs Group, Inc. relating to certain obligations of Goldman Sachs Bank USA (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K, filed on November 21, 2011).

10.46 Form of Aircraft Time Sharing Agreement (incorporated by reference to Exhibit 10.61 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2011). †

10.47 Description of Compensation Arrangements with Executive Officer (incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2012). †

10.48 The Goldman Sachs Group, Inc. Clawback Policy, effective as of January 1, 2015 (incorporated by reference to Exhibit 10.53 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014).

10.49 Form of Non-Employee Director RSU Award Agreement. †

10.50 Form of One-Time RSU Award Agreement. †

10.51 Form of Year-End RSU Award Agreement (not fully vested). †

10.52 Form of Year-End RSU Award Agreement (fully vested). †

10.53 Form of Year-End RSU Award Agreement (Base and/or Supplemental). †

10.54 Form of Year-End Short-Term RSU Award Agreement. †

10.55 Form of Year-End Restricted Stock Award Agreement (not fully vested). †

10.56 Form of Year-End Restricted Stock Award Agreement (fully vested). †

10.57 Form of Year-End Short-Term Restricted Stock Award Agreement. †

10.58 Form of Fixed Allowance RSU Award Agreement. †

10.59 Form of Fixed Allowance Deferred Cash Award Agreement. †

10.60 Form of Performance-Based Restricted Stock Unit Award Agreement. †

10.61 Form of Performance-Based Cash Compensation Award Agreement. †

10.62 Form of Signature Card for Equity Awards. †

12.1 Statement re: Computation of Ratios of Earnings to Fixed Charges and Ratios of Earnings to Combined Fixed Charges and Preferred Stock Dividends.

21.1 List of significant subsidiaries of The Goldman Sachs Group, Inc.

23.1 Consent of Independent Registered Public Accounting Firm.

31.1 Rule 13a-14(a) Certifications.

32.1 Section 1350 Certifications. *

99.1 Report of Independent Registered Public Accounting Firm on Selected Financial Data.

99.2 Debt and trust securities registered under Section 12(b) of the Exchange Act.

101 Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Statements of Earnings for the years ended December 31, 2015, December 31, 2014 and December 31, 2013, (ii) the Consolidated Statements of Comprehensive Income for the years ended December 31, 2015, December 31, 2014 and December 31, 2013, (iii) the Consolidated Statements of Financial Condition as of December 31, 2015 and December 31, 2014, (iv) the Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2015, December 31, 2014 and December 31, 2013, (v) the Consolidated Statements of Cash Flows for the years ended December 31, 2015, December 31, 2014 and December 31, 2013, and (vi) the notes to the Consolidated Financial Statements.

† This exhibit is a management contract or a compensatory plan or arrangement.

* This information is furnished and not filed for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

THE GOLDMAN SACHS GROUP, INC.

By: /s/ Harvey M. Schwartz
Name: Harvey M. Schwartz
Title: Chief Financial Officer

Date: February 19, 2016

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Capacity	Date
/s/ Lloyd C. Blankfein Lloyd C. Blankfein	Director, Chairman and Chief Executive Officer (Principal Executive Officer)	February 19, 2016
/s/ M. Michele Burns M. Michele Burns	Director	February 19, 2016
/s/ Gary D. Cohn Gary D. Cohn	Director	February 19, 2016
/s/ Mark A. Flaherty Mark A. Flaherty	Director	February 19, 2016
/s/ William W. George William W. George	Director	February 19, 2016
/s/ James A. Johnson James A. Johnson	Director	February 19, 2016
/s/ Lakshmi N. Mittal Lakshmi N. Mittal	Director	February 19, 2016
/s/ Adebayo O. Ogunlesi Adebayo O. Ogunlesi	Director	February 19, 2016

/s/ Peter Oppenheimer Peter Oppenheimer	Director	February 19, 2016
/s/ Debora L. Spar Debora L. Spar	Director	February 19, 2016
/s/ Mark E. Tucker Mark E. Tucker	Director	February 19, 2016
/s/ David A. Viniar David A. Viniar	Director	February 19, 2016
/s/ Mark O. Winkelman Mark O. Winkelman	Director	February 19, 2016
/s/ Harvey M. Schwartz Harvey M. Schwartz	Chief Financial Officer (Principal Financial Officer)	February 19, 2016
/s/ Sarah E. Smith Sarah E. Smith	Principal Accounting Officer	February 19, 2016

EXHIBIT 3.2

As Amended and Restated as of February 18, 2016

AMENDED AND RESTATED
BY-LAWS
OF
THE GOLDMAN SACHS GROUP, INC.

ARTICLE I

Stockholders

Section 1.1 Annual Meetings. An annual meeting of stockholders shall be held for the election of directors at such date, time and place either within or without the State of Delaware as may be designated by the Board of Directors from time to time. Any other business properly brought before the meeting may be transacted at the annual meeting.

Section 1.2 Special Meetings. (a) Special meetings of stockholders may be called at any time by, and only by, (i) the Board of Directors or (ii) solely to the extent required by Section 1.2(b), the Secretary of the Corporation. Each special meeting shall be held at such date, time and place either within or without the State of Delaware as may be stated in the notice of the meeting.

(b) A special meeting of the stockholders shall be called by the Secretary upon the written request of the holders of record of not less than twenty-five percent of the voting power of all outstanding shares of common stock of the Corporation (the "Requisite Percent"), subject to the following:

(1) In order for a special meeting upon stockholder request (a "Stockholder Requested Special Meeting") to be called by the Secretary, one or more written requests for a special meeting (each, a "Special Meeting Request," and collectively, the "Special Meeting Requests") stating the purpose of the special meeting and the matters proposed to be acted upon thereat must be signed and dated by the Requisite Percent of record holders of common stock of the Corporation (or their duly authorized agents), must be delivered to the Secretary at the principal executive offices of the Corporation and must set forth:

(i) in the case of any director nominations proposed to be presented at such Stockholder Requested Special Meeting, the information required by the third paragraph of Section 1.11(b);

(ii) in the case of any matter (other than a director nomination) proposed to be conducted at such Stockholder Requested Special Meeting, the information required by the fourth paragraph of Section 1.11(b); and

(iii) an agreement by the requesting stockholder(s) to notify the Corporation immediately in the case of any disposition prior to the record date for the Stockholder Requested Special Meeting of shares of common stock of the Corporation owned of record and an acknowledgement that any such disposition shall be deemed a revocation of such Special Meeting Request to the extent of such disposition, such that the number of shares disposed of shall not be included in determining whether the Requisite Percent has been reached.

The Corporation will provide the requesting stockholder(s) with notice of the record date for the determination of stockholders entitled to vote at the Stockholder Requested Special Meeting. Each requesting stockholder is required to update the notice delivered pursuant to this Section not later than ten business days after such record date to provide any material changes in the foregoing information as of such record date.

In determining whether a special meeting of stockholders has been requested by the record holders of shares representing in the aggregate at least the Requisite Percent, multiple Special Meeting Requests delivered to the Secretary will be considered together only if each such Special Meeting Request (x) identifies substantially the same purpose or purposes of the special meeting and substantially the same matters proposed to be acted on at the special meeting (in each case as determined in good faith by the Board of Directors), and (y) has been dated and delivered to the Secretary within sixty days of the earliest dated of such Special Meeting Requests. If the record holder is not the signatory to the Special Meeting Request, such Special Meeting Request will not be valid unless documentary evidence is supplied to the Secretary at the time of delivery of such Special Meeting Request (or within ten business days thereafter) of such signatory's authority to execute the Special Meeting Request on behalf of the record holder. Any requesting stockholder may revoke his, her or its Special Meeting Request at any time by written revocation delivered to the Secretary at the principal executive offices of the Corporation; provided, however, that if following such revocation (or any deemed revocation pursuant to clause (iii) above), the unrevoked valid Special Meeting Requests represent in the aggregate less than the Requisite Percent, there shall be no requirement to hold a special meeting. The first date on which unrevoked valid Special Meeting Requests constituting not less than the Requisite Percent shall have been delivered to the Corporation is referred to herein as the "Request Receipt Date".

(2) A Special Meeting Request shall not be valid if:

(i) the Special Meeting Request relates to an item of business that is not a proper subject for stockholder action under applicable law;

(ii) the Request Receipt Date is during the period commencing ninety days prior to the first anniversary of the date of the immediately preceding annual meeting and ending on the date of the next annual meeting;

(iii) the purpose specified in the Special Meeting Request is not the election of directors and an identical or substantially similar item (as determined in good faith by the Board of Directors, a "Similar Item") was presented at any meeting of stockholders held within the twelve months prior to the Request Receipt Date; or

(iv) a Similar Item is included in the Corporation's notice as an item of business to be brought before a stockholder meeting that has been called but not yet held or that is called for a date within ninety days of the Request Receipt Date.

(3) A Stockholder Requested Special Meeting shall be held at such date and time as may be fixed by the Board of Directors; provided, however, that the Stockholder Requested Special Meeting shall be called for a date not more than ninety days after the Request Receipt Date.

(4) Business transacted at any Stockholder Requested Special Meeting shall be limited to (i) the purpose(s) stated in the valid Special Meeting Request(s) received from the Requisite Percent of record holders and (ii) any additional matters that the Board of Directors determines to include in the Corporation's notice of the meeting. If none of the stockholders who submitted the Special Meeting Request appears or sends a qualified representative to present the matters to be presented for consideration that were specified in the Stockholder Meeting Request, the Corporation need not present such matters for a vote at such meeting, notwithstanding that proxies in respect of such matter may have been received by the Corporation.

Section 1.3 Notice of Meetings. Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, date and hour of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Unless otherwise required by law, the written notice of any meeting shall be given not less than ten nor more than sixty days before the date of the meeting to each stockholder entitled to vote at such meeting. Such notice shall be deemed to be given (i) if mailed, when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the Corporation; (ii) if sent by electronic mail, when delivered to an electronic mail address at which the stockholder has consented to receive such notice; and (iii) if posted on an electronic network together with a separate notice to the stockholder of such specific posting, upon the later to occur of (A) such posting and (B) the giving of such separate notice of such posting. Notice shall be deemed to have been given to all stockholders of record who share an address if notice is given in accordance with the "householding" rules set forth in Rule 14a-3(e) under the Securities Exchange Act of 1934 (the "Exchange Act") and Section 233 of the Delaware General Corporation Law.

Section 1.4 Adjournments. Any meeting of stockholders, annual or special, may be adjourned from time to time, to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 1.5 Quorum. At each meeting of stockholders, except where otherwise required by law, the certificate of incorporation or these by-laws, the holders of a majority of the outstanding shares of stock entitled to vote on a matter at the meeting, present in person or represented by proxy, shall constitute a quorum. For purposes of

the foregoing, where a separate vote by class or classes is required for any matter, the holders of a majority of the outstanding shares of such class or classes, present in person or represented by proxy, shall constitute a quorum to take action with respect to that vote on that matter. Two or more classes or series of stock shall be considered a single class if the holders thereof are entitled to vote together as a single class at the meeting. In the absence of a quorum of the holders of any class of stock entitled to vote on a matter, the meeting of such class may be adjourned from time to time in the manner provided by Sections 1.4 and 1.6 of these by-laws until a quorum of such class shall be so present or represented. Shares of its own capital stock belonging on the record date for the meeting to the Corporation or to another corporation, if a majority of the shares entitled to vote in the election of directors of such other corporation is held, directly or indirectly, by the Corporation, shall neither be entitled to vote nor be counted for quorum purposes; provided, however, that the foregoing shall not limit the right of the Corporation to vote stock, including but not limited to its own stock, held by it in a fiduciary capacity.

Section 1.6 Organization. Meetings of stockholders shall be presided over by a Chairman of the Board, if any, or in the absence of a Chairman of the Board by a Vice Chairman of the Board, if any, or in the absence of a Vice Chairman of the Board by a Chief Executive Officer, or in the absence of a Chief Executive Officer by a President, or in the absence of a President by a Chief Operating Officer, or in the absence of a Chief Operating Officer by a Vice President, or in the absence of the foregoing persons by a chairman designated by the Board of Directors, or in the absence of such designation by a chairman chosen at the meeting. A Secretary, or in the absence of a Secretary an Assistant Secretary, shall act as secretary of the meeting, but in the absence of a Secretary and any Assistant Secretary the chairman of the meeting may appoint any person to act as secretary of the meeting.

The order of business at each such meeting shall be as determined by the chairman of the meeting. The chairman of the meeting shall have the right and authority to adjourn a meeting of stockholders without a vote of stockholders and to prescribe such rules, regulations and procedures and to do all such acts and things as are necessary or desirable for the proper conduct of the meeting and are not inconsistent with any rules or regulations adopted by the Board of Directors pursuant to the provisions of the certificate of incorporation, including the establishment of procedures for the maintenance of order and safety, limitations on the time allotted to questions or comments on the affairs of the Corporation, restrictions on entry to such meeting after the time prescribed for the commencement thereof and the opening and closing of the voting polls for each item upon which a vote is to be taken.

Section 1.7 Inspectors. Prior to any meeting of stockholders, the Board of Directors, a Chairman of the Board, a Vice Chairman of the Board, a Chief Executive Officer, a President, a Chief Operating Officer, a Vice President or any other officer designated by the Board shall appoint one or more inspectors to act at such meeting and make a written report thereof and may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at the meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of his or her ability. The inspectors shall ascertain the number of shares outstanding and the voting power of each, determine the shares represented at the meeting and the validity of proxies and ballots, count all votes and ballots, determine and retain for a reasonable period a record

of the disposition of any challenges made to any determination by the inspectors and certify their determination of the number of shares represented at the meeting and their count of all votes and ballots. The inspectors may appoint or retain other persons to assist them in the performance of their duties. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced at the meeting. No ballot, proxy or vote, nor any revocation thereof or change thereto, shall be accepted by the inspectors after the closing of the polls. In determining the validity and counting of proxies and ballots, the inspectors shall be limited to an examination of the proxies, any envelopes submitted therewith, any information provided by a stockholder who submits a proxy by telegram, cablegram or other electronic transmission from which it can be determined that the proxy was authorized by the stockholder, ballots and the regular books and records of the Corporation, and they may also consider other reliable information for the limited purpose of reconciling proxies and ballots submitted by or on behalf of banks, brokers, their nominees or similar persons which represent more votes than the holder of a proxy is authorized by the record owner to cast or more votes than the stockholder holds of record. If the inspectors consider other reliable information for such purpose, they shall, at the time they make their certification, specify the precise information considered by them, including the person or persons from whom they obtained the information, when the information was obtained, the means by which the information was obtained and the basis for the inspectors' belief that such information is accurate and reliable.

Section 1.8 Voting; Proxies. Unless otherwise provided in the certificate of incorporation, each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of stock held by such stockholder which has voting power upon the matter in question. If the certificate of incorporation provides for more or less than one vote for any share on any matter, every reference in these by-laws to a majority or other proportion of shares of stock shall refer to such majority or other proportion of the votes of such shares of stock. Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power, regardless of whether the interest with which it is coupled is an interest in the stock itself or an interest in the Corporation generally. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by filing an instrument in writing revoking the proxy or another duly executed proxy bearing a later date with a Secretary. Voting at meetings of stockholders need not be by written ballot unless so directed by the chairman of the meeting or the Board of Directors. In all matters, unless otherwise required by law, the certificate of incorporation or these by-laws, the affirmative vote of not less than a majority of shares present in person or represented by proxy at the meeting and entitled to vote on such matter, with all shares of common stock of the Corporation and other stock of the Corporation entitled to vote on such matter considered for this purpose as a single class, shall be the act of the stockholders. Where a separate vote by class or classes is required, the affirmative vote of the holders of not less than a majority (or, in the case of an election of directors, a plurality) of shares present in person or represented by proxy at the meeting by stockholders in that class or classes entitled to vote on such matter shall be the act of such class or classes, except as otherwise required by law, the certificate of incorporation or these by-laws. For purposes of this Section 1.8, votes cast "for" or "against" and "abstentions" with respect to such matter shall be counted as shares of stock of the Corporation entitled to vote on such matter, while "broker nonvotes" (or other shares of stock of the Corporation similarly not entitled to vote) shall not be counted as shares entitled to vote on such matter.

Section 1.9 Fixing Date for Determination of Stockholders of Record. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty nor less than ten days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty days prior to the action for which a record date is being established. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 1.10 List of Stockholders Entitled to Vote. A Secretary shall prepare and make, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the municipality where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder who is present.

Section 1.11 Advance Notice of Stockholder Nominees for Director and Other Stockholder Proposals. (a) The matters to be considered and brought before any annual or special meeting of stockholders of the Corporation (other than a Stockholder Requested Special Meeting) shall be limited to only such matters, including the nomination and election of directors, as shall be brought properly before such meeting in compliance with the procedures set forth in this Section 1.11 and in Section 1.12, as the case may be.

(b) For any matter to be properly brought before any annual meeting of stockholders, the matter must be (i) specified in the notice of annual meeting given by or at the direction of the Board of Directors, (ii) otherwise brought before the annual meeting by or at the direction of the Board of Directors, (iii) brought before the annual

meeting in the manner specified in this Section 1.11(b) (x) by a stockholder that holds of record stock of the Corporation entitled to vote at the annual meeting on such matter (including any election of a director) or (y) by a person (a "Nominee Holder") that holds such stock through a nominee or "street name" holder of record of such stock and can demonstrate to the Corporation such indirect ownership of, and such Nominee Holder's entitlement to vote, such stock on such matter or (iv) brought before the annual meeting in accordance with Section 1.12.

In addition to any other requirements under applicable law, the certificate of incorporation and these by-laws, and except as provided in Section 1.12, persons nominated by stockholders for election as directors of the Corporation and any other proposals by stockholders shall be properly brought before an annual meeting of stockholders only if notice of any such matter to be presented by a stockholder at such meeting (a "Stockholder Notice") shall be delivered to a Secretary at the principal executive office of the Corporation not less than ninety nor more than one hundred and twenty days prior to the first anniversary date of the annual meeting for the preceding year; provided, however, that if and only if the annual meeting is not scheduled to be held within a period that commences thirty days before and ends thirty days after such anniversary date (an annual meeting date outside such period being referred to herein as an "Other Meeting Date"), such Stockholder Notice shall be given in the manner provided herein by the later of (i) the close of business on the date ninety days prior to such Other Meeting Date or (ii) the close of business on the tenth day following the date on which such Other Meeting Date is first publicly announced or disclosed.

Any stockholder desiring to nominate any person or persons (as the case may be) for election as a director or directors of the Corporation at an annual meeting of stockholders pursuant to this Section 1.11 shall deliver, as part of such Stockholder Notice, a statement in writing setting forth the name of the person or persons to be nominated, the number and class of all shares of each class of stock of the Corporation owned of record and beneficially by each such person, as reported to such stockholder by such person, the factual information regarding each such person required by paragraphs (a), (e) and (f) of Item 401 of Regulation S-K adopted by the Securities and Exchange Commission, each such person's signed consent to serve as a director of the Corporation if elected, such stockholder's name and address, the number and class of all shares of each class of stock of the Corporation owned of record and beneficially by such stockholder and, in the case of a Nominee Holder, evidence establishing such Nominee Holder's indirect ownership of stock and entitlement to vote such stock for the election of directors at the annual meeting. The Corporation may require any proposed director nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the Corporation and to comply with applicable law. If a stockholder is entitled to vote only for a specific class or category of directors at a meeting (annual or special), such stockholder's right to nominate one or more individuals for election as a director at the meeting shall be limited to such class or category of directors.

Any stockholder who gives a Stockholder Notice of any matter (other than a nomination for director or as provided in Section 1.12) proposed to be brought before an annual meeting of stockholders shall deliver, as part of such Stockholder Notice, the text of the proposal to be presented and a brief written statement of the reasons why such stockholder favors the proposal and setting forth such stockholder's name and address, the number and class of all shares of each class of stock of the Corporation owned of record and beneficially by such stockholder, any material interest of such stockholder in the matter proposed (other than as a stockholder), if applicable, and, in the case of a Nominee Holder, evidence establishing such Nominee Holder's indirect ownership of stock and entitlement to vote such stock on the matter proposed at the annual meeting.

As used in these by-laws (other than for purposes of Section 1.12), shares "beneficially owned" shall mean all shares which such person is deemed to beneficially own pursuant to Rules 13d-3 and 13d-5 under the Exchange Act.

Notwithstanding any provision of this Section 1.11 to the contrary, in the event that the number of directors to be elected to the Board of Directors of the Corporation at the next annual meeting of stockholders is increased by virtue of an increase in the size of the Board of Directors and either all of the nominees for director at the next annual meeting of stockholders or the size of the increased Board of Directors is not publicly announced or disclosed by the Corporation at least one hundred days prior to the first anniversary of the preceding year's annual meeting, a Stockholder Notice shall also be considered timely under this Section 1.11, but only with respect to nominees to stand for election at the next annual meeting as the result of any new positions created by such increase, if it shall be delivered to a Secretary at the principal executive office of the Corporation not later than the close of business on the tenth day following the first day on which all such nominees or the size of the increased Board of Directors shall have been publicly announced or disclosed.

(c) For any matter to be properly brought before a special meeting of stockholders, the matter must be set forth in the Corporation's notice of such meeting given by or at the direction of the Board of Directors or by the Secretary of the Company pursuant to Section 1.2(a)(ii). In the event the Corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any stockholder entitled to vote for the election of such director(s) at such meeting may nominate a person or persons (as the case may be) for election to such position(s) as are specified in the Corporation's notice of such meeting, but only if a Stockholder Notice containing the information required by the third paragraph of Section 1.11(b) hereof shall be delivered to a Secretary at the principal executive office of the Corporation not later than the close of business on the tenth day following the first day on which the date of the special meeting and either the names of all nominees proposed by the Board of Directors to be elected at such meeting or the number of directors to be elected shall have been publicly announced or disclosed.

(d) For purposes of this Section 1.11, a matter shall be deemed to have been "publicly announced or disclosed" if such matter is disclosed in a press release reported by the Dow Jones News Service, the Associated Press or a comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission.

(e) In no event shall the postponement or adjournment of an annual meeting already publicly noticed or a special meeting, or any announcement thereof, commence a new period for the giving of notice as provided in this Section 1.11. This Section 1.11 shall not apply to (i) any stockholder proposal made pursuant to Rule 14a-8 under the Exchange Act, (ii) any nomination of a director in an election in which only the holders of one or more series of Preferred Stock of the Corporation issued pursuant to Article FOURTH of the certificate of incorporation are entitled to vote (unless otherwise provided in the terms of such stock), (iii) any director nomination pursuant to Section 1.12 or (iv) any Stockholder Requested Special Meeting except as specifically provided in Section 1.2(b).

(f) The chairman of any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting, shall have the power and duty to determine whether notice of nominees and other matters proposed to be brought before a meeting has been duly given in the manner provided in this Section 1.11 or Section 1.2, as applicable and, if not so given, shall direct and declare at the meeting that such nominees and other matters shall not be considered.

Section 1.12 Stockholder Nominations Included in the Corporation's Proxy Materials.

(a) Inclusion of Proxy Access Nominee in Proxy Statement. Subject to the provisions of this Section 1.12, if expressly requested in the relevant Nomination Notice (as defined below), the Corporation shall include in its proxy statement for any annual meeting of stockholders (but not at any special meeting of stockholders):

(1) the name of any person nominated for election (the "Proxy Access Nominee"), which shall also be included on the Corporation's form of proxy and ballot, by any Nominating Stockholder (as defined below);

(2) disclosure about the Proxy Access Nominee and the Nominating Stockholder required under the rules of the Securities and Exchange Commission or other applicable law to be included in the proxy statement;

(3) any statement included by the Nominating Stockholder in the Nomination Notice for inclusion in the proxy statement in support of the Proxy Access Nominee's election to the Board of Directors (subject, without limitation, to Section 1.12(e)(ii)), if such statement does not exceed 500 words; and

(4) any other information that the Corporation or the Board of Directors determines, in their discretion, to include in the proxy statement relating to the nomination of the Proxy Access Nominee, including, without limitation, (1) any statement in opposition to the nomination, (2) any of the information provided pursuant to this Section 1.12 and (3) any solicitation materials or related information with respect to the Proxy Access Nominee.

For purposes of this Section 1.12, any determination to be made by the Board of Directors may be made by the Board of Directors, a committee of the Board or any officer of the Corporation designated by the Board of Directors or a committee of the Board and any such determination shall be final and binding on the Corporation, any Eligible Holder, any Nominating Stockholder, any Proxy Access Nominee and any other person so long as made in good faith (without any further requirements). The chairman of any annual meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting, shall have the power and duty to determine whether a Proxy Access Nominee has been nominated in accordance with the requirements of this Section 1.12 and, if not so nominated, shall direct and declare at the meeting that such Proxy Access Nominee shall not be considered.

(b) Maximum Number of Proxy Access Nominees.

(1) The Corporation shall not be required to include in the proxy statement for an annual meeting of stockholders more Proxy Access Nominees than that number of directors constituting the greater of (1) two or (2) twenty percent of the total number of directors of the Corporation on the last day on

which a Nomination Notice may be submitted pursuant to this Section 1.12 (rounded down to the nearest whole number) (the "Maximum Number"). In the event that one or more vacancies for any reason occurs on the Board of Directors after the deadline set forth in Section 1.12(d) below but before the date of the annual meeting, and the Board of Directors resolves to reduce the size of the board in connection therewith, the Maximum Number shall be calculated based on the number of directors in office as so reduced. The Maximum Number for a particular annual meeting shall be reduced by (1) Proxy Access Nominees who are subsequently withdrawn, (2) Proxy Access Nominees that the Board of Directors itself decides to nominate for election at such annual meeting and (3) the number of incumbent directors of the Corporation who had been Proxy Access Nominees with respect to any of the preceding two annual meetings of stockholders and whose reelection at the upcoming annual meeting is being recommended by the Board of Directors.

(2) If the number of Proxy Access Nominees pursuant to this Section 1.12 for any annual meeting of stockholders exceeds the Maximum Number then, promptly upon notice from the Corporation, each Nominating Stockholder will select one Proxy Access Nominee for inclusion in the proxy statement until the Maximum Number is reached, going in order of the amount (largest to smallest) of the ownership position as disclosed in each Nominating Stockholder's Nomination Notice, with the process repeated if the Maximum Number is not reached after each Nominating Stockholder has selected one Proxy Access Nominee. If, after the deadline for submitting a Nomination Notice as set forth in Section 1.12(d), a Nominating Stockholder becomes ineligible or withdraws its nomination or a Proxy Access Nominee becomes unwilling to serve on the Board of Directors, whether before or after the mailing of the definitive proxy statement, then the nomination shall be disregarded, and the Corporation (1) shall not be required to include in its proxy statement or on any ballot or form of proxy the disregarded Proxy Access Nominee or any successor or replacement nominee proposed by the Nominating Stockholder or by any other Nominating Stockholder and (2) may otherwise communicate to its stockholders, including without limitation by amending or supplementing its proxy statement or ballot or form of proxy, that the Proxy Access Nominee will not be included as a Proxy Access Nominee in the proxy statement or on any ballot or form of proxy and will not be voted on at the annual meeting.

(c) Eligibility of Nominating Stockholder.

(1) An "Eligible Holder" is a person who has either (1) been a record holder of the shares of common stock used to satisfy the eligibility requirements in this Section 1.12(c) continuously for the three-year period specified in Subsection (ii) below or (2) provides to a Secretary of the Corporation, within the time period referred to in Section 1.12(d), evidence of continuous ownership of such shares for such three-year period from one or more securities intermediaries in a form that the Board of Directors determines would be deemed acceptable for purposes of a shareholder proposal under Rule 14a-8(b)(2) under the Exchange Act (or any successor rule).

(2) An Eligible Holder or group of up to fifteen Eligible Holders may submit a nomination in accordance with this Section 1.12 only if the person or group (in the aggregate) has continuously owned at least the Minimum Number (as defined below) of shares of the Corporation's common stock throughout the

three-year period preceding and including the date of submission of the Nomination Notice, and continues to own at least the Minimum Number through the date of the annual meeting. Each Eligible Holder or group of up to fifteen Eligible Holders that submits a nomination in accordance with this Section 1.12 and has satisfied, as determined by the Board of Directors, all applicable conditions and complied with all applicable procedures set forth in this Section 1.12 is a "Nominating Stockholder". A group of funds that are (i) under common management and investment control, (ii) under common management and funded primarily by a single employer or (iii) a "group of investment companies," as such term is defined in Section 12(d)(1)(G)(ii) of the Investment Company Act of 1940, as amended, shall be treated as one Eligible Holder if such Eligible Holder shall provide together with the Nomination Notice documentation reasonably satisfactory to the Corporation that demonstrates that the funds meet the criteria set forth in (i), (ii) or (iii) hereof. For the avoidance of doubt, in the event of a nomination by a Nominating Stockholder that includes more than one Eligible Holder, any and all requirements and obligations for an individual Eligible Holder that are set forth in this Section 1.12, including the minimum holding period, shall apply to each individual Eligible Holder comprising the Nominating Stockholder; provided, however, that the Minimum Number shall apply to the ownership of the Nominating Stockholder in the aggregate. Should any Eligible Holder withdraw from a group of Eligible Holders constituting a Nominating Stockholder at any time prior to the annual meeting of stockholders, the Nominating Stockholder shall only be deemed to own the shares held by the remaining Eligible Holders. As used in this Section 1.12, any reference to a "group" or "group of Eligible Holders" refers to any Nominating Stockholder that consists of more than one Eligible Holder and to all the Eligible Holders that make up such Nominating Stockholder.

(3) The "Minimum Number" of shares of the Corporation's common stock means three percent of the number of outstanding shares of common stock as of the most recent date for which such amount is given in any filing by the Corporation with the Securities and Exchange Commission prior to the submission of the Nomination Notice.

(4) For purposes of this Section 1.12, an Eligible Holder "owns" only those outstanding shares of the Corporation as to which the Eligible Holder possesses both (1) the full voting and investment rights pertaining to the shares and (2) the full economic interest in (including the opportunity for profit and risk of loss on) such shares; provided that the number of shares calculated in accordance with clauses (1) and (2) shall not include any shares (A) sold by such Eligible Holder or any of its affiliates in any transaction that has not been settled or closed, (B) purchased by such Eligible Holder or any of its affiliates but the purchase has not yet been settled or closed, (C) borrowed by such Eligible Holder or any of its affiliates for any purpose or purchased by such Eligible Holder or any of its affiliates pursuant to an agreement to resell or subject to any other obligation to resell to another person, or (D) subject to any option, warrant, forward contract, swap, contract of sale, other derivative or similar agreement entered into by such Eligible Holder or any of its affiliates, whether any such instrument or agreement is to be settled with shares or with cash based on the notional amount or value of outstanding shares of the Corporation, in any such case which instrument or agreement has, or is intended to have, the purpose or effect of (x) reducing in any manner, to any extent or at any time in the future, such Eligible Holder's or any of its affiliates' full right to vote or direct the voting of

any such shares, and/or (y) hedging, offsetting, or altering to any degree, gain or loss arising from the full economic ownership of such shares by such Eligible Holder or any of its affiliates.

An Eligible Holder "owns" shares held in the name of a nominee or other intermediary so long as the Eligible Holder retains the right to instruct how the shares are voted with respect to the election of directors and possesses the full economic interest in the shares. An Eligible Holder's ownership of shares shall be deemed to continue during any period in which the Eligible Holder has delegated any voting power by means of a proxy, power of attorney, or other similar instrument or arrangement that is revocable at any time by the Eligible Holder. An Eligible Holder's ownership of shares shall be deemed to continue during any period in which the Eligible Holder has loaned such shares provided that the Eligible Holder has the power to recall such loaned shares within a reasonable period of time and will recall such loaned shares as of the date of the annual meeting. The terms "owned," "owning" and other variations of the word "own" shall have correlative meanings. Whether outstanding shares of the Corporation are "owned" for these purposes shall be determined by the Board of Directors.

(5) No Eligible Holder shall be permitted to be a part of more than one group of Eligible Holders constituting a Nominating Stockholder, and if any Eligible Holder appears as a member of more than one group, such Eligible Holder shall be deemed to be a member of the group of Eligible Holders that has the largest ownership position as reflected in the Nomination Notice.

(6) Any Eligible Holder (including each Eligible Holder whose stock ownership is counted as part of a group for the purposes of qualifying as a Nominating Stockholder) whose Proxy Access Nominee is elected as a director at the annual meeting of stockholders will not be eligible to nominate or participate in the nomination of a Proxy Access Nominee for the following two annual meetings of stockholders pursuant to this Section 1.12 other than nominating (either individually or as a part of a group constituting a Nominating Stockholder) a Proxy Access Nominee previously nominated and elected pursuant to this Section 1.12 by such Eligible Holder or a group of Eligible Holders of which such Eligible Holder was a member.

(d) Nomination Notice. To nominate a Proxy Access Nominee, the Nominating Stockholder must, no earlier than one hundred and fifty days and no later than one hundred and twenty days before the anniversary of the date that the Corporation mailed its proxy statement for the prior year's annual meeting of stockholders, submit to a Secretary of the Corporation at the principal executive office of the Corporation all of the following information and documents (collectively, the "Nomination Notice"); provided, however, that if and only if the annual meeting is scheduled for an Other Meeting Date, the Nomination Notice shall be given in the manner provided herein by the later of (1) one hundred and fifty days prior to such Other Meeting Date and (2) the tenth day following the date such Other Meeting Date is first publicly announced or disclosed:

(1) A Schedule 14N (or any successor form) relating to the Proxy Access Nominee, completed and filed with the Securities and Exchange Commission by the Nominating Stockholder as applicable, in accordance with Securities and Exchange Commission rules;

(2) A written notice of the nomination of such Proxy Access Nominee that includes the following additional information, agreements, representations and warranties by the Nominating Stockholder (including each group member):

(i) the information required with respect to the nomination of directors pursuant to Section 1.11(b) of these by-laws;

(ii) the details of any relationship that existed within the past three years and that would have been described pursuant to Item 6(e) of Schedule 14N (or any successor item) if it existed on the date of submission of the Schedule 14N;

(iii) a representation and warranty that the Nominating Stockholder did not acquire, and is not holding, securities of the Corporation for the purpose or with the effect of influencing or changing control of the Corporation;

(iv) a representation and warranty that the Proxy Access Nominee's candidacy or, if elected, Board membership would not violate applicable state or federal law or the rules of any stock exchange on which the Corporation's securities are traded;

(v) a representation and warranty that the Proxy Access Nominee:

(A) is not aware of any direct or indirect relationship the Proxy Access Nominee has with the Corporation other than those relationships that have been deemed categorically immaterial pursuant to the Corporation's Policy Regarding Director Independence Determinations as most recently published on its website and otherwise qualifies as independent under the bright-line rules of the primary stock exchange on which the Corporation's securities are traded;

(B) is not aware of any information that would make the Proxy Access Nominee fail to meet the audit committee and compensation committee independence requirements under the rules of the primary stock exchange on which the Corporation's securities are traded;

(C) is not aware of any information that would make the Proxy Access Nominee fail to be a "non-employee director" for the purposes of Rule 16b-3 under the Exchange Act (or any successor rule);

(D) is not aware of any information that would make the Proxy Access Nominee fail to be an "outside director" for the purposes of Section 162(m) of the Internal Revenue Code (or any successor provision); and

(E) is not and has not been subject to any event specified in Rule 506(d)(1) of Regulation D (or any successor rule) under the Securities Act of 1933 or Item 401(f) of Regulation S-K

(or any successor rule) under the Exchange Act, without reference to whether the event is material to an evaluation of the ability or integrity of the Proxy Access Nominee;

(vi) a representation and warranty that the Nominating Stockholder satisfies the eligibility requirements set forth in Section 1.12(c) and has provided evidence of ownership to the extent required by Section 1.12(c)(i);

(vii) a representation and warranty that the Nominating Stockholder intends to continue to satisfy the eligibility requirements described in Section 1.12(c) through the date of the annual meeting and currently intends in good faith to continue to hold the Minimum Number of shares for at least one year following the annual meeting; provided, however, that any Nominating Stockholder that is a registered open-end mutual fund under the Investment Company Act of 1940, and that seeks to replicate an index, will not violate this requirement as a result of changes to its common stock holdings in response to changes in the index or weightings of the securities in the index;

(viii) a statement detailing whether the Proxy Access Nominee is experienced in matters of risk management for purposes of Regulation YY of the Federal Reserve Board;

(ix) details of any position of the Proxy Access Nominee as an officer or director of any competitor (that is, any entity that produces products or provides services that compete with or are alternatives to the principal products produced or services provided by the Corporation or its affiliates) of the Corporation, within the three years preceding the submission of the Nomination Notice;

(x) details of any relationship between the Proxy Access Nominee and any entity that would require disclosure on Schedule 13D as if the Proxy Access Nominee was required to file a Schedule 13D with respect to the company;

(xi) details of any shares of the Corporation owned by the Proxy Access Nominee that are (A) pledged by the Proxy Access Nominee or otherwise subject to a lien, charge or other encumbrance or (B) subject to any option, warrant, forward contract, swap, contract of sale, other derivative or similar agreement entered into by such Proxy Access Nominee, whether any such instrument or agreement is to be settled with shares or with cash based on the notional amount or value of outstanding shares of the Corporation, in any such case which instrument or agreement has, or is intended to have, the purpose or effect of (x) reducing in any manner, to any extent or at any time in the future, such Proxy Access Nominee's full right to vote or direct the voting of any such shares, and/or (y) hedging, offsetting, or altering to any degree, gain or loss arising from the full economic ownership of such shares by such Proxy Access Nominee;

(xii) details of any compensatory, payment or other financial agreement, arrangement or understanding with any person or entity in connection with service or action as a director of the Corporation;

(xiii) a representation and warranty that the Nominating Stockholder will not engage in a "solicitation" within the meaning of Rule 14a-1(l) (without reference to the exception in Section 14a-(l)(2)(iv)) (or any successor rules) with respect to the annual meeting, other than with respect to its Proxy Access Nominee or any nominee of the Board of Directors;

(xiv) a representation and warranty that the Nominating Stockholder will not use any proxy card other than the Corporation's proxy card in soliciting stockholders in connection with the election of a Proxy Access Nominee at the annual meeting;

(xv) if desired, a statement for inclusion in the proxy statement in support of the Proxy Access Nominee's election to the Board of Directors, provided that such statement shall not exceed 500 words and shall fully comply with Section 14 of the Exchange Act and the rules and regulations thereunder, including Rule 14a-9; and

(xvi) in the case of a nomination by a Nominating Stockholder comprised of a group, the designation by all such Eligible Holders of one Eligible Holder that is authorized to act on behalf of the Nominating Stockholder with respect to matters relating to the nomination, including withdrawal of the nomination;

(3) An executed agreement, in a form deemed satisfactory by the Board of Directors, pursuant to which the Nominating Stockholder (including in the case of a group, each Eligible Holder in that group) agrees:

(i) to comply with all applicable laws, rules and regulations in connection with the nomination, solicitation and election;

(ii) to file any written solicitation or other communication with the Corporation's stockholders relating to one or more of the Corporation's directors or director nominees or any Proxy Access Nominee with the Securities and Exchange Commission, regardless of whether any such filing is required under rule or regulation or whether any exemption from filing is available for such materials under any rule or regulation;

(iii) to assume all liability stemming from an action, suit or proceeding concerning any actual or alleged legal or regulatory violation arising out of any communication by the Nominating Stockholder with the Corporation, its stockholders or any other person in connection with the nomination or election of directors, including, without limitation, the Nomination Notice;

(iv) to indemnify and hold harmless (jointly with all other Eligible Holders, in the case of a group of Eligible Holders) the Corporation and each of its directors, officers and employees individually

against any liability, loss, damages, expenses or other costs (including attorneys' fees) incurred in connection with any threatened or pending action, suit or proceeding, whether legal, administrative or investigative, against the Corporation or any of its directors, officers or employees arising out of or relating to a failure or alleged failure of the Nominating Stockholder to comply with, or any breach or alleged breach of, its obligations, agreements or representations under this Section 1.12;

(v) in the event that any information included in the Nomination Notice, or any other communication by the Nominating Stockholder (including with respect to any Eligible Holder included in a group), with the Corporation, its stockholders or any other person in connection with the nomination or election ceases to be true and accurate in all material respects (or due to a subsequent development omits a material fact necessary to make the statements made not misleading), or that the Nominating Stockholder (including any Eligible Holder included in a group) has failed to continue to satisfy the eligibility requirements described in Section 1.12(c), to promptly (and in any event within 48 hours of discovering such misstatement or omission) notify the Corporation and any other recipient of such communication of the misstatement or omission in such previously provided information and of the information that is required to correct the misstatement or omission; and

(4) An executed agreement, in a form deemed satisfactory by the Board of Directors, by the Proxy Access Nominee:

(i) to provide to the Corporation such other information, including completion of the Corporation's director questionnaire, as it may reasonably request;

(ii) that the Proxy Access Nominee has read and agrees, if elected, to serve as a member of the Board of Directors, to adhere to the Corporation's Corporate Governance Guidelines and Code of Business Conduct and Ethics and any other Corporation policies and guidelines applicable to directors; and

(iii) that the Proxy Access Nominee is not and will not become a party to any agreement, arrangement or understanding with any person or entity as to how the Proxy Access Nominee would vote or act on any issue or question as a director.

The information and documents required by this Section 1.12(d) shall be (A) provided with respect to and executed by each Eligible Holder or, in the case of a Nominating Stockholder comprised of a group of Eligible Holders, each Eligible Holder in that group; and (B) provided with respect to the persons specified in Instruction 1 to Items 6(c) and (d) of Schedule 14N (or any successor item) in the case of a Nominating Stockholder or Eligible Holder that is an entity. The Nomination Notice shall be deemed submitted on the date on which all the information and documents referred to in this Section 1.12(d) (other than such information and documents contemplated to be provided after the date the Nomination Notice is provided) have been delivered to or, if sent by mail, received by a Secretary of the Corporation.

(e) Exceptions.

(1) Notwithstanding anything to the contrary contained in this Section 1.12, the Corporation may omit from its proxy statement any Proxy Access Nominee and any information concerning such Proxy Access Nominee (including a Nominating Stockholder's statement in support) and no vote on such Proxy Access Nominee will occur (notwithstanding that proxies in respect of such vote may have been received by the Corporation), and the Nominating Stockholder may not, after the last day on which a Nomination Notice would be timely, cure in any way any defect preventing the nomination of the Proxy Access Nominee, if:

(i) the Corporation receives a notice pursuant to Section 1.11(b) of these by-laws that any stockholder intends to nominate a candidate for director at the annual meeting;

(ii) if another person is engaging in a "solicitation" within the meaning of Rule 14a-1(l) under the Exchange Act in support of the election of any individual as a director at the applicable annual meeting of stockholders other than a nominee of the Board of Directors and other than as permitted by this Section 1.12;

(iii) the Nominating Stockholder or the designated Eligible Holder that is authorized to act on behalf of the Nominating Stockholder, as applicable, or any qualified representative thereof, does not appear at the annual meeting of stockholders to present the nomination submitted pursuant to this Section 1.12 or the Nominating Stockholder withdraws its nomination;

(iv) the Board of Directors determines that such Proxy Access Nominee's nomination or election to the Board of Directors would result in the Corporation violating or failing to be in compliance with the Corporation's by-laws or certificate of incorporation or any applicable law, rule or regulation to which the Corporation is subject, including any rules or regulations of any stock exchange on which the Corporation's securities are traded;

(v) the Proxy Access Nominee was nominated for election to the Board of Directors pursuant to this Section 1.12 at one of the Corporation's two preceding annual meetings of stockholders and either (A) withdrew or became ineligible or (B) received a vote of less than twenty percent of the shares of common stock entitled to vote for such Proxy Access Nominee;

(vi) the Proxy Access Nominee (A) is an officer or director of a competitor, as defined for purposes of Section 8 of the Clayton Antitrust Act of 1914, as amended or (B) is a director, trustee, officer or employee with management functions for any depository institution, depository institution holding company or entity that has been designated as a Systemically Important Financial Institution, each as defined in the Depository Institution Management Interlocks Act, provided, however, that this clause (B) shall apply only so long as the Corporation is subject to compliance with Section 164 of the Dodd-Frank Wall Street Reform and Consumer Protection Act; or

(vii) the Corporation is notified, or the Board of Directors determines, that a Nominating Stockholder has failed to continue to satisfy the eligibility requirements described in Section 1.12(c), any of the representations and warranties made in the Nomination Notice cease to be true and accurate in all material respects (or omit a material fact necessary to make the statement not misleading), the Proxy Access Nominee becomes unwilling or unable to serve on the Board of Directors or any material violation or breach occurs of the obligations, agreements, representations or warranties of the Nominating Stockholder or the Proxy Access Nominee under this Section 1.12.

(2) Notwithstanding anything to the contrary contained in this Section 1.12, the Corporation may omit from its proxy statement, or may supplement or correct, any information, including all or any portion of the statement in support of the Proxy Access Nominee included in the Nomination Notice, if the Board of Directors determines that:

(i) such information is not true in all material respects or omits a material statement necessary to make the statements made not misleading;

(ii) such information directly or indirectly impugns character, integrity or personal reputation of, or directly or indirectly makes charges concerning improper, illegal or immoral conduct or associations, without factual foundation, with respect to any person; or

(iii) the inclusion of such information in the proxy statement would otherwise violate the Securities and Exchange Commission proxy rules or any other applicable law, rule or regulation.

ARTICLE II

Board of Directors

Section 2.1 Powers; Number; Qualifications. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors, except as may be otherwise required by law or provided in the certificate of incorporation. The number of directors of the Corporation shall be fixed only by resolution of the Board of Directors from time to time. If the holders of any class or classes of stock or series thereof are entitled by the certificate of incorporation to elect one or more directors, the preceding sentence shall not apply to such directors and the number of such directors shall be as provided in the terms of such stock. Directors need not be stockholders at the time of election or appointment.

Section 2.2 Election; Term of Office; Vacancies. Directors elected at each annual or special meeting of stockholders shall hold office until the next annual meeting of stockholders, and until their successors are elected and qualified or until their earlier resignation or removal. Each director shall be elected by a majority of the votes cast for or against the director at any meeting for the election of directors, provided that if the number of director nominees exceeds the number of directors to be elected, the directors shall be elected by a plurality of the votes of the shares present in person or represented by proxy at any such meeting and entitled to vote on the election of directors. If an incumbent director is nominated at an annual meeting of stockholders but

is not elected, the director shall immediately tender his or her resignation to the Board of Directors. Vacancies and newly created directorships resulting from any increase in the authorized number of directors (other than any directors elected in the manner described in the next sentence) or from any other cause shall be filled by, and only by, a majority of the directors then in office, although less than a quorum, or by the sole remaining director. Whenever the holders of any class or classes of stock or series thereof are entitled by the certificate of incorporation to elect one or more directors, vacancies and newly created directorships of such class or classes or series may be filled by, and only by, a majority of the directors elected by such class or classes or series then in office, or by the sole remaining director so elected. Any director elected or appointed to fill a vacancy or a newly created directorship shall hold office until the next annual meeting of stockholders, and until his or her successor is elected and qualified or until his or her earlier resignation or removal.

Section 2.3 Regular Meetings. Regular meetings of the Board of Directors may be held at such places within or without the State of Delaware and at such times as the Board may from time to time determine, and if so determined notice thereof need not be given.

Section 2.4 Special Meetings. Special meetings of the Board of Directors may be held at any time or place within or without the State of Delaware whenever called by the Board, by a Chairman of the Board, if any, by a Vice Chairman of the Board, if any, by a Chairperson of the Corporate Governance and Nominating Committee, if any, by a Lead Director, if any, by a Chief Executive Officer, if any, by a President, if any, by a Chief Operating Officer, if any, or by any two directors. Reasonable notice thereof shall be given by the person or persons calling the meeting.

Section 2.5 Participation in Meetings by Remote Communication Permitted. Unless otherwise restricted by the certificate of incorporation or these by-laws, members of the Board of Directors, or any committee designated by the Board, may participate in a meeting of the Board or of such committee, as the case may be, by means of conference telephone, video or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this by-law shall constitute presence in person at such meeting.

Section 2.6 Quorum; Vote Required for Action. At each meeting of the Board of Directors, a majority of the number of directors equal to (i) the total number of directors fixed by resolution of the board of directors (including any vacancies) plus (ii) the number of directors elected by a holder or holders of Preferred Stock voting separately as a class, as described in the fourth paragraph of Article EIGHTH of the certificate of incorporation (including any vacancies), shall constitute a quorum for the transaction of business. The vote of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board unless the certificate of incorporation or these by-laws shall require a vote of a greater number. In case at any meeting of the Board a quorum shall not be present, the members or a majority of the members of the Board present may adjourn the meeting from time to time until a quorum shall be present.

Section 2.7 Organization. Meetings of the Board of Directors shall be presided over by a Chairman of the Board, if any, or in the absence of a Chairman of the Board, by a Lead Director, if any, or in the absence of a Lead Director, by a Vice Chairman of the Board, if any, or in the absence of a Vice Chairman of the Board, by a Chief Executive Officer, or in the absence of a Chief Executive Officer, by a President, or in

the absence of a President, by a Chief Operating Officer, or in the absence of a Chief Operating Officer, by a chairman chosen at the meeting. A Secretary, or in the absence of a Secretary an Assistant Secretary, shall act as secretary of the meeting, but in the absence of a Secretary and any Assistant Secretary the chairman of the meeting may appoint any person to act as secretary of the meeting.

Section 2.8 Action by Directors Without a Meeting. Unless otherwise restricted by the certificate of incorporation or these by-laws, any action required or permitted to be taken at any meeting of the Board of Directors, or of any committee thereof, may be taken without a meeting if all members of the Board or of such committee, as the case may be, then in office consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or committee.

Section 2.9 Compensation of Directors. Unless otherwise restricted by the certificate of incorporation or these by-laws, the Board of Directors shall have the authority to fix the compensation of directors.

Section 2.10 Director Resignation and Removal. (a) Any director may resign at any time upon written notice to the Board of Directors or to a Chairman of the Board, a Lead Director, a Chairperson of the Corporate Governance and Nominating Committee or a Secretary. Such resignation shall take effect at the time specified therein and, unless otherwise specified therein (and except for a resignation described in subsection (b) below), no acceptance of such resignation shall be necessary to make it effective. No director may be removed except as provided in the certificate of incorporation.

(b) In the case of a resignation required to be tendered under Section 2.2 of these by-laws, the Board of Directors will determine, through a process managed by the Corporate Governance and Nominating Committee and excluding the incumbent director in question, whether to accept the resignation at or before its next regularly scheduled Board meeting after the date of the meeting for the election of directors. Absent a significant reason for the director to remain on the Board of Directors, the Board shall accept the resignation. The Board's decision and an explanation of any determination not to accept the director's resignation shall be disclosed promptly in a Form 8-K filed with the United States Securities and Exchange Commission.

ARTICLE III

Committees

Section 3.1 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors or in these by-laws, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to the following matters: (i) approving or adopting, or

recommending to the stockholders, any action or matter expressly required by law to be submitted to stockholders for approval or (ii) adopting, amending or repealing these by-laws.

Section 3.2 Committee Rules. Unless the Board of Directors otherwise provides, each committee designated by the Board may adopt, amend and repeal rules for the conduct of its business. In the absence of a provision by the Board or a provision in the rules of such committee to the contrary, a majority of the entire authorized number of members of such committee shall constitute a quorum for the transaction of business, the vote of a majority of the members present at a meeting at the time of such vote if a quorum is then present shall be the act of such committee, and in other respects each committee shall conduct its business in the same manner as the Board conducts its business pursuant to Article II of these by-laws.

ARTICLE IV

Officers

Section 4.1 Officers; Election or Appointment. The Board of Directors shall take such action as may be necessary from time to time to ensure that the Corporation has such officers as are necessary, under Section 5.1 of these by-laws and the Delaware General Corporation Law as currently in effect or as the same may hereafter be amended, to enable it to sign stock certificates. In addition, the Board of Directors at any time and from time to time may elect (i) one or more Chairmen of the Board and/or one or more Vice Chairmen of the Board from among its members, (ii) one or more Chief Executive Officers, one or more Presidents and/or one or more Chief Operating Officers, (iii) one or more Vice Presidents, one or more Treasurers and/or one or more Secretaries and/or (iv) one or more other officers, in the case of each of (i), (ii), (iii) and (iv) if and to the extent the Board deems desirable. The Board of Directors may give any officer such further designations or alternate titles as it considers desirable. In addition, the Board of Directors at any time and from time to time may authorize any officer of the Corporation to appoint one or more officers of the kind described in clauses (iii) and (iv) above. Any number of offices may be held by the same person and directors may hold any office unless the certificate of incorporation or these by-laws otherwise provide.

Section 4.2 Term of Office; Resignation; Removal; Vacancies. Unless otherwise provided in the resolution of the Board of Directors electing or authorizing the appointment of any officer, each officer shall hold office until his or her successor is elected or appointed and qualified or until his or her earlier resignation or removal. Any officer may resign at any time upon written notice to the Board or to such person or persons as the Board may designate. Such resignation shall take effect at the time specified therein, and unless otherwise specified therein no acceptance of such resignation shall be necessary to make it effective. The Board may remove any officer with or without cause at any time. Any officer authorized by the Board to appoint a person to hold an office of the Corporation may also remove such person from such office with or without cause at any time, unless otherwise provided in the resolution of the Board providing such authorization. Any such removal shall be without prejudice to the contractual rights of such officer, if any, with the Corporation, but the election or appointment of an officer shall not of itself create contractual rights. Any vacancy occurring in any office of the Corporation by death, resignation, removal or otherwise may be filled by the Board at any regular or special meeting or by an officer authorized by the Board to appoint a person to hold such office.

Section 4.3 Powers and Duties. The officers of the Corporation shall have such powers and duties in the management of the Corporation as shall be stated in these by-laws or in a resolution of the Board of Directors which is not inconsistent with these by-laws and, to the extent not so stated, as generally pertain to their respective offices, subject to the control of the Board. A Secretary or such other officer appointed to do so by the Board shall have the duty to record the proceedings of the meetings of the stockholders, the Board of Directors and any committees in a book to be kept for that purpose. The Board may require any officer, agent or employee to give security for the faithful performance of his or her duties.

ARTICLE V

Stock

Section 5.1 Certificates; Uncertificated Shares. The shares of stock in the Corporation shall be represented by certificates, provided that the Board of Directors of the Corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to any such shares represented by a certificate theretofore issued until such certificate is surrendered to the Corporation. Every holder of stock represented by certificates shall be entitled to have a certificate signed by or in the name of the Corporation by a Chairman or Vice Chairman of the Board or a President or Vice President, and by a Treasurer, Assistant Treasurer, Secretary or Assistant Secretary, representing the number of shares of stock in the Corporation owned by such holder. If such certificate is manually signed by one officer or manually countersigned by a transfer agent or by a registrar, any other signature on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue. Certificates representing shares of stock of the Corporation may bear such legends regarding restrictions on transfer or other matters as any officer or officers of the Corporation may determine to be appropriate and lawful.

If the Corporation is authorized to issue more than one class of stock or more than one series of any class, the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate which the Corporation shall issue to represent such class or series of stock, provided that, except as otherwise required by law, in lieu of the foregoing requirements, there may be set forth on the face or back of the certificate which the Corporation shall issue to represent such class or series of stock a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of such class or series of stock and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated shares of any class or series of stock, the Corporation shall send to the registered owner thereof a written notice containing the information required by law to be set forth or stated on certificates representing shares of such class or series or a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of such class or series and the qualifications, limitations or restrictions of such preferences and/or rights.

Except as otherwise provided by law or these by-laws, the rights and obligations of the holders of uncertificated shares and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

Section 5.2 Lost, Stolen or Destroyed Stock Certificates; Issuance of New Certificates. The Corporation may issue a new certificate of stock in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the Corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate.

ARTICLE VI

Miscellaneous

Section 6.1 Fiscal Year. The fiscal year of the Corporation shall be determined by the Board of Directors.

Section 6.2 Seal. The Corporation may have a corporate seal which shall have the name of the Corporation inscribed thereon and shall be in such form as may be approved from time to time by the Board of Directors. The corporate seal may be used by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

Section 6.3 Waiver of Notice of Meetings of Stockholders, Directors and Committees. Whenever notice is required to be given by law or under any provision of the certificate of incorporation or these by-laws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or members of a committee of directors need be specified in any written waiver of notice unless so required by the certificate of incorporation or these by-laws.

Section 6.4 Indemnification. The Corporation shall indemnify to the full extent permitted by law any person made or threatened to be made a party to any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person or such person's testator or intestate is or was a member of the Board of Directors of the Corporation, an officer of the Corporation appointed by resolution of the Board of Directors, or a member of the Shareholders' Committee acting pursuant to the Amended and Restated Shareholders' Agreement, dated as of May 7, 1999, among the Corporation and the Covered Persons listed on Appendix A thereto, as amended from time to time. Expenses, including attorneys' fees, incurred by any such person in defending any such action, suit or proceeding shall be paid or reimbursed by the Corporation promptly upon demand by such person and, if any such demand is made in advance of the final disposition of any such action, suit or proceeding, promptly upon receipt by the Corporation of an undertaking of such person to repay such expenses if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation. The rights provided to any person by this by-law shall be enforceable against the Corporation by such person, who shall be presumed to have

relied upon it in serving or continuing to serve in such capacity. In addition, the rights provided to any person by this by-law shall survive the termination of such person as any such member or officer. No amendment of this by-law shall impair the rights of any person arising at any time with respect to events occurring prior to such amendment.

Notwithstanding anything contained in this Section 6.4, except for proceedings to enforce rights provided in this Section 6.4, the Corporation shall not be obligated under this Section 6.4 to provide any indemnification or any payment or reimbursement of expenses to any person in connection with a proceeding (or part thereof) initiated by such person (which shall not include counterclaims or crossclaims initiated by others) unless the Board of Directors has authorized or consented to such proceeding (or part thereof) in a resolution adopted by the Board of Directors.

To the extent authorized from time to time in a resolution adopted by the Board of Directors (including a resolution authorizing officers of the Corporation to grant such rights), the Corporation may provide to any one or more persons, including without limitation any employee or other agent of the Corporation, or any director, officer, employee, agent, trustee, member, stockholder, partner, incorporator or liquidator of any subsidiary of the Corporation or any other enterprise, rights of indemnification and/or to receive payment or reimbursement of expenses, including attorneys' fees, with any such rights subject to the terms, conditions and limitations established pursuant to the Board resolution. Nothing in this Section 6.4 shall limit the power of the Corporation or the Board of Directors to provide rights of indemnification and to make payment and reimbursement of expenses, including attorneys' fees, to any person otherwise than pursuant to this Section 6.4.

Section 6.5 Interested Directors; Quorum. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, limited liability company, joint venture, trust, association or other unincorporated organization or other entity in which one or more of its directors or officers serve as directors, officers, trustees or in a similar capacity or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction, or solely because his or her or their votes are counted for such purpose, if: (i) the material facts as to his or her relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; (ii) the material facts as to his or her relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by a vote of the stockholders; or (iii) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified, by the Board, a committee thereof or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

Section 6.6 Form of Records. Any records maintained by the Corporation in the regular course of its business, including its stock ledger, books of account and minute books, may be kept on, or be in the form of, punch cards, magnetic tape, photographs, microphotographs or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

The Corporation shall so convert any records so kept upon the request of any person entitled to inspect the same.

Section 6.7 Laws and Regulations; Close of Business. (a) For purposes of these by-laws, any reference to a statute, rule or regulation of any governmental body means such statute, rule or regulation (including any successor thereto) as the same may be amended from time to time.

(b) Any reference in these by-laws to the close of business on any day shall be deemed to mean 5:00 P.M. New York time on such day, whether or not such day is a business day.

Section 6.8 Amendment of By-Laws. These by-laws may be amended, modified or repealed, and new by-laws may be adopted at any time, by the Board of Directors. Stockholders of the Corporation may adopt additional by-laws and amend, modify or repeal any by-law whether or not adopted by them, but only in accordance with Article SIXTH of the certificate of incorporation.

EXHIBIT 10.49

THE GOLDMAN SACHS GROUP, INC.
OUTSIDE DIRECTOR [ ] RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your _____ award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

1. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

2. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of RSUs awarded to you.

3. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

DELIVERY OF YOUR RSU SHARES

4. **Delivery.** RSU Shares (less applicable withholding) will be delivered in respect of your Outstanding RSUs reasonably promptly (but no more than 30 Business Days) after the Delivery Date, which will be the first Business Day in the third quarter of the Firm's fiscal year that occurs within a Window Period in the year following the year in which you cease to be a director of the Board. Unless otherwise determined by the Committee, delivery of the RSU Shares will be effected by book-entry credit to your Account and no delivery of RSU Shares will be made unless you have timely established your Account. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc.

DIVIDEND EQUIVALENT RIGHTS

5. **Dividend Equivalent Rights.** Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant.

ACCELERATED DELIVERY

6. **Accelerated Delivery in the Event of Conflicted Employment or Death.** In the event of your Conflicted Employment or death, your Outstanding Award will be treated as described in this Paragraph 6, and all other terms of this Award Agreement continue to apply.

(a) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If you accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 7(b)).

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated delivery described in Paragraph 6(a)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(b) Death. If you die, the RSU Shares underlying your Outstanding RSUs will be delivered to the representative of your estate as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

7. **Additional Terms, Conditions and Agreements**.

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan, provided that the Committee may determine not to apply the minimum withholding rate specified in Section 3.2.2 of the Plan.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Firm May Affix Legends and Place Stop Orders on RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable. GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(d) You Agree to Certain Consents. By accepting this Award, you have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable.

NON-TRANSFERABILITY

8. **Non-transferability**. Except as otherwise may be provided in this Paragraph 8 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 8 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which you may transfer some or all of your RSUs through a gift for no consideration to any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law, including adoptive relationships, any person sharing the recipient's household (other than a tenant or employee), a trust in which these persons have more than 50% of the beneficial interest, and any other entity in which these persons (or the recipient) own more than 50% of the voting interests.

GOVERNING LAW

9. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

10. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 10 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 10 and the other provisions of this Award Agreement, this Paragraph 10 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 4, 6(b) and 7 and the consents and other items specified in Section 3.3 of the Plan) are satisfied, and will occur by December 31 of the calendar year in which the Delivery Date occurs unless, in order to permit such conditions or restrictions to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date as may be permitted under Section 409A, including Regs. 1.409A-2(b)(7) (in conjunction with Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 7(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 6(b), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) Notwithstanding any provision of Paragraph 5 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be

paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(f) The timing of delivery or payment referred to in Paragraph 6(a)(i) will be the earlier of (i) the Delivery Date or (ii) within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, provided that such delivery or payment will be made, and any Committee action referred to in Paragraph 6(a)(i) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(g) Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(h) Delivery of RSU Shares in respect of this Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(i) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

AMENDMENT AND CONSTRUCTION

11. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; provided that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and provided further that the Committee expressly reserves the right to accelerate the delivery of the RSU Shares and in its discretion to provide that such Shares may not be transferable until the Delivery Date. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

12. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words “include,” “includes” and “including” will be deemed to be followed by the words “without limitation.” The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Board" means the Board of Directors of GS Inc.

(e) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(f) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(g) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(h) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(i) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(j) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, provided, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(k) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(l) "Firm" means GS Inc. and its subsidiaries and affiliates.

(m) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(n) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(o) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(p) "RSU Shares" means shares of Common Stock that underlie an RSU.

(q) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(r) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (provided that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.50

THE GOLDMAN SACHS GROUP, INC.
[_____] ONE-TIME RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your special _____ one-time award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 15.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of RSUs awarded to you and any applicable Vesting Dates and Delivery Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.** On each Vesting Date listed on your Award Statement, you will become Vested in the amount of Outstanding RSUs listed next to that date. When an RSU becomes Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery) continue to apply to Vested RSUs, and you can still forfeit Vested RSUs and any RSU Shares.**

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 12(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

DIVIDENDS

7. **Dividend Equivalent Rights and Dividends.** Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant.

FORFEITURE OF YOUR AWARD

8. **How You May Forfeit Your Award.** This Paragraph 8 sets forth the events that result in forfeiture of up to all of your RSUs and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend vesting of Outstanding RSUs or delivery of RSU Shares, (b) deliver any RSU Shares into an escrow account in accordance with Paragraph 12 (f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 8 have occurred. Paragraph 10 (relating to certain circumstances under which you will not forfeit your unvested RSUs upon Employment termination) and Paragraph 11 (relating to certain circumstances under which vesting and/or delivery may be accelerated) provide for exceptions to one or more provisions of this Paragraph 8.

(a) Unvested RSUs Forfeited if Your Employment Terminates. If your Employment terminates for any reason or you are otherwise no longer actively employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), your rights to your Outstanding RSUs that are not Vested will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(b) Vested and Unvested RSUs Forfeited if You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. If any of the following occurs before the applicable Delivery Date, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs:

(i) you, in any manner, directly or indirectly, (A) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (B) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (C) Solicit any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment with any Covered Enterprise or (D) on behalf of yourself or any person or Covered Enterprise hire, or participate in the hiring of, any Selected Firm Personnel or identify, or participate in the identification of, Selected Firm Personnel for potential hiring, whether as an employee or consultant or otherwise, or

(ii) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status (A) by a Covered Enterprise that you form, that bears your name, in which you are a partner, member or have similar status, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (B) by any Covered Enterprise where you have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Selected Firm Personnel.

(c) Vested and Unvested RSUs Forfeited upon Certain Events. If any of the following occurs your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the _____.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred before the applicable Delivery Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the applicable Delivery Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 15 or Section 3.17 of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding RSUs; *provided*, *however*, that your rights will only be terminated in respect of the RSUs that are replaced, substituted for or otherwise considered by such other entity in making its grant.

(viii) You Receive Compensation that this Award Is Intended to Replace. This Award is intended to replace or substitute for any award or compensation forgone with an entity to which you previously provided services, and such entity nevertheless delivers to you such award or compensation (including any cash, equity or other property (whether vested or unvested)), as determined by the Firm in its sole discretion.

REPAYMENT OF YOUR AWARD

9. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any RSU Shares for which the terms (including the terms for delivery) of the related RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(b) Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of RSUs that are forfeited or RSU Shares that are cancelled or required to be repaid), in accordance with Section 2.8.4 of the Plan.

(c) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(d) Any amount applied to satisfy tax withholding or other obligations with respect to any RSU, RSU Shares, dividend payments and payments under Dividend Equivalent Rights that are forfeited or required to be repaid.

EXCEPTIONS TO THE VESTING AND/OR DELIVERY DATES

10. **Circumstances Under Which You Will Not Forfeit Your Unvested RSUs on Employment Termination (but the Original Delivery Date Continues to Apply).** If your Employment terminates at a time when you meet the requirements for Extended Absence[, Retirement,] ["downsizing" or Approved Termination,] [each] as described below, then Paragraph 8(a) will not apply, and your Outstanding RSUs will be treated as described in this Paragraph 10. All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) [Extended Absence [or Retirement] and No Association With a Covered Enterprise.]

(i) Generally. If your Employment terminates by Extended Absence [or Retirement], your Outstanding RSUs that are not Vested will become Vested. **However, your rights to any Outstanding RSU that becomes Vested by this Paragraph 10 (a)[(i)] will terminate and no RSU Share will be delivered in respect of that RSU if you Associate With a Covered Enterprise on or before the originally scheduled Vesting Date for that RSU.**

(ii) [Special Treatment for Involuntary or Mutual Agreement Termination. The second sentence of Paragraph 10(a) [(i)] (relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (A) the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement."]

(b) [Downsizing. If (i) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes, your Outstanding RSUs that are not yet Vested will become Vested. Whether or not your Employment is terminated solely by reason of a "downsizing" will be determined by the Firm in its sole discretion.]

(c) [Approved Terminations of Program Analysts and Fixed-Term Employees. If the Firm classifies you as a "program analyst" or a "fixed-term" employee and your Employment terminates solely by reason of an Approved Termination (and you have not engaged in conduct constituting Cause), your Outstanding RSUs that are not yet Vested will become Vested.]

11. **Accelerated Vesting and/or Delivery in the Event of a Qualifying Termination After a Change in Control[, Conflicted Employment] or Death.** In the event of your Qualifying Termination After a Change in Control[, Conflicted Employment] or death, each as described below, then Paragraph 8(a) will not apply, your Outstanding Award will be treated as described in this Paragraph 11, and, except as set forth in Paragraph 11(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered. In addition, the forfeiture events in Paragraph 8 will not apply to your Award.

(b) [You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, (A) your Outstanding RSUs will Vest and (B) RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 12(b)). In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 12(b)).

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated vesting and/or delivery described in Paragraph 11(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).]

(c) Death. If you die, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered to the representative of your estate as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

12. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any

payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant, Vesting or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto). In no event, however, does this Paragraph 12(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSUs that become Vested on a Vesting Date and RSU Shares that become deliverable on a Delivery Date may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including,

without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when RSU Shares are delivered to you and you receive payment in respect of Dividend Equivalent Rights;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold RSUs, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 8(c)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your RSUs and subject previously delivered amounts to repayment under Paragraph 8(c)(iv);

(vii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 15 and Section 3.17 of the Plan; and

(viii) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

13. **Non-transferability.** Except as otherwise may be provided in this Paragraph 13 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 13 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of RSUs may transfer some or all of their RSUs through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

14. **Right of Offset.** Except as provided in Paragraph 17(h), the obligation to deliver RSU Shares or to make payments under Dividend Equivalent Rights under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

15. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

16. **Governing Law.** **THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

17. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 17 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 17 and the other provisions of this Award Agreement, this Paragraph 17 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 10[(a)(ii), 10](b), 11([b][c]) and 12 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-2(b)(7) (in conjunction with Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 12(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 11([b][c]), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 11(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 11(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 7 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(g) [The timing of delivery or payment referred to in Paragraph 11(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 11(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.]

(h) Paragraph 14 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

18. **Compliance of Award Agreement and Plan with Section 162(m).** If you are or become considered by GS Inc. to be one of its "covered employees" within the meaning of Section 162(m) of the Code, then you will be subject to Section 3.21.3 of the Plan, as a result of which delivery of your RSU Shares may be delayed.

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

19. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply and to limit the forfeitures and repayments that result under Paragraphs 8 and 9. [In addition, the Committee, in its sole discretion, may determine whether Paragraph[s] [10(a)(ii)] [and 10(b)] will apply upon a termination of Employment [and whether a termination of Employment constitutes an Approved Termination under Paragraph 10(c).]

20. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

21. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) ["Approved Termination" means that you are classified by the Firm as a "program analyst" or "fixed-term employee" and you (i) successfully complete the analyst program or fixed-term engagement, as applicable and determined by the Firm in its sole discretion, including remaining Employed through the completion date specified by the Firm, and (ii) terminate Employment immediately after the completion date without any "stay-on" or other agreement or understanding to continue Employment with the Firm. If you agree to stay with the Firm as an employee after your analyst program or fixed-term engagement ends and then later terminate Employment, you will not have an Approved Termination.]

(c) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(d) "Covered Enterprise" means an existing or planned business enterprise that competes with the Firm (which, for this purpose means offering products or services that are the same as or similar to those offered by the Firm ("Firm Products or Services")), or reasonably may be expected to do so. The enterprises covered by this definition include enterprises that offer Firm Products or Services directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by, or being under common ownership with an enterprise that offers Firm Products or Services). An enterprise will be treated as providing Firm Products or Services if, solely by way of example, it provides products or services associated with investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than you or your family members), private banking, commercial banking, merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading. A Competitive Enterprise is a Covered Enterprise. **An enterprise that offers, or may reasonably be expected to offer, Firm Products or Services is a Covered Enterprise irrespective of whether the enterprise is a customer, client or counterparty of the Firm, and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(e) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(f) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(g) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 8(b) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS

Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(k) ["Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-

regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.]

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) ["Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).]

(x) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(y) "RSU Shares" means shares of Common Stock that underlie an RSU.

(z) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(aa) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(bb) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(cc) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(dd) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ee) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(ff) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(gg) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.51

THE GOLDMAN SACHS GROUP, INC.
[_____] YEAR-END RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your _____ year-end award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 16.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of RSUs awarded to you and any applicable Vesting Dates, Delivery Dates and Transferability Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.** On each Vesting Date listed on your Award Statement, you will become Vested in the amount of Outstanding RSUs listed next to that date. When an RSU becomes Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery and any applicable Transfer Restrictions) continue to apply to Vested RSUs, and you can still forfeit Vested RSUs and any RSU Shares.**

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 13(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

TRANSFER RESTRICTIONS FOLLOWING DELIVERY

7. **Transfer Restrictions and Shares at Risk.** Fifty percent of the RSU Shares that are delivered on any date, before tax withholding (or, if the applicable tax withholding rate is greater than 50%, all RSU Shares delivered after tax withholding), will be Shares at Risk. This means that if, for example, on a Delivery Date, you are scheduled to receive delivery of 1,000 RSU Shares, and you are subject to a 40% withholding rate, then (a) 400 RSU Shares will be withheld for taxes, (b) 500 RSU Shares delivered to you will be Shares at Risk and (c) 100 RSU Shares delivered to you will not be subject to Transfer Restrictions. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

8. **Dividend Equivalent Rights and Dividends.** Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant. In addition, you will be entitled to receive on a current basis any regular cash dividend paid in respect of your Shares at Risk.

FORFEITURE OF YOUR AWARD

9. **How You May Forfeit Your Award.** This Paragraph 9 sets forth the events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend vesting of Outstanding RSUs, delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares into an escrow account in accordance with Paragraph 13(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 9 have occurred. Paragraph 11 (relating to certain circumstances under which you will not forfeit your unvested RSUs upon Employment termination) and Paragraph 12 (relating to certain circumstances under which vesting, delivery and/or release of Transfer Restrictions may be accelerated) provide for exceptions to one or more provisions of this Paragraph 9.

(a) Unvested RSUs Forfeited if Your Employment Terminates. If your Employment terminates for any reason or you are otherwise no longer actively employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), your rights to your Outstanding RSUs that are not Vested will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(b) RSUs Vested at Grant Forfeited if You Associate With a Covered Enterprise. If you Associate With a Covered Enterprise before the earlier of _____ or a Qualifying

Termination After a Change In Control, your rights to your Outstanding RSUs that were Vested on the Date of Grant will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(c) Vested and Unvested RSUs Forfeited if You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. If any of the following occurs before the applicable Delivery Date, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs:

(i) you, in any manner, directly or indirectly, (A) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (B) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (C) Solicit any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment with any Covered Enterprise or (D) on behalf of yourself or any person or Covered Enterprise hire, or participate in the hiring of, any Selected Firm Personnel or identify, or participate in the identification of, Selected Firm Personnel for potential hiring, whether as an employee or consultant or otherwise, or

(ii) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status (A) by a Covered Enterprise that you form, that bears your name, in which you are a partner, member or have similar status, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (B) by any Covered Enterprise where you have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Selected Firm Personnel.

(d) Vested and Unvested RSUs and Shares at Risk Forfeited upon Certain Events. If any of the following occurs (i) your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs and (ii) your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred before the applicable Delivery Date for RSUs or the Transferability Date for Shares at Risk.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the applicable Delivery Date for RSUs or the Transferability Date for Shares at Risk, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 16 or Section 3.17 of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding RSUs or Shares at Risk; *provided*, *however*, that your rights will only be terminated in respect of the RSUs and Shares at Risk that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

10. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any RSU Shares (which, for the avoidance of doubt, includes any Shares at Risk) for which the terms (including the terms for delivery) of the related RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(b) Any Shares at Risk for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(c) Any RSU Shares that were delivered (but not subject to Transfer Restrictions) at the same time any Shares at Risk that are cancelled or required to be repaid were delivered.

(d) Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of RSUs that are forfeited or RSU Shares that are cancelled or subject to repayment), in accordance with Section 2.8.4 of the Plan.

(e) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(f) Any amount applied to satisfy tax withholding or other obligations with respect to any RSU, RSU Shares, dividend payments and payments under Dividend Equivalent Rights that are forfeited or required to be repaid.

EXCEPTIONS TO THE VESTING, DELIVERY AND/OR TRANSFERABILITY DATES

11. **Circumstances Under Which You Will Not Forfeit Your Unvested RSUs on Employment Termination (but the Original Delivery Date and Transferability Date Continue to Apply).** If your Employment terminates at a time when you meet the requirements for Extended Absence, Retirement, "downsizing" or Approved Termination, each as described below, then Paragraph 9 (a) will not apply, and your Outstanding RSUs will be treated as described in this Paragraph 11. All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) Extended Absence or Retirement and No Association With a Covered Enterprise.

(i) Generally. If your Employment terminates by Extended Absence or Retirement, your Outstanding RSUs that are not Vested will become Vested. However, your rights to any Outstanding RSU that becomes Vested by this Paragraph 11(a)(i) will terminate and no RSU Share will be delivered in respect of that RSU if you Associate With a Covered Enterprise on or before the originally scheduled Vesting Date for that RSU.

(ii) Special Treatment for Involuntary or Mutual Agreement Termination. Paragraph 9(b) and the second sentence of Paragraph 11(a)(i) (each relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (A) the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement."

(b) Downsizing. If (i) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes, your Outstanding RSUs that are not yet Vested will become Vested and Paragraph 9(b) will not apply. Whether or not your Employment is terminated solely by reason of a "downsizing" will be determined by the Firm in its sole discretion.

(c) Approved Terminations of Program Analysts and Fixed-Term Employees. If the Firm classifies you as a "program analyst" or a "fixed-term" employee and your Employment terminates solely by reason of an Approved Termination (and you have not engaged in conduct constituting Cause), your Outstanding RSUs that are not yet Vested will become Vested and Paragraph 9(b) will not apply.

12. **Accelerated Vesting, Delivery and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, then Paragraph 9(a) will not apply, your Outstanding Award will be treated as described in this Paragraph 12, and, except as set forth in Paragraph 12(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered, and any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 9 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, (A) your Outstanding RSUs will Vest, (B) RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 13(b)) and (C) any Transfer Restrictions will cease to apply. In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, (A) RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 13(b)) and (B) any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated vesting, delivery and/or release of Transfer Restrictions described in Paragraph 12(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered to the representative of your estate and any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

13. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant, Vesting or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto). In no event, however, does this Paragraph 13(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSUs that become Vested on a Vesting Date, RSU Shares that become deliverable on a Delivery Date and RSU Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award

Agreement when you accept delivery of RSU Shares, receive payment in respect of Dividend Equivalent Rights and request the sale of RSU Shares following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares (including Shares at Risk) or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold RSUs or Shares at Risk, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 9(d)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your RSUs and Shares at Risk and subject previously delivered amounts to repayment under Paragraph 9(d)(iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Shares at Risk and Sell, Assign or Transfer any Forfeited Shares at Risk. You are granting to the Firm the full power and authority to register any Shares at Risk in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Shares at Risk if you forfeit your Shares at Risk;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 16 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

14. **Non-transferability.** Except as otherwise may be provided in this Paragraph 14 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 14 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant

to which some or all recipients of RSUs may transfer some or all of their RSUs and/or Shares at Risk (which will continue to be subject to Transfer Restrictions until the Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

15. **Right of Offset.** Except as provided in Paragraph 18(h), the obligation to deliver RSU Shares, to pay dividends or payments under Dividend Equivalent Rights or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

16. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

17. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

18. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 18 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 18 and the other provisions of this Award Agreement, this Paragraph 18 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 7, 11(a)(ii), 11(b), 12(c) and 13 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-2(b)(7) (in conjunction with Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 13(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 12(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 12(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will

occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 12(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 8 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(g) The timing of delivery or payment referred to in Paragraph 12(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 12(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 15 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

19. **Compliance of Award Agreement and Plan with Section 162(m).** If you are or become considered by GS Inc. to be one of its "covered employees" within the meaning of Section 162(m) of the Code, then you will be subject to Section 3.21.3 of the Plan, as a result of which delivery of your RSU Shares may be delayed.

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

20. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 9 and 10 and to remove Transfer Restrictions before the Transferability Date. In addition, the Committee, in its sole discretion, may determine whether Paragraphs 11(a)(ii) and 11(b) will apply upon a termination of Employment and whether a termination of Employment constitutes an Approved Termination under Paragraph 11(c).

21. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

22. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Approved Termination" means that you are classified by the Firm as a "program analyst" or "fixed-term employee" and you (i) successfully complete the analyst program or fixed-term engagement, as applicable and determined by the Firm in its sole discretion, including remaining Employed through the completion date specified by the Firm, and (ii) terminate Employment immediately after the completion date without any "stay-on" or other agreement or understanding to continue Employment with the Firm. If you agree to stay with the Firm as an employee after your analyst program or fixed-term engagement ends and then later terminate Employment, you will not have an Approved Termination.

(c) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(d) "Covered Enterprise" means an existing or planned business enterprise that competes with the Firm (which, for this purpose means offering products or services that are the same as or similar to those offered by the Firm ("Firm Products or Services")), or reasonably may be expected to do so. The enterprises covered by this definition include enterprises that offer Firm Products or Services directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by, or being under common ownership with an enterprise that offers Firm Products or Services). An enterprise will be treated as providing Firm Products or Services if, solely by way of example, it provides products or services associated with investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than you or your family members), private banking, commercial banking, merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading. A Competitive Enterprise is a Covered Enterprise. **An enterprise that offers, or may reasonably be expected to offer, Firm Products or Services is a Covered Enterprise irrespective of whether the enterprise is a customer, client or counterparty of the Firm, and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(e) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(f) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(g) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 9(c) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(h) "Shares at Risk" means RSU Shares subject to Transfer Restrictions.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a

"Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(k) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) "Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).

(x) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(y) "RSU Shares" means shares of Common Stock that underlie an RSU.

(z) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(aa) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(bb) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(cc) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(dd) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ee) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(ff) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(gg) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(hh) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.52

THE GOLDMAN SACHS GROUP, INC.
[_____] YEAR-END RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your _____ year-end award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 16.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of RSUs awarded to you and any applicable Vesting Dates, Delivery Dates and Transferability Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.** All of your RSUs are Vested. When an RSU is Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery and any applicable Transfer Restrictions) continue to apply to Vested RSUs, and you can still forfeit Vested RSUs and any RSU Shares.**

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 13(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

TRANSFER RESTRICTIONS FOLLOWING DELIVERY

7. **Transfer Restrictions and Shares at Risk.** Fifty percent of the RSU Shares that are delivered on any date, before tax withholding (or, if the applicable tax withholding rate is greater than 50%, all RSU Shares delivered after tax withholding), will be Shares at Risk[that are subject to Transfer Restrictions until the _____ Transferability Date, as set forth on your Award Statement. If the tax withholding rate is less than 50%, then any remaining RSU Shares that are delivered after tax withholding will be Shares at Risk subject to Transfer Restrictions until the Six-Month Transferability Date]. This means that if, for example, on a Delivery Date, you are scheduled to receive delivery of 1,000 RSU Shares, and you are subject to a 40% withholding rate, then (a) 400 RSU Shares will be withheld for taxes, (b) 500 RSU Shares delivered to you will be Shares at Risk [until the _____ Transferability Date] and (c) 100 RSU Shares delivered to you will [not be subject to Transfer Restrictions][be Shares at Risk until the Six-Month Transferability Date]. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void. Within 30 Business Days after the [applicable] Transferability Date [listed on your Award Statement](or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date [listed on your Award Statement], and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

8. **Dividend Equivalent Rights and Dividends.** Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant. In addition, you will be entitled to receive on a current basis any regular cash dividend paid in respect of your Shares at Risk.

FORFEITURE OF YOUR AWARD

9. **How You May Forfeit Your Award.** This Paragraph 9 sets forth the events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares into an escrow account in accordance with Paragraph 13(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 9 have occurred. Paragraph 11 (relating to certain circumstances under which restrictions on Association With a Covered Enterprise will not apply) and Paragraph 12 (relating to certain circumstances under which delivery and/or release of Transfer Restrictions may be accelerated) provide for exceptions to one or more provisions of this Paragraph 9. [The Code Staff Forfeiture and Repayment Appendix supplements this Paragraph 9 and sets forth additional events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm as described in Paragraph 10 and the Appendix.]

(a) RSUs Forfeited Upon Certain Events. If any of the following occurs, your rights to all of your Outstanding RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs:

(i) You Associate With a Covered Enterprise.

(A) If you Associate With a Covered Enterprise before the earlier of _____ or a Qualifying Termination After a Change in Control, your rights to all your Outstanding RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(B) If you Associate With a Covered Enterprise on or after _____ but before the earlier of _____ or a Qualifying Termination After a Change in Control, your rights to your Outstanding RSUs that are scheduled to deliver in _____ and _____ will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(C) If you Associate With a Covered Enterprise on or after _____ but before the earlier of _____ or a Qualifying Termination After a Change in Control, your rights in respect of your Outstanding RSUs that are scheduled to deliver in _____ will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(ii) You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. Before the applicable Delivery Date, either:

(A) you, in any manner, directly or indirectly, (1) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (2) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (3) Solicit any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment with any Covered Enterprise or (4) on behalf of yourself or any person or Covered Enterprise hire, or participate in the hiring of, any Selected Firm Personnel or identify, or participate in the identification of, Selected Firm Personnel for potential hiring, whether as an employee or consultant or otherwise, or

(B) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status (1) by a Covered Enterprise that you form, that bears your name, in which you are a partner, member or have similar status, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (2) by any Covered Enterprise where you have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Selected Firm Personnel.

(iii) [GS Inc. Fails to Maintain the Minimum Tier 1 Capital Ratio. Before the applicable Delivery Date, GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days.]

(iv) [GS Inc. Is Determined to Be in Default. Before the applicable Delivery Date, the Board of Governors of the Federal Reserve or the Federal Deposit Insurance Corporation (the "FDIC") makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default."]

(b) RSUs and Shares at Risk Forfeited upon Certain Events. If any of the following occurs (i) your rights to all of your Outstanding RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs and (ii) your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause [(including, for the avoidance of doubt, "Serious Misconduct" as defined in the Code Staff Forfeiture and Repayment Appendix)]has occurred before the applicable Delivery Date for RSUs or the [applicable] Transferability Date for Shares at Risk.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the applicable Delivery Date for RSUs or the [applicable] Transferability Date for Shares at Risk, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 16 or Section 3.17 of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding RSUs or Shares at Risk; provided, however, that your rights will only be terminated in respect of the RSUs and Shares at Risk that are replaced, substituted for or otherwise considered by such other entity in making its grant.

(viii) [Accounting Restatement Required Under Sarbanes-Oxley. GS Inc. is required to prepare an accounting restatement due to GS Inc.'s material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws as described in Section 304(a) of the Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley"); provided, however, that your rights will only be terminated in respect of the RSUs and Shares at Risk to the same extent that would be required under Section 304(a) of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).]

REPAYMENT OF YOUR AWARD

10. **When You May Be Required to Repay Your Award.**

(a) [Repayment, Generally.] If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(i) Any RSU Shares (which, for the avoidance of doubt, includes any Shares at Risk) for which the terms (including the terms for delivery) of the related RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(ii) Any Shares at Risk for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(iii) Any RSU Shares that were delivered (but not subject to Transfer Restrictions) at the same time any Shares at Risk that are cancelled or required to be repaid were delivered.

(iv) Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of RSUs that are forfeited or RSU Shares that are cancelled or subject to repayment), in accordance with Section 2.8.4 of the Plan.

(v) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(vi) Any amount applied to satisfy tax withholding or other obligations with respect to any RSU, RSU Shares, dividend payments and payments under Dividend Equivalent Rights that are forfeited or required to be repaid.

(b) [Repayment Upon Accounting Restatement Required Under Sarbanes-Oxley If an event described in Paragraph 9(b)(viii) (relating to a requirement under Sarbanes-Oxley that GS Inc. prepare an accounting restatement) occurs, any RSU Shares, cash or other property delivered, paid or withheld in respect of this Award shall be subject to repayment as described in Paragraph 10(a) to the same extent that would be required under Section 304(a) of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).]

EXCEPTIONS TO ASSOCIATION WITH A COVERED ENTERPRISE; DELIVERY AND/OR TRANSFERABILITY DATES

11. **Restrictions on Association With a Covered Enterprise Cease to Apply After an Involuntary or Mutual Agreement Termination (but the Original Delivery Date and Transferability Date Continue to Apply).** Paragraph 9(a)(i) (relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (a) your Employment terminates and the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (b) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive

termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement." All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

12. **Accelerated Delivery and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding Award will be treated as described in this Paragraph 12, and, except as set forth in Paragraph 12(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding RSUs will be delivered, and any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 9 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, (A) RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 13(b)) and (B) any Transfer Restrictions will cease to apply. In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, (A) RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 13(b)) and (B) any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated delivery and/or release of Transfer Restrictions described in Paragraph 12(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding RSUs will be delivered to the representative of your estate and any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

13. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal,

state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto). In no event, however, does this Paragraph 13(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSU Shares that become deliverable on a Delivery Date and RSU Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies),

and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you accept delivery of RSU Shares, receive payment in respect of Dividend Equivalent Rights and request the sale of RSU Shares following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares (including Shares at Risk) or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold RSUs or Shares at Risk, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 9(b)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your RSUs and Shares at Risk and subject previously delivered amounts to repayment under Paragraph 9(b)(iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Shares at Risk and Sell, Assign or Transfer any Forfeited Shares at Risk. You are granting to the Firm the full power and authority to register any Shares at Risk in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Shares at Risk if you forfeit your Shares at Risk;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days

after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 16 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

14. **Non-transferability.** Except as otherwise may be provided in this Paragraph 14 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 14 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of RSUs may transfer some or all of their RSUs and/or Shares at Risk (which will continue to be subject to Transfer Restrictions until the [applicable] Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

15. **Right of Offset.** Except as provided in Paragraph 18(h), the obligation to deliver RSU Shares, to pay dividends or payments under Dividend Equivalent Rights or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

16. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

17. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

18. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 18 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 18 and the other provisions of this Award Agreement, this Paragraph 18 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 7, 11, 12(c) and 13 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-2(b)(7) (in conjunction with Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 13(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 12(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 12(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 12(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 8 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(g) The timing of delivery or payment referred to in Paragraph 12(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 12(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 15 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

19. **Compliance of Award Agreement and Plan with Section 162(m).** If you are or become considered by GS Inc. to be one of its "covered employees" within the meaning of Section 162(m) of the Code, then you will be subject to Section 3.21.3 of the Plan, as a result of which delivery of your RSU Shares may be delayed.

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

20. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 9 and 10 and to remove Transfer Restrictions before the [applicable] Transferability Date. In addition, the Committee, in its sole discretion, may determine whether Paragraph 11 will apply upon a termination of Employment.

21. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

22. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words “include,” “includes” and “including” will be deemed to be followed by the words “without limitation.” The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

[CODE STAFF FORFEITURE AND REPAYMENT APPENDIX

This Code Staff Appendix supplements Paragraph 9 and sets forth additional events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. As with the events described in Paragraph 9, more than one event may apply, in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event and the Firm reserves the right to (a) suspend delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares into an escrow account in accordance with Paragraph 13(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under this Code Staff Appendix have occurred.

With respect to the events described in Paragraphs (b) through (e) of this Appendix, the Committee will consider certain factors to determine whether and what portion of your Award will terminate, including the reason for the "Loss Event" (as defined below) or "Risk Event" (as defined below) and the extent to which: (1) you participated in the Loss Event or Risk Event, (2) your compensation for the Firm's _____ fiscal year may or may not have been adjusted to take into account the risk associated with the Loss Event, Risk Event, your "Serious Misconduct" (as defined below) or the Serious Misconduct of a "Supervised Employee" (as defined below) and (3) your compensation may be adjusted for the year in which the Loss Event, Risk Event, your Serious Misconduct or a Supervised Employee's Serious Misconduct is discovered.

(a) You Associate With a Material Covered Enterprise Prior to [_____]. If you "Associate With a Material Covered Enterprise" (as defined below) on or after the date the restrictions on Association With a Covered Enterprise lapse (as described in Paragraph 9(a)(i) of the Award Agreement) and before the earlier of _____ or a Qualifying Termination After a Change in Control, your rights to all of your Outstanding RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs and your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled.

(i) "**Associate With a Material Covered Enterprise**" means that you (A) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any "Material Covered Enterprise" (as defined below) or (B) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Material Covered Enterprise. Associate With a Material Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (A) becoming the subject of any publicly available announcement or report of a pending or future association with a Material Covered Enterprise and (B) unpaid associations, including an association in contemplation of future employment. The term "Association With a Material Covered Enterprise" has its correlative meaning.

(ii) The restriction described above on any Association With a Material Covered Enterprise will not apply if (A) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) or the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes.

(iii) "**Material Covered Enterprise**" means a Covered Enterprise that the Firm determines, in its sole discretion, to be material.

(b) A Loss Event Occurs Prior to Delivery. If a Loss Event occurs prior to the delivery of RSU Shares, your rights in respect of all or a portion of your RSUs which are scheduled to deliver on the next Delivery Date immediately following the date that the Loss Event is identified (or, if not practicable, then the next following Delivery Date) will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(i) A "**Loss Event**" means (A) an annual pre-tax loss at GS Inc. or (B) annual negative revenues in one or more reporting segments as disclosed in the Firm's Form 10-K other than the Investing & Lending segment, or annual negative revenues in the Investing & Lending segment of $5 billion or more, provided in either case that you are employed in a business within such reporting segment.

(c) A Risk Event Occurs Prior to [_____]. If a Risk Event occurs prior to _____, (i) your rights in respect of all or a portion of your RSUs will terminate and no RSU Shares will be delivered in respect of such RSUs, (ii) your rights to all or a portion of any Shares at Risk will terminate and such Shares at Risk will be cancelled and (iii) you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments and payments under Dividend Equivalent Rights) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (A) the date the Risk Event occurred and (B) the date that the repayment request is made.

(i) A "**Risk Event**" means there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy.

(d) You Engage in Serious Misconduct Prior to [_____]. If you engage in Serious Misconduct during the period beginning on the applicable Transferability Date through _____, you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments and payments under Dividend Equivalent Rights) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (i) the date the Serious Misconduct occurred and (ii) the date that the repayment request is made.

(i) "**Serious Misconduct**" means that you engage in conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.

(e) A Supervised Employee Engages in Serious Misconduct. If the Committee determines that it is appropriate to hold you accountable in whole or in part for Serious Misconduct related to compliance, control or risk that occurred during the Firm's _____ fiscal year by a Supervised Employee, your rights in respect of all or a portion of your RSUs will terminate and no RSU Shares will be delivered in respect of such RSUs and your rights to all or a portion of any Shares at Risk will terminate and such Shares at Risk will be cancelled.

(i) "**Supervised Employee**" means an individual with respect to whom the Committee determines you had supervisory responsibility as a result of direct or indirect reporting lines or your management responsibility for an office, division or business.

Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, the parties agree that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs (c) and (d) of this Appendix (including your refusal to remit payment) the parties will submit to arbitration in accordance with Paragraph 16 of this Award Agreement and Section 3.17 of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the payment amount).]

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(c) "Covered Enterprise" means an existing or planned business enterprise that competes with the Firm (which, for this purpose means offering products or services that are the same as or similar to those offered by the Firm ("Firm Products or Services")), or reasonably may be expected to do so. The enterprises covered by this definition include enterprises that offer Firm Products or Services directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by, or being under common ownership with an enterprise that offers Firm Products or Services). An enterprise will be treated as providing Firm Products or Services if, solely by way of example, it provides products or services associated with investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than you or your family members), private banking, commercial banking, merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading. A Competitive Enterprise is a Covered Enterprise. **An enterprise that offers, or may reasonably be expected to offer, Firm Products or Services is a Covered Enterprise irrespective of whether the enterprise is a customer, client or counterparty of the Firm, and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(d) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(e) [[_____] Transferability Date" means the first trading day in a Window Period that occurs in _____, or if no Window Period occurs in _____, the first trading day of the first Window Period following thereafter.]

(f) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(g) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 9(a)(ii) was (i) a Firm employee or consultant with whom you

personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(h) "Shares at Risk" means RSU Shares subject to Transfer Restrictions.

(i) ["Six-Month Transferability Date" means the first trading day in a Window Period that occurs on or after the six-month anniversary of the Delivery Date.]

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the

entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(k) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(x) "RSU Shares" means shares of Common Stock that underlie an RSU.

(y) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(z) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(aa) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(bb) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(cc) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(dd) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(ee) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(ff) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(gg) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.53

THE GOLDMAN SACHS GROUP, INC.
[_____] YEAR-END RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your _____ year-end award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 16.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the type and number of RSUs awarded to you and any applicable Vesting Dates, Delivery Dates and Transferability Dates. The portion of your RSUs that are designated on the Award Statement as "_____ Year End RSUs" (and not "_____ Year-End Supplemental RSUs") are referred to in this Award Agreement as "Base RSUs." The portion of your RSUs that are designated on the Award Statement as "_____ Year End Supplemental RSUs" are referred to in this Award Agreement as "Supplemental RSUs." All references to RSUs in this Award Agreement include both the Base RSUs and the Supplemental RSUs. This Award Agreement does not govern the terms and conditions of any RSUs designated on your Award Statement as "Short-Term RSUs," which, if applicable to you, are addressed in a separate Award Agreement.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.**

(a) Base RSUs. On each Vesting Date listed on your Award Statement, you will become Vested in the amount of Outstanding Base RSUs listed next to that date.

(b) Supplemental RSUs. All of your Supplemental RSUs are Vested.

(c) What Vesting Means. When an RSU becomes Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery and any applicable Transfer Restrictions) continue to apply to Vested RSUs, and you can still forfeit Vested RSUs and any RSU Shares.**

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 13(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding RSUs listed next to that date, *provided* that such delivery applies first to RSU Shares underlying the Supplemental RSUs and then to RSU Shares underlying the Base RSUs. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

TRANSFER RESTRICTIONS FOLLOWING DELIVERY

7. **Transfer Restrictions and Shares at Risk.**

(a) Base RSUs. Fifty percent of the RSU Shares that are delivered on any date in respect of Base RSUs, **before** tax withholding (or, if the applicable tax withholding rate is greater than 50%, all RSU Shares delivered after tax withholding), will be Shares at Risk that are subject to Transfer Restrictions until the _____ Transferability Date, as set forth on your Award Statement. If the tax withholding rate is less than 50%, then any remaining RSU Shares that are delivered in respect of Base RSUs after tax withholding will be Shares at Risk subject to Transfer Restrictions until the Six-Month Transferability Date.

(b) Supplemental RSUs. All RSU Shares that are delivered on any date in respect of Supplemental RSUs after tax withholding will be Shares at Risk subject to Transfer Restrictions until the Six-Month Transferability Date.

(c) Example. For example, if on a Delivery Date, you are scheduled to receive delivery of 1,000 RSU Shares in respect of Base RSUs and 500 RSU Shares in respect of Supplemental RSUs, and you are subject to a 40% withholding rate, then (i) 600 RSU Shares will be withheld for taxes, (ii) 500 RSU Shares delivered to you in respect of the Base RSUs will be Shares at Risk until the _____ Transferability Date, (iii) 100 RSU Shares delivered to you in respect of the Base RSUs will be Shares at Risk until the Six-Month Transferability Date and (iv) 300 RSU Shares delivered in respect of the Supplemental RSUs will be Shares at Risk until the Six-Month Transferability Date.

(d) Purported Transactions that Violate the Transfer Restrictions Are Void. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void.

(e) Removal of Transfer Restrictions. Within 30 Business Days after the applicable Transferability Date (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

8. **Dividend Equivalent Rights and Dividends.** Each RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding RSUs for any record date that occurs on or after the Date of Grant. In addition, you will be entitled to receive on a current basis any regular cash dividend paid in respect of your Shares at Risk.

FORFEITURE OF YOUR AWARD

9. **How You May Forfeit Your Award.** This Paragraph 9 sets forth the events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend vesting of Outstanding RSUs, delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares into an escrow account in accordance with Paragraph 13(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 9 have occurred. Paragraph 11 (relating to certain circumstances under which you will not forfeit your unvested RSUs upon Employment termination) and Paragraph 12 (relating to certain circumstances under which vesting, delivery and/or release of Transfer Restrictions may be accelerated) provide for exceptions to one or more provisions of this Paragraph 9. The Code Staff Forfeiture and Repayment Appendix supplements this Paragraph 9 and sets forth additional events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm as described in Paragraph 10 and the Appendix.

(a) Unvested RSUs Forfeited if Your Employment Terminates. If your Employment terminates for any reason or you are otherwise no longer actively employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), your rights to your Outstanding RSUs that are not Vested will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(b) RSUs Forfeited if You Associate With a Covered Enterprise.

(i) Base RSUs. If you Associate With a Covered Enterprise before the earlier of _____ or a Qualifying Termination After a Change In Control, your rights to your Outstanding Base RSUs that were Vested on the Date of Grant will terminate, and no RSU Shares will be delivered in respect of such Base RSUs.

(ii) Supplemental RSUs. Your rights to your Outstanding Supplemental RSUs that are scheduled to deliver on an applicable Delivery Date will terminate, and no RSU Shares will be delivered in respect of such Supplemental RSUs if you Associate With a Covered Enterprise before the earlier of the January 1 immediately preceding that Delivery Date or a Qualifying Termination After a Change In Control.

(c) Vested and Unvested RSUs Forfeited Upon Certain Events. If any of the following occurs before the applicable Delivery Date, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs:

(i) You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. Either:

(A) you, in any manner, directly or indirectly, (1) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (2) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (3) Solicit any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment with any Covered Enterprise or (4) on behalf of yourself or any person or Covered Enterprise hire, or participate in the hiring of, any Selected Firm Personnel or identify, or participate in the identification of, Selected Firm Personnel for potential hiring, whether as an employee or consultant or otherwise, or

(B) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status (1) by a Covered Enterprise that you form, that bears your name, in which you are a partner, member or have similar status, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (2) by any Covered Enterprise where you have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Selected Firm Personnel.

(ii) GS Inc. Fails to Maintain the Minimum Tier 1 Capital Ratio. GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days.

(iii) GS Inc. Is Determined to Be in Default. The Board of Governors of the Federal Reserve or the Federal Deposit Insurance Corporation (the "FDIC") makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default."

(d) Vested and Unvested RSUs and Shares at Risk Forfeited upon Certain Events. If any of the following occurs (i) your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs and (ii) your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause (including, for the avoidance of doubt, "Serious Misconduct" as defined in the Code Staff Forfeiture and Repayment Appendix) has occurred before the applicable Delivery Date for RSUs or the applicable Transferability Date for Shares at Risk.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the applicable Delivery Date for RSUs or the applicable Transferability Date for Shares at Risk, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 16 or Section 3.17 of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding RSUs or Shares at Risk; *provided*, *however*, that your rights will only be terminated in respect of the RSUs and Shares at Risk that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

10. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any RSU Shares (which, for the avoidance of doubt, includes any Shares at Risk) for which the terms (including the terms for delivery) of the related RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(b) Any Shares at Risk for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(c) Any RSU Shares that were delivered (but not subject to Transfer Restrictions) at the same time any Shares at Risk that are cancelled or required to be repaid were delivered.

(d) Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of RSUs that are forfeited or RSU Shares that are cancelled or subject to repayment), in accordance with Section 2.8.4 of the Plan.

(e) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(f) Any amount applied to satisfy tax withholding or other obligations with respect to any RSU, RSU Shares, dividend payments and payments under Dividend Equivalent Rights that are forfeited or required to be repaid.

EXCEPTIONS TO THE VESTING, DELIVERY AND/OR TRANSFERABILITY DATES

11. **Circumstances Under Which You Will Not Forfeit Your Unvested RSUs on Employment Termination (but the Original Delivery Date and Transferability Date Continue to Apply).** If your Employment terminates at a time when you meet the requirements for Extended Absence, Retirement, "downsizing" or Approved Termination, each as described below, then Paragraph 9 (a) will not apply, and your Outstanding RSUs will be treated as described in this Paragraph 11. All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) Extended Absence or Retirement and No Association With a Covered Enterprise.

(i) Generally. If your Employment terminates by Extended Absence or Retirement, your Outstanding RSUs that are not Vested will become Vested. However, your rights to any Outstanding RSU that becomes Vested by this Paragraph 11(a)(i) will terminate and no RSU Share will be delivered in respect of that RSU if you Associate With a Covered Enterprise on or before the originally scheduled Vesting Date for that RSU.

(ii) Special Treatment for Involuntary or Mutual Agreement Termination. Paragraph 9(b) and the second sentence of Paragraph 11(a)(i) (each relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (A) the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement."

(b) Downsizing. If (i) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes, your Outstanding RSUs that are not yet Vested will become Vested and Paragraph 9(b) will not apply. Whether or not your Employment is terminated solely by reason of a "downsizing" will be determined by the Firm in its sole discretion.

(c) Approved Terminations of Program Analysts and Fixed-Term Employees. If the Firm classifies you as a "program analyst" or a "fixed-term" employee and your Employment terminates solely by reason of an Approved Termination (and you have not engaged in conduct constituting Cause), your Outstanding RSUs that are not yet Vested will become Vested and Paragraph 9(b) will not apply.

12. **Accelerated Vesting, Delivery and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, then Paragraph 9(a) will not apply, your Outstanding Award will be treated as described in this Paragraph 12, and, except as set forth in Paragraph 12(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered, and any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 9 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, (A) your Outstanding RSUs will Vest, (B) RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 13(b)) and (C) any Transfer Restrictions will cease to apply. In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, (A) RSU Shares will be delivered in respect of your Outstanding RSUs (including in the form of cash as described in Paragraph 13(b)) and (B) any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated vesting, delivery and/or release of Transfer Restrictions described in Paragraph 12(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding RSUs (whether or not Vested) will be delivered to the representative of your estate and any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

13. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant, Vesting or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto). In no event, however, does this Paragraph 13(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSUs that become Vested on a Vesting Date, RSU Shares that become deliverable on a Delivery Date and RSU Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party. If you are a party to the Amended and Restated Shareholders' Agreement, RSU Shares will be subject to the Amended and Restated Shareholders' Agreement, but RSU Shares delivered in respect of Supplemental RSUs will not be "Covered Shares" for purposes of Section 2.1(a) thereof.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have

represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you accept delivery of RSU Shares, receive payment in respect of Dividend Equivalent Rights and request the sale of RSU Shares following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares (including Shares at Risk) or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold RSUs or Shares at Risk, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 9(d)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your RSUs and Shares at Risk and subject previously delivered amounts to repayment under Paragraph 9(d)(iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Shares at Risk and Sell, Assign or Transfer any Forfeited Shares at Risk. You are granting to the Firm the full power and authority to register any Shares at Risk in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Shares at Risk if you forfeit your Shares at Risk;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 16 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

14. **Non-transferability.** Except as otherwise may be provided in this Paragraph 14 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 14 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant

to which some or all recipients of RSUs may transfer some or all of their RSUs and/or Shares at Risk (which will continue to be subject to Transfer Restrictions until the applicable Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

15. **Right of Offset.** Except as provided in Paragraph 18(h), the obligation to deliver RSU Shares, to pay dividends or payments under Dividend Equivalent Rights or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

16. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

17. Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.

CERTAIN TAX PROVISIONS

18. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 18 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 18 and the other provisions of this Award Agreement, this Paragraph 18 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 7, 11(a)(ii), 11(b), 12(c) and 13 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-2(b)(7) (in conjunction with Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 13(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 12(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 12(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will

occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 12(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 8 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding RSUs.

(g) The timing of delivery or payment referred to in Paragraph 12(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 12(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 15 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

19. **Compliance of Award Agreement and Plan with Section 162(m).** If you are or become considered by GS Inc. to be one of its "covered employees" within the meaning of Section 162(m) of the Code, then you will be subject to Section 3.21.3 of the Plan, as a result of which delivery of your RSU Shares may be delayed.

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

20. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 9 and 10 and to remove Transfer Restrictions before the applicable Transferability Date. In addition, the Committee, in its sole discretion, may determine whether Paragraphs 11(a)(ii) and 11(b) will apply upon a termination of Employment and whether a termination of Employment constitutes an Approved Termination under Paragraph 11(c).

21. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

22. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

CODE STAFF FORFEITURE AND REPAYMENT APPENDIX

This Code Staff Appendix supplements Paragraph 9 and sets forth additional events that result in forfeiture of up to all of your RSUs and Shares at Risk and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 10. As with the events described in Paragraph 9, more than one event may apply, in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event and the Firm reserves the right to (a) suspend vesting of Outstanding RSUs, delivery of RSU Shares or release of Transfer Restrictions, (b) deliver any RSU Shares into an escrow account in accordance with Paragraph 13(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under this Code Staff Appendix have occurred.

With respect to the events described in Paragraphs ([a][b]) through ([d][e]) of this Appendix, the Committee will consider certain factors to determine whether and what portion of your Award will terminate, including the reason for the "Loss Event" (as defined below) or "Risk Event" (as defined below) and the extent to which: (1) you participated in the Loss Event or Risk Event, (2) your compensation for the Firm's _____ fiscal year may or may not have been adjusted to take into account the risk associated with the Loss Event, Risk Event, your "Serious Misconduct" (as defined below) or the Serious Misconduct of a "Supervised Employee" (as defined below) and (3) your compensation may be adjusted for the year in which the Loss Event, Risk Event, your Serious Misconduct or a Supervised Employee's Serious Misconduct is discovered.

(a) [You Associate With a Material Covered Enterprise Prior to [_____]. If you "Associate With a Material Covered Enterprise" (as defined below) on or after _____ and before the earlier of _____ or a Qualifying Termination After a Change In Control, your rights to all of your Outstanding RSUs (whether or not Vested) will terminate, and no RSU Shares will be delivered in respect of such RSUs and your rights to all of your Shares at Risk will terminate and your Shares at Risk will be cancelled.

(i) "**Associate With a Material Covered Enterprise**" means that you (A) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any "Material Covered Enterprise" (as defined below) or (B) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Material Covered Enterprise. Associate With a Material Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (A) becoming the subject of any publicly available announcement or report of a pending or future association with a Material Covered Enterprise and (B) unpaid associations, including an association in contemplation of future employment. The term "Association With a Material Covered Enterprise" has its correlative meaning.

(ii) The restriction described above on any Association With a Material Covered Enterprise will not apply if (A) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) or the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes.

(iii) "**Material Covered Enterprise**" means a Covered Enterprise that the Firm determines, in its sole discretion, to be material.]

(b) A Loss Event Occurs Prior to Delivery. If a Loss Event occurs prior to the delivery of RSU Shares, your rights in respect of all or a portion of your RSUs (whether or not Vested) which are scheduled to deliver on the next Delivery Date immediately following the date that the Loss Event is identified (or, if not practicable, then the next following Delivery Date) will terminate, and no RSU Shares will be delivered in respect of such RSUs.

(i) A "**Loss Event**" means (A) an annual pre-tax loss at GS Inc. or (B) annual negative revenues in one or more reporting segments as disclosed in the Firm's Form 10-K other than the Investing & Lending segment, or annual negative revenues in the Investing & Lending segment of $5 billion or more, provided in either case that you are employed in a business within such reporting segment.

(c) A Risk Event Occurs Prior to [_____]. If a Risk Event occurs prior to _____, (i) your rights in respect of all or a portion of your RSUs (whether or not Vested) will terminate and no RSU Shares will be delivered in respect of such RSUs, (ii) your rights to all or a portion of any Shares at Risk will terminate and such Shares at Risk will be cancelled and (iii) you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments and payments under Dividend Equivalent Rights) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (A) the date the Risk Event occurred and (B) the date that the repayment request is made.

(i) A "**Risk Event**" means there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy.

(d) You Engage in Serious Misconduct Prior to [_____]. If you engage in Serious Misconduct during the period beginning on the applicable Transferability Date through _____, you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments and payments under Dividend Equivalent Rights) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (i) the date the Serious Misconduct occurred and (ii) the date that the repayment request is made.

(i) "**Serious Misconduct**" means that you engage in conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.

(e) A Supervised Employee Engages in Serious Misconduct. If the Committee determines that it is appropriate to hold you accountable in whole or in part for Serious Misconduct related to compliance, control or risk that occurred during the Firm's _____ fiscal year by a Supervised Employee, your rights in respect of all or a portion of your RSUs (whether or not Vested) will terminate and no RSU Shares will be delivered in respect of such RSUs and your rights to all or a portion of any Shares at Risk will terminate and such Shares at Risk will be cancelled.

(i) "**Supervised Employee**" means an individual with respect to whom the Committee determines you had supervisory responsibility as a result of direct or indirect reporting lines or your management responsibility for an office, division or business.

Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, the parties agree that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs ([b][c]) and ([c][d]) of this Appendix (including your refusal to remit payment) the parties will submit to arbitration in accordance with Paragraph 16 of this Award Agreement and Section 3.17 of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the payment amount).

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Approved Termination" means that you are classified by the Firm as a "program analyst" or "fixed-term employee" and you (i) successfully complete the analyst program or fixed-term engagement, as applicable and determined by the Firm in its sole discretion, including remaining Employed through the completion date specified by the Firm, and (ii) terminate Employment immediately after the completion date without any "stay-on" or other agreement or understanding to continue Employment with the Firm. If you agree to stay with the Firm as an employee after your analyst program or fixed-term engagement ends and then later terminate Employment, you will not have an Approved Termination.

(c) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(d) "Covered Enterprise" means an existing or planned business enterprise that competes with the Firm (which, for this purpose means offering products or services that are the same as or similar to those offered by the Firm ("Firm Products or Services")), or reasonably may be expected to do so. The enterprises covered by this definition include enterprises that offer Firm Products or Services directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by, or being under common ownership with an enterprise that offers Firm Products or Services). An enterprise will be treated as providing Firm Products or Services if, solely by way of example, it provides products or services associated with investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than you or your family members), private banking, commercial banking, merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading. A Competitive Enterprise is a Covered Enterprise. **An enterprise that offers, or may reasonably be expected to offer, Firm Products or Services is a Covered Enterprise irrespective of whether the enterprise is a customer, client or counterparty of the Firm, and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(e) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(f) "[_____] Transferability Date" means the first trading day in a Window Period that occurs in _____, or if no Window Period occurs in _____, the first trading day of the first Window Period following thereafter.

(g) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(h) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 9(c)(i) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(i) "Shares at Risk" means RSU Shares subject to Transfer Restrictions.

(j) "Six-Month Transferability Date" means the first trading day in a Window Period that occurs on or after the six-month anniversary of the Delivery Date.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to,

specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned

or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(k) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of

Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) "Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).

(x) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(y) "RSU Shares" means shares of Common Stock that underlie an RSU.

(z) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(aa) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(bb) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(cc) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(dd) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ee) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(ff) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(gg) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(hh) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.54

THE GOLDMAN SACHS GROUP, INC.
[_____] YEAR-END SHORT-TERM RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your _____ year-end award of Short-Term RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 14.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of Short-Term RSUs awarded to you and the Delivery Date.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RSUS

5. **Vesting.** All of your Short-Term RSUs are Vested. When an RSU is Vested, it means **only** that your continued active Employment is not required for delivery of that portion of RSU Shares. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to delivery) continue to apply to Vested Short-Term RSUs, and you can still forfeit Vested Short-Term RSUs and any RSU Shares**.

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 11(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding Short-Term RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the Short-Term RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

DIVIDENDS

7. **Dividend Equivalent Rights and Dividends.** Each Short-Term RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding Short-Term RSUs for any record date that occurs on or after the Date of Grant.

FORFEITURE OF YOUR AWARD

8. **How You May Forfeit Your Award.** This Paragraph 8 sets forth the events that result in forfeiture of up to all of your Short-Term RSUs and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend delivery of RSU Shares, (b) deliver any RSU Shares into an escrow account in accordance with Paragraph 11(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 8 have occurred. Paragraph 10 (relating to certain circumstances under which delivery may be accelerated) provides for exceptions to one or more provisions of this Paragraph 8. The Code Staff Forfeiture and Repayment Appendix supplements this Paragraph 8 and sets forth additional events that result in forfeiture of up to all of your Supplemental RSUs and Shares at Risk and may require repayment to the Firm as described in Paragraph 9 and the Appendix.

(a) Short-Term RSUs Forfeited Upon Certain Events. If any of the following occurs, your rights to all of your Outstanding Short-Term RSUs will terminate, and no RSU Shares will be delivered in respect of such RSUs, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause (including, for the avoidance of doubt, "Serious Misconduct" as defined in the Code Staff Forfeiture and Repayment Appendix) has occurred before the Delivery Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Delivery Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 14 or Section 3.17 of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding Short-Term RSUs; *provided*, *however*, that your rights will only be terminated in respect of the Short-Term RSUs that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

9. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any RSU Shares for which the terms (including the terms for delivery) of the related Short-Term RSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(b) Any payments under Dividend Equivalent Rights for which the terms were not satisfied (including any such payments made in respect of Short-Term RSUs that are forfeited or RSU Shares that are cancelled or subject to repayment), in accordance with Section 2.8.4 of the Plan.

(c) Any dividends paid in respect of any RSU Shares that are cancelled or required to be repaid.

(d) Any amount applied to satisfy tax withholding or other obligations with respect to any Short-Term RSUs, RSU Shares, dividend payments and payments under Dividend Equivalent Rights that are forfeited or required to be repaid.

EXCEPTIONS TO THE DELIVERY DATE

10. **Accelerated Delivery in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding Award will be treated as described in this Paragraph 10, and, except as set forth in Paragraph 10(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding Short-Term RSUs will be delivered. In addition, the forfeiture events in Paragraph 8 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding Short-Term RSUs (including in the form of cash as described in Paragraph 11 (b)). In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, RSU Shares will be delivered in respect of your Outstanding Short-Term RSUs (including in the form of cash as described in Paragraph 11(b)).

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated delivery described in Paragraph 10(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding Short-Term RSUs will be delivered to the representative of your estate as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

11. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto). In no event, however, does this Paragraph 11(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the

Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSU Shares that become deliverable on a Delivery Date may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your Short-Term RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party. If you are a party to the Amended and Restated Shareholders' Agreement, RSU Shares will be subject to the Amended and Restated Shareholders' Agreement, but RSU Shares delivered in respect of Short-Term RSUs will not be "Covered Shares" for purposes of Section 2.1(a) thereof.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Short-Term RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you accept delivery of RSU Shares, or receive payment in respect of Dividend Equivalent Rights;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold Short-Term RSUs, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 8(a)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your Short-Term RSUs and subject previously delivered amounts to repayment under Paragraph 8(a)(iv);

(vii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 14 and Section 3.17 of the Plan; and

(viii) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

12. **Non-transferability.** Except as otherwise may be provided in this Paragraph 12 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 12 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Short-Term RSUs may transfer some or all of their Short-Term RSUs through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

13. **Right of Offset.** Except as provided in Paragraph 16(h), the obligation to deliver RSU Shares or to make payments under Dividend Equivalent Rights under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

14. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

15. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

16. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 16 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 16 and the other provisions of this Award Agreement, this Paragraph 16 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 10(c) and 11 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-2(b)(7) (in conjunction with Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 11(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your Short-Term RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 10(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 10(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 10(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 7 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding Short-Term RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding Short-Term RSUs.

(g) The timing of delivery or payment referred to in Paragraph 10(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 10(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 13 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

17. **Compliance of Award Agreement and Plan with Section 162(m).** If you are or become considered by GS Inc. to be one of its "covered employees" within the meaning of Section 162(m) of the Code, then you will be subject to Section 3.21.3 of the Plan, as a result of which delivery of your RSU Shares may be delayed.

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

18. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply and to limit the forfeitures and repayments that result under Paragraphs 8 and 9.

19. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

20. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

CODE STAFF FORFEITURE AND REPAYMENT APPENDIX

This Code Staff Appendix supplements Paragraph 8 and sets forth additional events that result in forfeiture of up to all of your Short-Term RSUs and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. As with the events described in Paragraph 8, more than one event may apply, in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event and the Firm reserves the right to (a) suspend delivery of RSU Shares, (b) deliver any RSU Shares into an escrow account in accordance with Paragraph 11(f)(v) or (c) apply Transfer Restrictions to any RSU Shares in connection with any investigation of whether any of the events that result in forfeiture under this Code Staff Appendix have occurred.

With respect to the events described in Paragraphs (a) and (b) of this Appendix, the Committee will consider certain factors to determine whether and what portion of your Award will terminate, including the reason for the "Risk Event" (as defined below) and the extent to which: (1) you participated in the Risk Event, (2) your compensation for the Firm's _____ fiscal year may or may not have been adjusted to take into account the risk associated with the Risk Event or your "Serious Misconduct" (as defined below) and (3) your compensation may be adjusted for the year in which the Risk Event or your Serious Misconduct is discovered.

(a) A Risk Event Occurs Prior to [_____]. If a Risk Event occurs prior to _____, (i) your rights in respect of all or a portion of your Short-Term RSUs will terminate and no RSU Shares will be delivered in respect of such Short-Term RSUs and (ii) you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments and payments under Dividend Equivalent Rights) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (A) the date the Risk Event occurred and (B) the date that the repayment request is made.

(i) A "**Risk Event**" means there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy.

(b) You Engage in Serious Misconduct Prior to [_____]. If you engage in Serious Misconduct during the period beginning on the Delivery Date through _____, you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the RSU Shares (plus any dividend payments and payments under Dividend Equivalent Rights) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (i) the date the Serious Misconduct occurred and (ii) the date that the repayment request is made.

(i) "**Serious Misconduct**" means that you engage in conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.

Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, the parties agree that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs (a) and (b) of this Appendix (including your refusal to remit payment) the parties will submit to arbitration in accordance with Paragraph 14 of this Award Agreement and Section 3.17 of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the payment amount)

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(c) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to,

specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(k) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(l) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(m) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, *provided*, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(n) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(o) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(p) "Firm" means GS Inc. and its subsidiaries and affiliates.

(q) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(r) "Grantee" means a person who receives an Award.

(s) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(t) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(u) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(v) "RSU Shares" means shares of Common Stock that underlie an RSU.

(w) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(x) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(y) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(z) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(aa) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(bb) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(cc) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.55

THE GOLDMAN SACHS GROUP, INC.
[ ] YEAR-END RESTRICTED STOCK AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your award of _____ year-end Restricted Shares (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 15. Within 30 days of the Date of Grant, you must make a Section 83(b) Election, which will result in your recognition of taxable income on the Date of Grant equal to the fair market value of the Restricted Shares on the Date of Grant, but will not affect Vesting of your Restricted Shares or the removal of the Transfer Restrictions.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of Restricted Shares awarded to you and any applicable Vesting Dates and Transferability Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RESTRICTED SHARES

5. **Vesting.** On each Vesting Date listed on your Award Statement, you will become Vested in the amount of Outstanding Restricted Shares listed next to that date. When a Restricted Share becomes Vested, it means **only** that your continued active Employment is not required for that portion of Restricted Shares to become fully transferrable without risk of forfeiture. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including the Transfer Restrictions) continue to apply to Vested Restricted Shares, and you can still forfeit Vested Restricted Shares.**

TRANSFER RESTRICTIONS

6. **Transfer Restrictions.** Restricted Shares will be subject to Transfer Restrictions until the Transferability Date next to such number or percentage of Restricted Shares on your Award Statement. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30 Business-Day-period on which to remove Transfer Restrictions for all or a portion of the Restricted Shares with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

7. **Dividends.** You will be entitled to receive on a current basis any regular cash dividend paid in respect of your Restricted Shares.

FORFEITURE OF YOUR AWARD

8. **How You May Forfeit Your Award.** This Paragraph 8 sets forth the events that result in forfeiture of up to all of your Restricted Shares and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend vesting of Outstanding Restricted Shares or release of Transfer Restrictions, (b) deliver any Restricted Shares into an escrow account in accordance with Paragraph 12(f)(v) or (c) apply Transfer Restrictions to any Restricted Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 8 have occurred. Paragraph 10 (relating to certain circumstances under which you will not forfeit your unvested Restricted Shares upon Employment termination) and Paragraph 11 (relating to certain circumstances under which vesting and/or release of Transfer Restrictions may be accelerated) provide for exceptions to one or more provisions of this Paragraph 8.

(a) Unvested Restricted Shares Forfeited if Your Employment Terminates. If your Employment terminates for any reason or you are otherwise no longer actively employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), your rights to your Outstanding Restricted Shares that are not Vested will terminate and those Restricted Shares will be cancelled.

(b) Restricted Shares Vested at Grant Forfeited if You Associate With a Covered Enterprise. If you Associate With a Covered Enterprise before the earlier of _____ or a Qualifying Termination After a Change In Control, your rights to your Outstanding Restricted Shares that were Vested on the Date of Grant will terminate and those Restricted Shares will be cancelled.

(c) Vested and Unvested Restricted Shares Forfeited if You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. If either:

(i) you, in any manner, directly or indirectly, (A) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (B) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (C) Solicit any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment with any Covered Enterprise or (D) on behalf of yourself or any person or Covered Enterprise hire, or participate in the hiring of, any Selected Firm Personnel or identify, or participate in the identification of, Selected Firm Personnel for potential hiring, whether as an employee or consultant or otherwise, or

(ii) Selected Firm Personnel are Solicited, hired or accepted into partnership,

membership or similar status (A) by a Covered Enterprise that you form, that bears your name, in which you are a partner, member or have similar status, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (B) by any Covered Enterprise where you have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Selected Firm Personnel,

then your rights to the following Restricted Shares (whether or not Vested) will terminate and those Restricted Shares will be cancelled:

(X) all of the Restricted Shares granted to you if any of the events in this Paragraph 8(c) occurs before the _____ Date,

(Y) the Restricted Shares with a Vesting Date of _____ or _____ if any of the events in this Paragraph 8(c) occurs after the _____ Date but before the _____ Date; and

(Z) the Restricted Shares with a Vesting Date of _____ if any of the events in this Paragraph 8(c) occurs after the _____ Date but before the _____ Date.

(d) Vested and Unvested Restricted Shares Forfeited upon Certain Events. If any of the following occurs, your rights to all of your Outstanding Restricted Shares (whether or not Vested) will terminate and those Restricted Shares will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred before the Transferability Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Transferability Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 15 or Section 3.17 of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding Restricted Shares; *provided, however*, that your rights will only be terminated in respect of the Restricted Shares that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

9. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any Restricted Shares for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(b) Any Restricted Shares for which Transfer Restrictions were previously released if (i) any Restricted Shares with a Transferability Date of _____ are forfeited in accordance with any of Paragraphs 8(d)(i) through 8(d)(vi) or (ii) are required to be repaid due to the occurrence of any of the events described in Paragraphs 8(d)(i) through 8(d)(vi).

(c) Any dividends paid in respect of any Restricted Shares that are cancelled or required to be repaid.

(d) Any amount applied to satisfy tax withholding or other obligations with respect to any Restricted Shares or dividend payments that are forfeited or required to be repaid.

EXCEPTIONS TO THE VESTING AND/OR TRANSFERABILITY DATES

10. **Circumstances Under Which You Will Not Forfeit Your Unvested Restricted Shares on Employment Termination (but the Transferability Date Continues to Apply).** If your Employment terminates at a time when you meet the requirements for Extended Absence, Retirement or "downsizing", each as described below, then Paragraph 8(a) will not apply, and your Outstanding Restricted Shares will be treated as described in this Paragraph 10. All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) Extended Absence or Retirement and No Association With a Covered Enterprise.

(i) Generally. If your Employment terminates by Extended Absence or Retirement, your Outstanding Restricted Shares that are not Vested will become Vested. However, your rights to any Outstanding Restricted Shares that becomes Vested by this Paragraph 10(a)(i) will terminate and those Restricted Shares will be cancelled if you Associate With a Covered Enterprise on or before the originally scheduled Vesting Date for those Restricted Shares.

(ii) Special Treatment for Involuntary or Mutual Agreement Termination. Paragraph 8(b) and the second sentence of Paragraph 10(a)(i) (each relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (A) the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement."

(b) Downsizing. If (i) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes, your Outstanding Restricted Shares that are not yet Vested will become Vested and Paragraph 8(b) will not apply. Whether or not your Employment is terminated solely by reason of a "downsizing" will be determined by the Firm in its sole discretion.

11. **Accelerated Vesting and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, then Paragraph 8(a) will not apply, your Outstanding Award will be treated as described in this Paragraph 11, and, except as set forth in Paragraph 11(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, your Outstanding Restricted Shares will Vest and any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 8 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, (A) your Outstanding Restricted Shares will Vest and (B) any Transfer Restrictions will cease to apply. In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated vesting and/or release of Transfer Restrictions described in Paragraph 11(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

12. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Vesting of Restricted Shares and removal of the Transfer Restrictions are conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant, Vesting or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise), (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you under this Award or (iii) shares of Common Stock delivered to you pursuant to this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto).

(b) Firm May Deliver Cash or Other Property Instead of Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the shares of Common Stock, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of shares of Common Stock will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. Restricted Shares that become Vested on a Vesting Date and Restricted Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional shares of Common Stock.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your Restricted Shares are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted Shares. GS Inc. may affix to Certificates representing shares of Common Stock any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended shares of Common Stock.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in shares of Common Stock and hedging or pledging shares of Common Stock and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information, and you will effect sales of shares of Common Stock in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Restricted Shares, including those related to the sale of shares of Common Stock;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Sell Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you request the sale of shares of Common Stock following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of shares of Common Stock (including Restricted Shares) or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of shares of Common Stock, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold Restricted Shares, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 8(d)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your Restricted Shares and subject previously delivered amounts to repayment under Paragraph 8(d)(iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Restricted Shares and Sell, Assign or Transfer any Forfeited Restricted Shares. You are granting to the Firm the full power and authority to register any Restricted Shares in its or its designee's

name and authorizing the Firm or its designee to sell, assign or transfer any Restricted Shares if forfeited by you. This Award, if held in escrow, will not be delivered to you but will be held by an escrow agent for your benefit. If an escrow agent is used, such escrow agent will also hold the Restricted Shares for the benefit of the Firm for the purpose of perfecting its security interest;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 15 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

13. **Non-transferability.** Except as otherwise may be provided in this Paragraph 13 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 13 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Restricted Shares may transfer some or all of their Restricted Shares (which will continue to be subject to Transfer Restrictions until the Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

14. **Right of Offset.** The obligation to pay dividends or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

15. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

16. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

17. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 8 and 9 and to remove Transfer Restrictions before the Transferability Date. In addition, the Committee, in its sole discretion, may determine whether Paragraphs 10(a)(ii) and 10(b) will apply upon a termination of Employment.

18. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

19. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

SHAREHOLDERS' AGREEMENT APPENDIX

Treatment of _____ Year-End Restricted Shares under the Amended and Restated Shareholders' Agreement (the "Shareholders' Agreement"). Certain capitalized terms used in this Appendix are used with the meaning assigned to them in the Shareholders' Agreement, as noted below.

- With respect to all Restricted Shares that are awarded under the _____ Year-End Award, an event triggering the recalculation of the Covered Person's Covered Shares (as each term is defined in the Shareholders' Agreement) shall be deemed to occur with respect to one-third of such Restricted Shares on each of the _____ Date, the _____ Date, and the _____ Date (each such date being referred to as a "Trigger Date").
- As of each such Trigger Date, such Covered Person's Covered Shares shall be increased by:
  - the gross number of Restricted Shares for such Trigger Date (determined before any deductions, including any deductions for withholding taxes, fees or commissions), minus
  - such gross number multiplied by the Specified Tax Rate (as defined in the Shareholders' Agreement) that would apply if the Covered Person had received, on or around the Trigger Date, a delivery of RSU Shares underlying RSUs instead of receiving a grant of Restricted Shares.
- Until a Trigger Date, the Covered Person shall not be deemed to be the Sole Beneficial Owner (as defined in the Shareholders' Agreement) of the Restricted Shares relating to such Trigger Date (and therefore until such Trigger Date such Shares shall not be counted toward the satisfaction of the Transfer Restrictions (as defined in the Shareholders' Agreement)).

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(c) "Covered Enterprise" means an existing or planned business enterprise that competes with the Firm (which, for this purpose means offering products or services that are the same as or similar to those offered by the Firm ("Firm Products or Services")), or reasonably may be expected to do so. The enterprises covered by this definition include enterprises that offer Firm Products or Services directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by, or being under common ownership with an enterprise that offers Firm Products or Services). An enterprise will be treated as providing Firm Products or Services if, solely by way of example, it provides products or services associated with investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than you or your family members), private banking, commercial banking, merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading. A Competitive Enterprise is a Covered Enterprise. **An enterprise that offers, or may reasonably be expected to offer, Firm Products or Services is a Covered Enterprise irrespective of whether the enterprise is a customer, client or counterparty of the Firm, and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(d) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(e) "[_____] Date" means the first trading day in a Window Period in _____ (or if there is no trading day in a Window Period that occurs in _____ on or before _____, another date in _____ that is selected by the Committee or the SIP Committee) and includes the 30 Business Days after such date.

(f) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(g) "Section 83(b) Election" means an election filed with the Internal Revenue Service, electing under Section 83(b) of the Code to be taxed currently on the fair market value of the Restricted Shares on the Date of Grant.

(h) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 8(c) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS

Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(k) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-

regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(o) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(p) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(q) "Fair Market Value" means, with respect to a share of Common Stock on any day, the fair market value as determined in accordance with a valuation methodology approved by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) "Restricted Share" means a share of Common Stock delivered under the Plan that is subject to Transfer Restrictions, forfeiture provisions and/or other terms and conditions specified in the Plan and in the Award Agreement or other Applicable Award Agreement. All references to Restricted Shares include "Shares at Risk."

(x) "Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).

(y) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(z) "RSU Shares" means shares of Common Stock that underlie an RSU.

(aa) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(bb) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(cc) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(dd) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(ee) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ff) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(gg) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(hh) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(ii) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.56

THE GOLDMAN SACHS GROUP, INC.
[ ] YEAR-END RESTRICTED STOCK AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your award of _____ year-end Restricted Shares (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 15. Within 30 days of the Date of Grant, you must make a Section 83(b) Election, which will result in your recognition of taxable income on the Date of Grant equal to the fair market value of the Restricted Shares on the Date of Grant, but will not affect the removal of the Transfer Restrictions.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of Restricted Shares awarded to you and any applicable Transferability Dates. This Award Agreement does not govern the terms and conditions of any Restricted Shares designated on your Award Statement as "Short-Term Restricted Shares," which, if applicable to you, are addressed in a separate Award Agreement.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RESTRICTED SHARES

5. **Vesting.** All of your Restricted Shares are Vested. When a Restricted Share is Vested, it means **only** that your continued active Employment is not required for that portion of Restricted Shares to become fully transferrable without risk of forfeiture. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including the Transfer Restrictions) continue to apply to Vested Restricted Shares, and you can still forfeit Vested Restricted Shares.**

TRANSFER RESTRICTIONS

6. **Transfer Restrictions.** Restricted Shares will be subject to Transfer Restrictions until the Transferability Date next to such number or percentage of Restricted Shares on your Award Statement. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30 Business-Day-period on which to remove Transfer Restrictions for all or a portion of the Restricted Shares with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

7. **Dividends.** You will be entitled to receive on a current basis any regular cash dividend paid in respect of your Restricted Shares.

FORFEITURE OF YOUR AWARD

8. **How You May Forfeit Your Award.** This Paragraph 8 sets forth the events that result in forfeiture of up to all of your Restricted Shares and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend release of Transfer Restrictions, (b) deliver any Restricted Shares into an escrow account in accordance with Paragraph 12(f)(v) or (c) apply Transfer Restrictions to any Restricted Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 8 have occurred. Paragraph 10 (relating to certain circumstances under which restrictions on Association With a Covered Enterprise will not apply) and Paragraph 11 (relating to certain circumstances under which release of Transfer Restrictions may be accelerated) provide for exceptions to one or more provisions of this Paragraph 8. The Code Staff Forfeiture and Repayment Appendix supplements this Paragraph 8 and sets forth additional events that result in forfeiture of up to all of your Restricted Shares and may require repayment to the Firm as described in Paragraph 9 and the Appendix.

(a) Restricted Shares Forfeited if You Associate With a Covered Enterprise.

(i) If you Associate With a Covered Enterprise before the earlier of _____ or a Qualifying Termination After a Change in Control, your rights to all the Restricted Shares granted to you will terminate and those Restricted Shares will be cancelled.

(ii) If you Associate With a Covered Enterprise on or after _____ but before the earlier of _____ or a Qualifying Termination After a Change in Control, your rights to two-thirds of the Restricted Shares granted to you will terminate and those Restricted Shares will be cancelled.

(iii) If you Associate With a Covered Enterprise on or after _____ but before the earlier of _____ or a Qualifying Termination After a Change in Control, your rights to one-third the Restricted Shares granted to you will terminate and those Restricted Shares will be cancelled.

(b) Restricted Shares Forfeited if You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees or if GS Inc. Experiences Certain Severe Adverse Financial Events. If:

(i) you, in any manner, directly or indirectly, (A) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (B) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (C) Solicit any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment with any Covered Enterprise or (D) on behalf

of yourself or any person or Covered Enterprise hire, or participate in the hiring of, any Selected Firm Personnel or identify, or participate in the identification of, Selected Firm Personnel for potential hiring, whether as an employee or consultant or otherwise;

(ii) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status (A) by a Covered Enterprise that you form, that bears your name, in which you are a partner, member or have similar status, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (B) by any Covered Enterprise where you have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Selected Firm Personnel;

(iii) GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days; or

(iv) The Board of Governors of the Federal Reserve or the Federal Deposit Insurance Corporation (the "FDIC") makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default,"

then your rights to the following Restricted Shares will terminate and those Restricted Shares will be cancelled:

(X) all of the Restricted Shares granted to you if any of the events in this Paragraph 8(b) occurs before the _____ Date,

(Y) two-thirds of the Restricted Shares granted to you if any of the events in this Paragraph 8(b) occurs on or after the _____ Date but before the _____ Date; and

(Z) one-third of the Restricted Shares granted to you if any of the events in this Paragraph 8(b) occurs on or after the _____ Date but before the _____ Date.

(c) Restricted Shares Forfeited upon Certain Events. If any of the following occurs, your rights to all of your Outstanding Restricted Shares will terminate and those Restricted Shares will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause (including, for the avoidance of doubt, "Serious Misconduct" as defined in the Code Staff Forfeiture and Repayment Appendix) has occurred before the Transferability Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Transferability Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 15 or Section 3.17 of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding Restricted Shares; *provided, however*, that your rights will only be terminated in respect of the Restricted Shares that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

9. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any Restricted Shares for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(b) Any Restricted Shares for which Transfer Restrictions were previously released if (i) any Restricted Shares with a Transferability Date of _____ are forfeited in accordance with any of Paragraphs 8(c)(i) through 8(c)(vi) or (ii) are required to be repaid due to the occurrence of any of the events described in Paragraphs 8(c)(i) through 8(c)(vi) .

(c) Any dividends paid in respect of any Restricted Shares that are cancelled or required to be repaid.

(d) Any amount applied to satisfy tax withholding or other obligations with respect to any Restricted Shares or dividend payments that are forfeited or required to be repaid.

EXCEPTIONS TO ASSOCIATION WITH A COVERED ENTERPRISE; TRANSFERABILITY DATES

10. **Restrictions on Association With a Covered Enterprise Cease to Apply After an Involuntary or Mutual Agreement Termination (but the Transferability Date Continues to Apply).** Paragraph 8(a) (relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (a) the Firm characterizes your Employment termination as “involuntary” or by “mutual agreement” and (b) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in

each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement." All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

11. **Accelerated Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding Award will be treated as described in this Paragraph 11, and, except as set forth in Paragraph 11(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 8 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, any Transfer Restrictions will cease to apply. In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated release of Transfer Restrictions described in Paragraph 11(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

12. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Removal of the Transfer Restrictions is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise), (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you under this Award or (iii)

shares of Common Stock delivered to you pursuant to this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto).

(b) Firm May Deliver Cash or Other Property Instead of Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the shares of Common Stock, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of shares of Common Stock will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. Restricted Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional shares of Common Stock.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your Restricted Shares are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party.

(e) Firm May Affix Legends and Place Stop Orders on Restricted Shares. GS Inc. may affix to Certificates representing shares of Common Stock any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended shares of Common Stock.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in shares of Common Stock and hedging or pledging shares of Common Stock and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information, and you will effect sales of shares of Common Stock in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Restricted Shares, including those related to the sale of shares of Common Stock;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Sell Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you request the sale of shares of Common Stock following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of shares of Common Stock (including Restricted Shares) or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of shares of Common Stock, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold Restricted Shares, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 8(c)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your Restricted Shares and subject previously delivered amounts to repayment under Paragraph 8(c)(iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Restricted Shares and Sell, Assign or Transfer any Forfeited Restricted Shares. You are granting to the Firm the full power and authority to register any Restricted Shares in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Restricted Shares if forfeited by you. This Award, if held in escrow, will not be delivered to you but will be held by an escrow agent for your benefit. If an escrow agent is used, such escrow agent will also hold the Restricted Shares for the benefit of the Firm for the purpose of perfecting its security interest;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 15 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

13. **Non-transferability.** Except as otherwise may be provided in this Paragraph 13 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 13 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Restricted Shares may transfer some or all of their Restricted Shares (which will continue to be subject to Transfer Restrictions until the Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

14. **Right of Offset.** The obligation to pay dividends or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

15. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

16. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

17. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 8 and 9 and to remove Transfer Restrictions before the Transferability Date. In addition, the Committee, in its sole discretion, may determine whether Paragraph 10 will apply upon a termination of Employment.

18. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

19. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

CODE STAFF FORFEITURE AND REPAYMENT APPENDIX

This Code Staff Appendix supplements Paragraph 8 and sets forth additional events that result in forfeiture of up to all of your Restricted Shares and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. As with the events described in Paragraph 8, more than one event may apply, in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event and the Firm reserves the right to (a) suspend release of Transfer Restrictions, (b) deliver any Restricted Shares into an escrow account in accordance with Paragraph 12(f)(v) or (c) apply Transfer Restrictions to any Restricted Shares in connection with any investigation of whether any of the events that result in forfeiture under this Code Staff Appendix have occurred.

With respect to the events described in Paragraphs (b) through (e) of this Appendix, the Committee will consider certain factors to determine whether and what portion of your Award will terminate, including the reason for the "Loss Event" (as defined below) or "Risk Event" (as defined below) and the extent to which: (1) you participated in the Loss Event or Risk Event, (2) your compensation for the Firm's _____ fiscal year may or may not have been adjusted to take into account the risk associated with the Loss Event, Risk Event, your "Serious Misconduct" (as defined below) or the Serious Misconduct of a "Supervised Employee" (as defined below) and (3) your compensation may be adjusted for the year in which the Loss Event, Risk Event, your Serious Misconduct or a Supervised Employee's Serious Misconduct is discovered.

(a) You Associate With a Material Covered Enterprise Prior to [_____]. If you "Associate With a Material Covered Enterprise" (as defined below) on or after the date the restrictions on Association With a Covered Enterprise lapse (as described in Paragraph 8(a) of the Award Agreement) and before the earlier of _____ or a Qualifying Termination After a Change in Control, your rights to all of your Outstanding Restricted Shares will terminate and those Restricted Shares will be cancelled.

(i) "**Associate With a Material Covered Enterprise**" means that you (A) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any "Material Covered Enterprise" (as defined below) or (B) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Material Covered Enterprise. Associate With a Material Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (A) becoming the subject of any publicly available announcement or report of a pending or future association with a Material Covered Enterprise and (B) unpaid associations, including an association in contemplation of future employment. The term "Association With a Material Covered Enterprise" has its correlative meaning.

(ii) The restriction described above on any Association With a Material Covered Enterprise will not apply if (A) the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (B) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes.

(iii) "**Material Covered Enterprise**" means a Covered Enterprise that the Firm determines, in its sole discretion, to be material.

(b) A Loss Event Occurs Prior to the [_____] Date. If a Loss Event occurs prior to the _____ Date, then your rights to the following Outstanding Restricted Shares will terminate and those Restricted Shares will be cancelled:

(X) for all Loss Events identified before the _____ Date, up to one-third (1/3) of your Restricted Shares in the aggregate;

(Y) for all Loss Events identified after the _____ Date but before the _____ Date, up to one-third (1/3) of your Restricted Shares in the aggregate; and

(Z) for all Loss Events identified after the _____ Date but before the _____ Date, up to one-third (1/3) of your Restricted Shares in the aggregate.

(i) A "**Loss Event**" means (A) an annual pre-tax loss at GS Inc. or (B) annual negative revenues in one or more reporting segments as disclosed in the Firm's Form 10-K other than the Investing & Lending segment, or annual negative revenues in the Investing & Lending segment of $5 billion or more, *provided* in either case that you are employed in a business within such reporting segment.

(c) A Risk Event Occurs Prior to [_____]. If a Risk Event occurs prior to _____, (i) your rights in respect of all or a portion of your Restricted Shares will terminate and those Restricted Shares will be cancelled and (ii) you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the Restricted Shares (plus any dividend payments) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (A) the date the Risk Event occurred and (B) the date that the repayment request is made.

(i) A "**Risk Event**" means there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy.

(d) You Engage in Serious Misconduct Prior to [_____]. If you engage in Serious Misconduct during the period beginning on the applicable Transferability Date through _____, you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the Restricted Shares (plus any dividend payments) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (i) the date the Serious Misconduct occurred and (ii) the date that the repayment request is made.

(i) "**Serious Misconduct**" means that you engage in conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.

(e) A Supervised Employee Engages in Serious Misconduct. If the Committee determines that it is appropriate to hold you accountable in whole or in part for Serious Misconduct related to compliance, control or risk that occurred during the Firm's _____ fiscal year by a Supervised Employee, your rights in respect of all or a portion of your Restricted Shares will terminate and those Restricted Shares will be cancelled.

(i) "**Supervised Employee**" means an individual with respect to whom the Committee determines you had supervisory responsibility as a result of direct or indirect reporting lines or your management responsibility for an office, division or business.

Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, the parties agree that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs (c) and (d) of this Appendix (including your refusal to remit payment) the parties will submit to arbitration in accordance with Paragraph 15 of this Award Agreement and Section 3.17 of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the payment amount).

SHAREHOLDERS' AGREEMENT APPENDIX

Treatment of _____ Year-End Restricted Shares under the Amended and Restated Shareholders' Agreement (the "Shareholders' Agreement"). Certain capitalized terms used in this Appendix are used with the meaning assigned to them in the Shareholders' Agreement, as noted below.

- With respect to all Restricted Shares that are awarded under the _____ Year-End Award, an event triggering the recalculation of the Covered Person's Covered Shares (as each term is defined in the Shareholders' Agreement) shall be deemed to occur with respect to one-third of such Restricted Shares on each of the _____ Date, the _____ Date, and the _____ Date (each such date being referred to as a "Trigger Date").
- As of each such Trigger Date, such Covered Person's Covered Shares shall be increased by:
  - the gross number of Restricted Shares for such Trigger Date (determined before any deductions, including any deductions for withholding taxes, fees or commissions), minus
  - such gross number multiplied by the Specified Tax Rate (as defined in the Shareholders' Agreement) that would apply if the Covered Person had received, on or around the Trigger Date, a delivery of RSU Shares underlying RSUs instead of receiving a grant of Restricted Shares.
- Until a Trigger Date, the Covered Person shall not be deemed to be the Sole Beneficial Owner (as defined in the Shareholders' Agreement) of the Restricted Shares relating to such Trigger Date (and therefore until such Trigger Date such Shares shall not be counted toward the satisfaction of the Transfer Restrictions (as defined in the Shareholders' Agreement)).

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of either the Committee or the SIP Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(c) "Covered Enterprise" means an existing or planned business enterprise that competes with the Firm (which, for this purpose means offering products or services that are the same as or similar to those offered by the Firm ("Firm Products or Services")), or reasonably may be expected to do so. The enterprises covered by this definition include enterprises that offer Firm Products or Services directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by, or being under common ownership with an enterprise that offers Firm Products or Services). An enterprise will be treated as providing Firm Products or Services if, solely by way of example, it provides products or services associated with investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than you or your family members), private banking, commercial banking, merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading. A Competitive Enterprise is a Covered Enterprise. **An enterprise that offers, or may reasonably be expected to offer, Firm Products or Services is a Covered Enterprise irrespective of whether the enterprise is a customer, client or counterparty of the Firm, and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(d) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(e) "[_____] Date" means the first trading day in a Window Period in _____ (or if there is no trading day in a Window Period that occurs in _____ on or before _____, another date in _____ that is selected by the Committee or the SIP Committee) and includes the 30 Business Days after such date.

(f) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(g) "Section 83(b) Election" means an election filed with the Internal Revenue Service, electing under Section 83(b) of the Code to be taxed currently on the fair market value of the Restricted Shares on the Date of Grant.

(h) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraphs 8(b)(i) and (ii) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS

Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(k) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-

regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(o) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(p) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(q) "Fair Market Value" means, with respect to a share of Common Stock on any day, the fair market value as determined in accordance with a valuation methodology approved by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) "Restricted Share" means a share of Common Stock delivered under the Plan that is subject to Transfer Restrictions, forfeiture provisions and/or other terms and conditions specified in the Plan and in the Award Agreement or other Applicable Award Agreement. All references to Restricted Shares include "Shares at Risk."

(x) "Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).

(y) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(z) "RSU Shares" means shares of Common Stock that underlie an RSU.

(aa) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(bb) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(cc) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(dd) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(ee) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(ff) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(gg) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(hh) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(ii) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.57

THE GOLDMAN SACHS GROUP, INC.
[_____] YEAR-END SHORT-TERM RESTRICTED STOCK AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your award of _____ year-end Short-Term Restricted Shares (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 14. Within 30 days of the Date of Grant, you must make a Section 83(b) Election, which will result in your recognition of taxable income on the Date of Grant equal to the fair market value of the Restricted Shares on the Date of Grant, but will not affect the removal of the Transfer Restrictions.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of Short-Term Restricted Shares awarded to you and any applicable Transferability Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR RESTRICTED SHARES

5. **Vesting.** All of your Short-Term Restricted Shares are Vested. When a Restricted Share is Vested, it means **only** that your continued active Employment is not required for that portion of Restricted Shares to become fully transferrable without risk of forfeiture. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including the Transfer Restrictions) continue to apply to Vested Short-Term Restricted Shares, and you can still forfeit Vested Short-Term Restricted Shares.**

TRANSFER RESTRICTIONS

6. **Transfer Restrictions.** Short-Term Restricted Shares will be subject to Transfer Restrictions until the Transferability Date. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30 Business-Day-period on which to remove Transfer Restrictions for all or a portion of the Restricted Shares with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

7. **Dividends.** You will be entitled to receive on a current basis any regular cash dividend paid in respect of your Short-Term Restricted Shares.

FORFEITURE OF YOUR AWARD

8. **How You May Forfeit Your Award.** This Paragraph 8 sets forth the events that result in forfeiture of up to all of your Short-Term Restricted Shares and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (a) suspend release of Transfer Restrictions, (b) deliver any Short-Term Restricted Shares into an escrow account in accordance with Paragraph 11(f)(v) or (c) apply Transfer Restrictions to any Short-Term Restricted Shares in connection with any investigation of whether any of the events that result in forfeiture under the Plan or this Paragraph 8 have occurred. Paragraph 10 (relating to certain circumstances under which release of Transfer Restrictions may be accelerated) provides for exceptions to one or more provisions of this Paragraph 8. The Code Staff Forfeiture and Repayment Appendix supplements this Paragraph 8 and sets forth additional events that result in forfeiture of up to all of your Short-Term Restricted Shares and may require repayment to the Firm as described in Paragraph 9 and the Appendix.

(a) Short-Term Restricted Shares Forfeited upon Certain Events. If any of the following occurs, your rights to all of your Outstanding Short-Term Restricted Shares will terminate and those Restricted Shares will be cancelled, in each case, as may be further described below:

(i) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause (including, for the avoidance of doubt, "Serious Misconduct" as defined in the Code Staff Forfeiture and Repayment Appendix) has occurred before the Transferability Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Transferability Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 14 or Section 3.17 of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of any Outstanding Short-Term Restricted Shares; *provided, however*, that your rights will only be terminated in respect of the Short-Term Restricted Shares that are replaced, substituted for or otherwise considered by such other entity in making its grant.

REPAYMENT OF YOUR AWARD

9. **When You May Be Required to Repay Your Award.** If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(a) Any Short-Term Restricted Shares for which the terms (including the terms for the release of Transfer Restrictions) were not satisfied, in accordance with Section 2.5.3 of the Plan.

(b) Any dividends paid in respect of any Short-Term Restricted Shares that are cancelled or required to be repaid.

(c) Any amount applied to satisfy tax withholding or other obligations with respect to any Short-Term Restricted Shares or dividend payments that are forfeited or required to be repaid.

EXCEPTIONS TO THE TRANSFERABILITY DATE

10. **Accelerated Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, then your Outstanding Award will be treated as described in this Paragraph 10, and, except as set forth in Paragraph 10(a), all other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 8 and 9, continue to apply.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, any Transfer Restrictions will cease to apply. In addition, the forfeiture events in Paragraph 8 will not apply to your Award.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, any Transfer Restrictions will cease to apply. In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated release of Transfer Restrictions described in Paragraph 10(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

11. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Removal of the Transfer Restrictions is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise), (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you under this Award or (iii) shares of Common Stock delivered to you pursuant to this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto).

(b) Firm May Deliver Cash or Other Property Instead of Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the shares of Common Stock, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of shares of Common Stock will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. Short-Term Restricted Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional shares of Common Stock.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your Short-Term Restricted Shares are conditioned on your becoming a party to any

shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a similar title or position) of the Firm are required to be a party. If you are party to the Amended and Restated Shareholders' Agreement (the "Shareholders' Agreement"), Short-Term Restricted Shares will be subject to the Shareholders' Agreement, but those Restricted Shares will not be considered "Covered Shares" for purposes of Section 2.1(a) thereof. Until the Transferability Date, you will not be deemed to be the Sole Beneficial Owner (as defined in the Shareholders' Agreement) of the Short-Term Restricted Shares (and therefore such Short-Term Restricted Shares will not be counted toward the satisfaction of the Transfer Restrictions (as defined in the Shareholders' Agreement) until the Transferability Date).

(e) Firm May Affix Legends and Place Stop Orders on Short-Term Restricted Shares. GS Inc. may affix to Certificates representing shares of Common Stock any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended shares of Common Stock.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in shares of Common Stock and hedging or pledging shares of Common Stock and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information, and you will effect sales of shares of Common Stock in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Short-Term Restricted Shares, including those related to the sale of shares of Common Stock;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Sell Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you request the sale of shares of Common Stock following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of shares of Common Stock (including Short-Term Restricted Shares) or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as

it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of shares of Common Stock, cash or other property required by this Award Agreement have been satisfied;

(vi) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold Short-Term Restricted Shares, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 8(a)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your Short-Term Restricted Shares and subject previously delivered amounts to repayment under Paragraph 8(a)(iv);

(vii) You Authorize the Firm to Register, in Its or Its Designee's Name, Any Restricted Shares and Sell, Assign or Transfer any Forfeited Short-Term Restricted Shares. You are granting to the Firm the full power and authority to register any Short-Term Restricted Shares in its or its designee's name and authorizing the Firm or its designee to sell, assign or transfer any Short-Term Restricted Shares if forfeited by you. This Award, if held in escrow, will not be delivered to you but will be held by an escrow agent for your benefit. If an escrow agent is used, such escrow agent will also hold the Short-Term Restricted Shares for the benefit of the Firm for the purpose of perfecting its security interest;

(viii) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 14 and Section 3.17 of the Plan; and

(ix) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

12. **Non-transferability.** Except as otherwise may be provided in this Paragraph 12 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 12 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Restricted Shares may transfer some or all of their Restricted Shares (which will continue to be subject to Transfer Restrictions until the Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

13. **Right of Offset.** The obligation to pay dividends or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

14. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

15. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

16. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 8 and 9 and to remove Transfer Restrictions before the Transferability Date.

17. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially

adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

18. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

CODE STAFF FORFEITURE AND REPAYMENT APPENDIX

This Code Staff Appendix supplements Paragraph 8 and sets forth additional events that result in forfeiture of up to all of your Short-Term Restricted Shares and may require repayment to the Firm of up to all other amounts previously delivered or paid to you under your Award in accordance with Paragraph 9. As with the events described in Paragraph 8, more than one event may apply, in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event and the Firm reserves the right to (a) suspend release of Short-Term Transfer Restrictions, (b) deliver any Short-Term Restricted Shares into an escrow account in accordance with Paragraph 11(f)(v) or (c) apply Transfer Restrictions to any Short-Term Restricted Shares in connection with any investigation of whether any of the events that result in forfeiture under this Code Staff Appendix have occurred.

With respect to the events described in Paragraphs (a) and (b) of this Appendix, the Committee will consider certain factors to determine whether and what portion of your Award will terminate, including the reason for the "Risk Event" (as defined below) and the extent to which: (1) you participated in the Risk Event, (2) your compensation for the Firm's _____ fiscal year may or may not have been adjusted to take into account the risk associated with the Risk Event or your "Serious Misconduct" (as defined below) and (3) your compensation may be adjusted for the year in which the Risk Event or your Serious Misconduct.

(a) A Risk Event Occurs Prior to [_____]. If a Risk Event occurs prior to _____, (i) your rights in respect of all or a portion of your Short-Term Restricted Shares will terminate and those Short-Term Restricted Shares will be cancelled and (ii) you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the Short-Term Restricted Shares (plus any dividend payments) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (A) the date the Risk Event occurred and (B) the date that the repayment request is made.

(i) A "**Risk Event**" means there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy.

(b) You Engage in Serious Misconduct Prior to [_____]. If you engage in Serious Misconduct during the period beginning on the applicable Transferability Date through _____, you will be obligated immediately upon demand therefor to pay the Firm an amount not in excess of the greater of the Fair Market Value of the Short-Term Restricted Shares (plus any dividend payments) delivered in respect of the Award (without reduction for any amount applied to satisfy tax withholding or other obligations) determined as of (i) the date the Serious Misconduct occurred and (ii) the date that the repayment request is made.

(i) "**Serious Misconduct**" means that you engage in conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.

Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, the parties agree that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs (a) and (b) of this Appendix (including your refusal to remit payment) the parties will submit to arbitration in accordance with Paragraph 14 of this Award Agreement and Section 3.17 of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the payment amount).

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(c) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(d) "Section 83(b) Election" means an election filed with the Internal Revenue Service, electing under Section 83(b) of the Code to be taxed currently on the fair market value of the Restricted Shares on the Date of Grant.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation

or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(h) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(i) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(j) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(k) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(l) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(m) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(n) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(o) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(p) "Extended Absence" means the Grantee's inability to perform for six (6) continuous months, due to illness, injury or pregnancy-related complications, substantially all the essential duties of the Grantee's occupation, as determined by the Committee.

(q) "Fair Market Value" means, with respect to a share of Common Stock on any day, the fair market value as determined in accordance with a valuation methodology approved by the Committee.

(r) "Firm" means GS Inc. and its subsidiaries and affiliates.

(s) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the

Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(t) "Grantee" means a person who receives an Award.

(u) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(v) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(w) "Restricted Share" means a share of Common Stock delivered under the Plan that is subject to Transfer Restrictions, forfeiture provisions and/or other terms and conditions specified in the Plan and in the Award Agreement or other Applicable Award Agreement. All references to Restricted Shares include "Shares at Risk."

(x) "Retirement" means termination of the Grantee's Employment (other than for Cause) on or after the Date of Grant at a time when (i) (A) the sum of the Grantee's age plus years of service with the Firm (as determined by the Committee in its sole discretion) equals or exceeds 60 and (B) the Grantee has completed at least 10 years of service with the Firm (as determined by the Committee in its sole discretion) or, if earlier, (ii) (A) the Grantee has attained age 50 and (B) the Grantee has completed at least five years of service with the Firm (as determined by the Committee in its sole discretion).

(y) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(z) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(aa) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(bb) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(cc) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(dd) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(ee) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(ff) "Vesting Date" means each date specified in the Grantee's Award Agreement as a date on which part or all of an Award becomes Vested.

(gg) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (*provided* that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.58

THE GOLDMAN SACHS GROUP, INC.
[_____] FIXED ALLOWANCE RSU AWARD

This Award Agreement, together with The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), governs your _____ Fixed Allowance award of RSUs (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified (a) open and activate an Account and (b) agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 13.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of Fixed Allowance RSUs awarded to you and any applicable Delivery Dates and Transferability Dates.

4. **Definitions.** Capitalized terms are defined in the Definitions Appendix, which also includes terms that are defined in the Plan.

VESTING OF YOUR FIXED ALLOWANCE RSUS

5. **Vesting.** All of your Fixed Allowance RSUs are Vested. When a Fixed Allowance RSU is Vested, it means that your continued active Employment is not required for delivery of that portion of RSU Shares. **The terms of this Award Agreement (including conditions to delivery and any applicable Transfer Restrictions) continue to apply to Vested Fixed Allowance RSUs.**

DELIVERY OF YOUR RSU SHARES

6. **Delivery.** Reasonably promptly (but no more than 30 Business Days) after each Delivery Date listed on your Award Statement, RSU Shares (less applicable withholding as described in Paragraph 10(a)) will be delivered (by book entry credit to your Account) in respect of the amount of Outstanding Fixed Allowance RSUs listed next to that date. The Committee or the SIP Committee may select multiple dates within the 30-Business-Day period following the Delivery Date to deliver RSU Shares in respect of all or a portion of the Fixed Allowance RSUs with the same Delivery Date listed on the Award Statement, and all such dates will be treated as a single Delivery Date for purposes of this Award. Until such delivery, you have only the rights of a general unsecured creditor, and no rights as a shareholder of GS Inc. Without limiting the Committee's authority under Section 1.3.2(h) of the Plan, the Firm may accelerate any Delivery Date by up to 30 days.

TRANSFER RESTRICTIONS FOLLOWING DELIVERY

7. **Transfer Restrictions and Shares at Risk.** Fifty percent of the RSU Shares that are delivered on any date, before tax withholding (or, if the applicable tax withholding rate is greater than 50%, all RSU Shares delivered after tax withholding), will be Shares at Risk. This means that if, for example, on a Delivery Date, you are scheduled to receive delivery of 1,000 RSU Shares, and you are subject to a 40% withholding rate, then (a) 400 RSU Shares will be withheld for taxes, (b) 500 RSU Shares delivered to you will be Shares at Risk and (c) 100 RSU Shares delivered to you will not be subject to Transfer Restrictions. Any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposition in violation of the Transfer Restrictions on Shares at Risk will be void. Within 30 Business Days after the Transferability Date listed on your Award Statement (or any other date on which the Transfer Restrictions are to be removed), GS Inc. will remove the Transfer Restrictions. The Committee or the SIP Committee may select multiple dates within such 30-Business-Day period on which to remove Transfer Restrictions for all or a portion of the Shares at Risk with the same Transferability Date listed on the Award Statement, and all such dates will be treated as a single Transferability Date for purposes of this Award.

DIVIDENDS

8. **Dividend Equivalent Rights and Dividends.** Each Fixed Allowance RSU includes a Dividend Equivalent Right, which entitles you to receive an amount (less applicable withholding), at or after the time of distribution of any regular cash dividend paid by GS Inc. in respect of a share of Common Stock, equal to any regular cash dividend payment that would have been made in respect of an RSU Share underlying your Outstanding Fixed Allowance RSUs for any record date that occurs on or after the Date of Grant. In addition, you will be entitled to receive on a current basis any regular cash dividend paid in respect of your Shares at Risk.

EXCEPTIONS TO DELIVERY AND/OR TRANSFERABILITY DATES

9. **Accelerated Delivery and/or Release of Transfer Restrictions in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding Award will be treated as described in this Paragraph 9.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, the RSU Shares underlying your Outstanding Fixed Allowance RSUs will be delivered, and any Transfer Restrictions will cease to apply.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Committee has received satisfactory documentation relating to your Conflicted Employment, (A) RSU Shares will be delivered in respect of your Outstanding Fixed Allowance RSUs (including in the form of cash as described in Paragraph 10(b)) and (B) any Transfer Restrictions will cease to apply. In addition, if, following your termination of Employment, you notify the Firm and provide the Committee with satisfactory documentation that you are accepting Conflicted Employment, (A) RSU Shares will be delivered in respect of your Outstanding Fixed Allowance RSUs (including in the form of cash as described in Paragraph 10(b)) and (B) any Transfer Restrictions will cease to apply.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Committee retains the authority to exercise its rights under the Award Agreement or the Plan (including Section 1.3.2 of the Plan) to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated delivery and/or release of Transfer Restrictions described in Paragraph 9(b)(i) will not apply because such actions are not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, the RSU Shares underlying your Outstanding Fixed Allowance RSUs will be delivered to the representative of your estate and any Transfer Restrictions will cease to apply as soon as practicable after the date of death and after such documentation as may be requested by the Committee is provided to the Committee.

OTHER TERMS, CONDITIONS AND AGREEMENTS

10. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Delivery of RSU Shares is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). In addition, to the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or delivery of this Award by requiring you to choose between remitting the amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of RSU Shares delivered to you under this Award. In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of shares of Common Stock delivered to you pursuant to this Award (or any other Outstanding awards granted under the Plan or any predecessor or successor plan thereto). In no event, however, does this Paragraph 10(a) give you any discretion to determine or affect the timing of the delivery of RSU Shares or the timing of payment of tax obligations.

(b) Firm May Deliver Cash or Other Property Instead of RSU Shares. In accordance with Section 1.3.2(i) of the Plan, in the sole discretion of the Committee, in lieu of all or any portion of the RSU Shares, the Firm may deliver cash, other securities, other awards under the Plan or other property, and all references in this Award Agreement to deliveries of RSU Shares will include such deliveries of cash, other securities, other awards under the Plan or other property.

(c) Amounts May Be Rounded to Avoid Fractional Shares. RSU Shares that become deliverable on a Delivery Date and RSU Shares subject to Transfer Restrictions may, in each case, be rounded to avoid fractional Shares.

(d) You May Be Required to Become a Party to the Shareholders' Agreement. Your rights to your Fixed Allowance RSUs are conditioned on your becoming a party to any shareholders' agreement to which other similarly situated employees (*e.g.*, employees with a

similar title or position) of the Firm are required to be a party. If you are a party to the Amended and Restated Shareholders' Agreement, RSU Shares will be subject to the Amended and Restated Shareholders' Agreement, but RSU Shares delivered in respect of Fixed Allowance RSUs will not be "Covered Shares" for purposes of Section 2.1(a) thereof.

(e) Firm May Affix Legends and Place Stop Orders on Restricted RSU Shares. GS Inc. may affix to Certificates representing RSU Shares any legend that the Committee determines to be necessary or advisable (including to reflect any restrictions to which you may be subject under a separate agreement). GS Inc. may advise the transfer agent to place a stop order against any legended RSU Shares.

(f) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in RSU Shares and hedging or pledging RSU Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information, and you will effect sales of RSU Shares in accordance with such rules and procedures as may be adopted from time to time (which may include, without limitation, restrictions relating to the timing of sale requests, the manner in which sales are executed, pricing method, consolidation or aggregation of orders and volume limits determined by the Firm);

(iii) You Are Responsible for Costs Associated with Your Award. You will be responsible for all brokerage costs and other fees or expenses associated with your Fixed Allowance RSUs, including those related to the sale of RSU Shares;

(iv) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Delivery of, or Sell, RSU Shares. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you accept delivery of RSU Shares, receive payment in respect of Dividend Equivalent Rights and request the sale of RSU Shares following the release of Transfer Restrictions;

(v) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the delivery of RSU Shares (including Shares at Risk) or the payment of cash or other property may initially be made into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on delivery of RSU Shares, cash or other property required by this Award Agreement have been satisfied;

(vi) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee, the SIP Committee or SIP Administrators. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 13 and Section 3.17 of the Plan.

(vii) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award

11. **Non-transferability**. Except as otherwise may be provided in this Paragraph 11 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 11 or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Fixed Allowance RSUs may transfer some or all of their Fixed Allowance RSUs and/or Shares at Risk (which will continue to be subject to Transfer Restrictions until the Transferability Date) through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee or SIP Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

12. **Right of Offset**. Except as provided in Paragraph 15(h), the obligation to deliver RSU Shares, to pay dividends or payments under Dividend Equivalent Rights or to remove the Transfer Restrictions under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

13. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

14. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

15. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 15 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 15 and the other provisions of this Award Agreement, this Paragraph 15 will govern.

(b) Delivery of RSU Shares will not be delayed beyond the date on which all applicable conditions or restrictions on delivery of RSU Shares required by this Agreement (including those specified in Paragraphs 6, 7, 9(c) and 10 and the consents and other items specified in Section 3.3 of the Plan) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, delivery for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the delivery of RSU Shares to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on delivery to be satisfied, the Committee elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay delivery of RSU Shares to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-2(b)(7) (in conjunction with Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Paragraph 10(b) and Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any securities, other Awards or other property that the Firm may deliver in respect of your Fixed Allowance RSUs will not have the effect of deferring delivery or payment, income inclusion, or a substantial risk of forfeiture,

beyond the date on which such delivery, payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the RSU Shares that would otherwise have been deliverable (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Notwithstanding the timing provisions of Paragraph 9(c), the delivery of RSU Shares referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(e) The timing of delivery or payment pursuant to Paragraph 9(a) will occur on the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), delivery will occur on the earlier of the Delivery Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment (or, if the latter date is not during a Window Period, the first trading day of the next Window Period). For purposes of Paragraph 9(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(f) Notwithstanding any provision of Paragraph 8 or Section 2.8.2 of the Plan to the contrary, the Dividend Equivalent Rights with respect to each of your Outstanding Fixed Allowance RSUs will be paid to you within the calendar year that includes the date of distribution of any corresponding regular cash dividends paid by GS Inc. in respect of a share of Common Stock the record date for which occurs on or after the Date of Grant. The payment will be in an amount (less applicable withholding) equal to such regular dividend payment as would have been made in respect of the RSU Shares underlying such Outstanding Fixed Allowance RSUs.

(g) The timing of delivery or payment referred to in Paragraph 9(b)(i) will be the earlier of (i) the Delivery Date or (ii) a date that is within the calendar year in which the Committee receives satisfactory documentation relating to your Conflicted Employment, *provided* that such delivery or payment will be made, and any Committee action referred to in Paragraph 9(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(h) Paragraph 12 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(i) Delivery of RSU Shares in respect of any Award may be made, if and to the extent elected by the Committee, later than the Delivery Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later delivery is permitted under Section 409A).

(j) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the delivery.

AMENDMENT AND CONSTRUCTION

16. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided* that, notwithstanding the foregoing and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement and the Plan as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of delivery of RSU Shares will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

17. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

(c) "Shares at Risk" means RSU Shares subject to Transfer Restrictions.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan.

(a) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(b) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(e) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(f) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(g) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(h) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(i) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(j) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(k) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(l) "Delivery Date" means each date specified in the Grantee's Award Agreement as a delivery date, provided, unless the Committee determines otherwise, such date is during a Window Period or, if such date is not during a Window Period, the first trading day of the first Window Period beginning after such date.

(m) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(n) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(o) "Firm" means GS Inc. and its subsidiaries and affiliates.

(p) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(q) "Grantee" means a person who receives an Award.

(r) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(s) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(t) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(u) "RSU Shares" means shares of Common Stock that underlie an RSU.

(v) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(w) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(x) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(y) "Transfer Restrictions" means restrictions that prohibit the sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization, hedge or other disposal (including through the use of any cash-settled instrument), whether voluntarily or involuntarily by the Grantee, of an Award or any shares of Common Stock, cash or other property delivered in respect of an Award.

(z) "Transferability Date" means the date Transfer Restrictions on a Restricted Share will be released. Within 30 Business Days after the applicable Transferability Date, GS Inc. shall take, or shall cause to be taken, such steps as may be necessary to remove Transfer Restrictions.

(aa) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

(bb) "Window Period" means a period designated by the Firm during which all employees of the Firm are permitted to purchase or sell shares of Common Stock (provided that, if the Grantee is a member of a designated group of employees who are subject to different restrictions, the Window Period may be a period designated by the Firm during which an employee of the Firm in such designated group is permitted to purchase or sell shares of Common Stock).

EXHIBIT 10.59

[_____] FIXED ALLOWANCE DEFERRED CASH AWARD

This Award Agreement governs your _____ Fixed Allowance deferred cash award (your "Award"), granted to you effective _____ (the "Award Date'). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified agree to all the terms of your Award by executing this Award Agreement and returning the executed signature page in accordance with its instructions. By executing this Award Agreement, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 13.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the amount of your Award (the "Award Amount").

3. **Definitions.** Capitalized terms that are not defined in the body of this Award Agreement are defined in the Definitions Appendix, which also includes terms that are defined in The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan").

4. **The Goldman Sachs Amended and Restated Stock Incentive Plan (2015).** Certain provisions of the Plan apply to this Award. Any reference to a Plan provision in this Award Agreement means that such provision applies to this Award and that such provision is expressly incorporated by reference into this Award Agreement. Any references to "Grantee" in the Plan shall be deemed to refer to you, any references to an "Award" shall be deemed to refer to this Award of deferred cash, any references to "shares of Common Stock" shall be deemed to refer to the Award Amount and any references to "delivery" shall be deemed to refer to payment.

AWARD

5. **Award.** This Award constitutes an unfunded and unsecured promise to pay (or cause to be paid) to you in cash, subject to the terms and conditions of this Award Agreement, the Award Amount, plus applicable earnings as described in Paragraph 8, on the date or dates provided in this Award Agreement.

VESTING OF YOUR AWARD

6. **Vesting.** Your Award is Vested. When an Award is Vested, it means that your continued active Employment is not required for payment of that portion of your Award. **The terms of this Award Agreement (including conditions to payment) continue to apply to your Vested Award.**

PAYMENT OF YOUR AWARD AMOUNT; EARNINGS

7. **Payment of the Award Amount.** The Award Amount (less applicable withholding as described in Paragraph 10(a)) will be paid to you in three substantially equal installments in each of _____, _____ and _____ (each such date, a "Payment Date"). Until such payment, you have only the rights of a general unsecured creditor of the Firm. The Firm may accelerate any Payment Date by up to 30 days.

8. **Earnings.** During the period between the Date of Grant and the last applicable Payment Date (or such earlier date as you may receive payment of all amounts due to you under the Award), any unpaid portion of the Award Amount will be credited with earnings on the last day of the calendar year that immediately precedes the Payment Date at a rate of _____, *provided*, *however*, in the event you receive payment on a date earlier than the applicable Payment Date, any unpaid portion of the Award Amount will be credited with the pro-rata portion of such earnings (based upon the number of days in the calendar year in which such payment occurs, or such other method as may be determined by the Firm). Such credited earnings (less applicable withholding as described in Paragraph 10 (a)) will be paid to you on each Payment Date in accordance with Paragraph 7 above.

EXCEPTIONS TO PAYMENT DATES

9. **Accelerated Payment in the Event of a Qualifying Termination After a Change in Control, Conflicted Employment or Death.** In the event of your Qualifying Termination After a Change in Control, Conflicted Employment or death, each as described below, your Outstanding Award will be treated as described in this Paragraph 9.

(a) You Have a Qualifying Termination After a Change in Control. If your Employment terminates when you meet the requirements of a Qualifying Termination After a Change in Control, an amount equal to any unpaid portion of your Award will be paid to you.

(b) You Are Determined to Have Accepted Conflicted Employment.

(i) Generally. If your Employment terminates solely because you resign to accept Conflicted Employment, as soon as practicable after the Firm has received satisfactory documentation relating to your Conflicted Employment, an amount equal to any unpaid portion of your Award will be paid to you. In addition, if, following your termination of Employment, you notify the Firm and provide the Firm with satisfactory documentation that you are accepting Conflicted Employment, an amount equal to any unpaid portion of your Award will be paid to you.

(ii) You May Have to Take Other Steps to Address Conflicts of Interest. The Firm retains the authority to exercise its rights under the Award Agreement to take or require you to take other steps it determines in its sole discretion to be necessary or appropriate to cure an actual or perceived conflict of interest (which may include a determination that the accelerated payment described in Paragraph 9(b)(i) will not apply because such action is not necessary or appropriate to cure an actual or perceived conflict of interest).

(c) Death. If you die, an amount equal to any unpaid portion of your Award will be paid to the representative of your estate as soon as practicable after the date of death and after such documentation as may be requested by the Firm is provided to the Firm.

OTHER TERMS, CONDITIONS AND AGREEMENTS

10. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. Payment of your Award is conditioned on your satisfaction of any applicable withholding taxes in any manner described in Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment to you). To the extent permitted by applicable law, the Firm, in its sole discretion, also may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or payment of this Award by requiring you to remit such amount in cash (or through payroll deduction or otherwise). In addition, if you are an individual with separate employment contracts (at any time during and/or after the Firm's _____ fiscal year), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to remit such amount in cash (or through payroll deduction or otherwise). In no event, however, does this Paragraph 10(a) give you any discretion to determine or affect the timing of the payment of the Award or the timing of payment of tax obligations.

(b) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Award or other person such personal information of yours as the Firm deems advisable to administer the Award, and you agree to provide any additional consents that the Firm determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning confidential or proprietary information;

(iii) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Payment. You will be deemed to have represented and certified that you have complied with all of the terms of this Award Agreement when you accept payment of your Award;

(iv) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the payment of your Award may initially be made into and held in that escrow account until such time as the Firm has received such documentation as it may have requested or until the Firm has determined that any other conditions or restrictions on payment required by this Award Agreement have been satisfied;

(v) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Firm. In order to appeal a determination by the Firm, or any of its delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 13 and Section 3.17 of the Plan.

(vi) You Agree that any Covered Person Shall Not Have Liability. In addition to and without limiting the generality of the provisions of Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

11. **Non-transferability.** Unless otherwise determined by the Firm, none of your rights under this Award shall be permitted to be sold, exchanged, transferred, assigned, pledged, hypothecated, fractionalized or otherwise disposed of, whether voluntarily or involuntarily, and any purported sale, exchange, transfer, assignment, pledge, hypothecation, fractionalization or other disposition in violation of this Paragraph shall be void.

12. **Right of Offset.** Except as provided in Paragraph 15(f), the obligation to make any payment under this Award Agreement is subject to Section 3.4 of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Firm deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

13. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 3.17 OF THE PLAN ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE AND WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S. Federal, state, or local employment laws.

14. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

15. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 16 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement is intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Firm will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or potential inconsistency between the provisions of this Paragraph 15 and the other provisions of this Award Agreement, this Paragraph 15 will govern.

(b) Payment of the Award will not be delayed beyond the date on which all applicable conditions or restrictions on payment required by this Agreement are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, payment for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. 1.409A-1(b)(4) in order for the payment of the Award to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on payment to be satisfied, the Firm elects, pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay payment to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including Reg. 1.409A-2(b)(7) (in conjunction with Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the timing provisions of Paragraph 9(c), the payment of the Award referred to therein will be made after the date of death and during the calendar year that includes the date of death (or on such later date as may be permitted under Section 409A).

(d) The timing of payment pursuant to Paragraph 9(a) will occur on the earlier of (i) the Payment Date or (ii) a date that is within the calendar year in which the termination of Employment occurs; *provided*, *however*, that, if you are a "specified employee" (as defined by the Firm in accordance with Section 409A(a)(2)(i)(B) of the Code), payment will occur on the earlier of the Payment Date or (to the extent required to avoid the imposition of additional tax under Section 409A) the date that is six months after your termination of Employment. For purposes of Paragraph 9(a), references in this Award Agreement to termination of Employment mean a termination of Employment from the Firm (as defined by the Firm) which is also a separation from service (as defined by the Firm in accordance with Section 409A).

(e) The timing of payment referred to in Paragraph 9(b)(i) will be the earlier of (i) the Payment Date or (ii) a date that is within the calendar year in which the Firm receives satisfactory documentation relating to your Conflicted Employment, *provided* that such payment will be made, and any Firm action referred to in Paragraph 9(b)(ii) will be taken, only at such time as, and if and to the extent that it, as reasonably determined by the Firm, would not result in the imposition of any additional tax to you under Section 409A.

(f) Paragraph 12 and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(g) Payment of the Award may be made, if and to the extent elected by the Firm, later than the Payment Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later payment is permitted under Section 409A).

(h) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the payment.

AMENDMENT AND CONSTRUCTION

16. **Amendment.** The Firm reserves the right at any time to amend the terms of this Award Agreement; *provided* that, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Firm expressly reserves its rights to amend the Award Agreement as described in Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of payment of the Award will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

17. **Construction, Headings.** Unless the context requires otherwise, (a) words describing the singular number include the plural and vice versa, (b) words denoting any gender include all genders and (c) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

18. **Actions of the Firm.** Any right, responsibility, act or omission that is reserved to the Firm hereunder or to the Committee in the provisions of the Plan that apply to this Award, may be taken by the Board of Directors of The Goldman Sachs Group, Inc. (the "Board"), the Compensation Committee of the Board, the individuals who from time to time constitute the administrative committee of the SIP (the "SIP Committee") or such other person or persons as the Board, the Compensation Committee or the members of the SIP Committee may designate, and each such person shall have the powers with respect to this Award as described in Section 1.3.2 of the Plan, and may take actions in the manner described in Section 1.3.3 of the Plan.

IN WITNESS WHEREOF, [_____] has caused this _____ Fixed Allowance Deferred Cash Award Agreement to be duly executed and delivered as of the Award Date.

[_____]

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Qualifying Termination After a Change in Control" means that the Firm terminates your Employment other than for Cause or you terminate your Employment for Good Reason, in each case, within 18 months following a Change in Control.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan"), as modified by Paragraph 4.

(a) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(b) "Award Statement" means a written statement that reflects certain Award terms.

(c) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(d) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(e) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the

case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(f) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 1.3, and, to the extent the Board determines it is appropriate for the compensation realized from Awards under the Plan to be considered "performance based" compensation under Section 162(m) of the Code, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is an "outside director" within the meaning of Code Section 162(m), and which, to the extent the Board determines it is appropriate for Awards under the Plan to qualify for the exemption available under Rule 16b-3(d)(1) or Rule 16b-3(e) promulgated under the Exchange Act, shall be a committee or subcommittee of the Board composed of two or more members, each of whom is a "non-employee director" within the meaning of Rule 16b-3. Unless otherwise determined by the Board, the Committee shall be the Compensation Committee of the Board.

(g) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(h) "Conflicted Employment" means the Grantee's employment at any U.S. Federal, state or local government, any non-U.S. government, any supranational or international organization, any self-regulatory organization, or any agency or instrumentality of any such government or organization, or any other employer determined by the Committee, if, as a result of such employment, the Grantee's continued holding of any Outstanding Award would result in an actual or perceived conflict of interest.

(i) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(j) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(k) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(l) "Firm" means GS Inc. and its subsidiaries and affiliates.

(m) "Good Reason" means, in connection with a termination of employment by a Grantee following a Change in Control, (a) as determined by the Committee, a materially adverse alteration in the Grantee's position or in the nature or status of the Grantee's responsibilities from those in effect immediately prior to the Change in Control or (b) the Firm's requiring the Grantee's principal place of Employment to be located more than seventy-five (75) miles from the location where the Grantee is principally Employed at the time of the Change in Control (except for required travel on the Firm's business to an extent substantially consistent with the Grantee's customary business travel obligations in the ordinary course of business prior to the Change in Control).

(n) "Grantee" means a person who receives an Award.

(o) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

(p) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(q) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(r) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

EXHIBIT 10.60

THE GOLDMAN SACHS GROUP, INC.
[ ] YEAR-END PERFORMANCE-BASED RSU AWARD

This Award Agreement governs your award of performance-based RSUs (your "Award" or "PSUs") granted under The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "Plan") in accordance with The Goldman Sachs Long-Term Performance Incentive Plan (the "LTIP"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 15.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan and LTIP.** Your Award is granted under the Plan in accordance with the LTIP, and the terms of both apply to, and are a part of, this Award Agreement. In the event of a conflict between the terms of the LTIP and the Plan, the terms of the Plan will control.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the number of PSUs subject to this Award, the Performance Periods and the Performance Goal applicable to your Award. The number of PSUs on your Award Statement is not necessarily the number of PSUs in respect of which the Payment Amount will be paid, but is merely the basis for determining the amount (if any) that will be paid to you.

4. **Definitions.** Capitalized terms are defined in the Award Statement or the Definitions Appendix, which also includes terms that are defined in the LTIP and the Plan.

VESTING OF YOUR PSUS

5. **Vesting.** Your PSUs are Vested. When a PSU is Vested, it means **only** that your continued active Employment is not required for payment in respect of that PSU. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to payment and satisfaction of the Performance Goal) continue to apply to your Award, and failure to meet such terms may result in the termination of this Award (as a result of which no payment in respect of such Vested PSUs would be made).**

PERFORMANCE GOALS

6. **Performance.** The Payment Amount is dependent, and may vary based, on achievement of the Performance Goal over the Performance Period. On the Determination Date, the Firm will determine whether or not, and to what extent, the Performance Goal for that Performance Period has been satisfied. All your rights with respect to the Payment Amount (and any Dividend Equivalent Payments) are dependent on the extent to which the Performance Goal is achieved, and any rights to payment in respect of your Outstanding PSUs immediately will terminate and no Payment Amount will be paid in respect of such PSUs upon the Committee's determination, in its sole discretion, that the Performance Goal has not been satisfied to the extent necessary to result in payment in respect of the PSUs.

PAYMENT AMOUNT

7. **Payment.** Subject to satisfaction of the terms of this Award, including satisfaction of the Performance Goal, on the Payment Date, you will receive payment (less applicable withholding as described in Paragraph 12(a)) of the Payment Amount and any Dividend Equivalent Payments as further described in your Award Statement. Until such payment, you have only the rights of a general unsecured creditor and you do not have any rights as a shareholder of GS Inc. with respect to either the PSUs or the Payment Amount. Without limiting the Committee's authority under Section 2(b) of the LTIP, the Firm may accelerate any Payment Date by up to 30 days.

DIVIDEND EQUIVALENT RIGHTS

8. **Dividend Equivalent Rights.** To the extent described in your Award Statement, each PSU will include a Dividend Equivalent Right, which will be subject to the provisions of Section 2.8 of the Plan. Accordingly, for each of your Outstanding PSUs with respect to which payment is made under the Payment Amount, you will be entitled to payments under Dividend Equivalent Rights equal to any regular cash dividend paid by GS Inc. in respect of a Share the record date for which occurs on or after the Date of Grant. The payment to you of amounts under Dividend Equivalent Rights (less applicable withholding as described in Paragraph 12(a)) is conditioned upon the payment under the Payment Amount in respect of the PSUs to which such Dividend Equivalent Rights relate, and you will have no right to receive any Dividend Equivalent Payments relating to PSUs for which you do not receive payment under the Payment Amount (including, without limitation, due to a failure to satisfy the Performance Goal). Dividend Equivalent Payments will be paid on the Payment Date.

FORFEITURE OF YOUR AWARD

9. **How You May Forfeit Your Award.** This Paragraph 9 sets forth the events that result in forfeiture of up to all of your PSUs and may require repayment to the Firm of up to all amounts previously paid to you under your PSUs in accordance with Paragraph 10. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (i) suspend payment of the Payment Amount and any Dividend Equivalent Payments or (ii) make payment into an escrow account in accordance with Paragraph 12(c)(iv). If any of the following occurs, your rights to all of your Outstanding PSUs will terminate, and no Payment Amount will be paid in respect thereof, as may be further described below:

(a) You Associate With a Covered Enterprise. You Associate With a Covered Enterprise during the Performance Period.

(b) You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. Before the Payment Date, either:

(i) you, in any manner, directly or indirectly, (A) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (B) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (C) Solicit any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment with any Covered Enterprise or (D) on behalf of yourself or any person or Covered Enterprise hire, or participate in the hiring of, any Selected Firm Personnel or identify, or participate in the identification of, Selected Firm Personnel for potential hiring, whether as an employee or consultant or otherwise, or

(ii) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status (A) by a Covered Enterprise that you form, that bears your name, in which you are a partner, member or have similar status, or in which you possess or control greater than a de minimis equity ownership, voting or profit participation or (B) by any Covered Enterprise where you have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Selected Firm Personnel.

(c) You Failed to Consider Risk. You Failed to Consider Risk during the Firm's _____ fiscal year.

(d) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred before the Payment Date.

(e) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Payment Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(f) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the LTIP, the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the LTIP, the Plan or this Award Agreement to which you have certified compliance.

(g) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the LTIP, the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 15, Section 3.17 of the Plan or Section 6(h) of the LTIP.

(h) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(i) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of your Outstanding PSUs.

(j) GS Inc. Fails to Maintain the Minimum Tier 1 Capital Ratio. Before the Payment Date, GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days.

(k) GS Inc. Is Determined to Be in Default. Before the Payment Date, the Board of Governors of the Federal Reserve or the FDIC makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default."

(l) Accounting Restatement Required Under Sarbanes-Oxley. GS Inc. is required to prepare an accounting restatement due to GS Inc.'s material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws described in Section 304(a) of Sarbanes-Oxley; *provided*, *however*, that your rights with respect to the PSUs will only be terminated to the same extent that would be required under Section 304 of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).

REPAYMENT OF YOUR AWARD

10. **When You May Be Required to Repay Your Award.**

(a) Repayment Generally. If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm the following:

(i) Any Payment Amount for which the terms (including the terms for payment) of the related PSUs were not satisfied, in accordance with Section 2.6.3 of the Plan.

(ii) Any Dividend Equivalent Payments for which the terms were not satisfied (including any such payments made in respect of PSUs that are forfeited or any Payment Amount that is subject to repayment), in accordance with Section 2.8.4 of the Plan.

(iii) Any amount applied to satisfy tax withholding or other obligations with respect to any PSU, Payment Amount or Dividend Equivalent Payments that are forfeited or required to be repaid.

(b) Repayment Upon Materially Inaccurate Financial Statements. If any payment is made under this Award Agreement based on materially inaccurate financial statements (which includes, but is not limited to, statements of earnings, revenues or gains) or other materially inaccurate performance criteria, you will be obligated to repay to the Firm, immediately upon demand therefor, any excess amount paid, as determined by the Committee in its sole discretion.

(c) Repayment Upon Accounting Restatement Required Under Sarbanes-Oxley. If an event described in Paragraph 9(b)(l) (relating to a requirement under Sarbanes-Oxley that GS Inc. prepare an accounting restatement) occurs, any Payment Amount, Dividend Equivalent Payments, cash or other property delivered, paid or withheld in respect of this Award will be subject to repayment as described in Paragraph 10(a) to the same extent that would be required under Section 304 of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).

TERMINATIONS OF EMPLOYMENT

11. **Termination of Employment.**

(a) Employment Termination Generally. Unless the Committee determines otherwise, if your Employment terminates for any reason or you are otherwise no longer actively Employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), the Performance Goal applicable to your Outstanding PSUs will continue to apply and the determination of the Payment Amount will continue to be subject to whether or not, and to what extent, the Performance Goal has been achieved, in each case, as provided in Paragraph 6. All other terms of this Award Agreement, including the forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(b) Death. If you die before the Payment Date, the representative of your estate will, on the relevant Payment Date, be paid the Payment Amount and Dividend Equivalent Payments that would have otherwise been payable pursuant to Paragraph 6, after such documentation as may be requested by the Committee is provided to the Committee. All other terms of this Award Agreement, including the forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

(c) Restrictions on Association with a Covered Enterprise Cease to Apply After an Involuntary or Mutual Agreement Termination. Paragraph 9(a) (relating to forfeiture if you Associate With a Covered Enterprise) will not apply if (i) your Employment terminates and the Firm characterizes your Employment termination as "involuntary" or by "mutual agreement" and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes. No Employment termination that you initiate, including any purported "constructive termination," a "termination for good reason" or similar concepts, can be "involuntary" or by "mutual agreement." All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 9 and 10, continue to apply.

OTHER TERMS, CONDITIONS AND AGREEMENTS

12. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. The payment of your Award is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 6(k) of the LTIP and Section 3.2 of the Plan (which includes the Firm deducting or withholding amounts from any payment or distribution to you). To the extent permitted by applicable law, the Firm, in its sole discretion, may require you to provide amounts equal to all or a portion of any Federal, state, local, foreign or other tax obligations imposed on you or the Firm in connection with the grant or payment of this Award by requiring you to remit such amount in cash (or through payroll deduction or otherwise). In addition, if you are an individual with separate employment contracts (at any time on or after the Date of Grant), the Firm, in its sole discretion, may require you to provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to your separate employment contracts by requiring you to remit such amount in cash (or through payroll deduction or otherwise). In no event, however, does this Paragraph 12(a) give you any discretion to determine or affect the timing of payment of the Payment Amount or the timing of payment of tax obligations.

(b) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 6(c)(ii) of the LTIP and Section 3.3.3(d) of the Plan, including the Firm's supplying to any third-party recordkeeper of the LTIP or the Plan or other person such personal information of yours as the Committee deems advisable to administer the LTIP or the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Are Subject to the Firm's Policies, Rules and Procedures. You are subject to the Firm's policies in effect from time to time concerning trading in Shares and hedging or pledging Shares and equity-based compensation or other awards (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc." or any successor policies), and confidential or proprietary information;

(iii) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Payment. You will be deemed to have represented and certified that you have complied with all of the terms of the LTIP, the Plan and this Award Agreement when you accept payment in respect of your Award;

(iv) Firm May Make Payments into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the Payment Amount and any Dividend Equivalent Payments may initially be paid into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on payment required by this Award Agreement have been satisfied;

(v) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold PSUs, from time to time, you may be required to provide certifications of your compliance with all of the terms of the LTIP, the Plan and this Award Agreement as described in Paragraph 9(f). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your PSUs and subject previously delivered amounts to repayment under Paragraph 9 (f).

(vi) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee. In order to appeal a determination by the Committee, the SIP Committee, the SIP Administrators, or any of their delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 15, Section 6(h) of the LTIP and Section 3.17 of the Plan; and

(vii) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 2(e) of the LTIP and Section 1.3.5 of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award.

13. **Non-transferability.** Except as otherwise may be provided in this Paragraph 13 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 6(b) of the LTIP and Section 3.5 of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 13, Section 6(b) of the LTIP or Section 3.5 of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of PSUs may transfer some or all of their PSUs through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest.

14. **Right of Offset.** Except as provided in Paragraph 17(d), the obligation to pay the Payment Amount or Dividend Equivalent Payments under this Award Agreement is subject to Section 6(l) of the LTIP and Section 3.4 of the Plan, which provide for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

15. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 6(h) OF THE LTIP AND SECTION 3.17 OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE LTIP, THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 6(h) OF THE LTIP AND SECTION 3.17 OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 6(h) of the LTIP and Section 3.17 of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the LTIP, the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S., Federal, state, or local employment laws.

16. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

17. **Compliance of Award Agreement, the Plan and LTIP with Section 409A.** The provisions of this Paragraph 17 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement, the Plan and the LTIP provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give effect to this intent, in the case of any conflict or

potential inconsistency between the provisions of the LTIP (including Section 2(b) thereof), the Plan (including Sections 1.3.2 and 2.1 thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 17 and the other provisions of this Award Agreement, this Paragraph 17 will govern.

(b) Payment will not be delayed beyond the date on which all applicable conditions or restrictions on payment in respect of your PSUs required by this Award Agreement (including, those specified in Paragraph 11(c) (execution of waiver and release of claims agreement to pay associated tax liability) the consents and other items specified in Section 3.3 of the Plan and Section 6(c) of the LTIP) are satisfied. To the extent that any portion of this Award is intended to satisfy the requirements for short-term deferral treatment under Section 409A, payment for such portion will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. § 1.409A-1(b)(4) in order for payment to be within the short-term deferral exception unless, in order to permit all applicable conditions or restrictions on payment to be satisfied, the Committee elects, pursuant to Reg. § 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay payment to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including, Reg. § 1.409A-2(b)(7) (in conjunction with Section 6(d) of the LTIP and Section 3.21.3 of the Plan pertaining to Code Section 162(m)) and Reg. § 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. § 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Notwithstanding the provisions of Section 1.3.2(i) of the Plan, to the extent necessary to comply with Section 409A, any payment that the Firm may make in respect of your PSUs will not have the effect of deferring payment, income inclusion, or a substantial risk of forfeiture, beyond the date on which such payment or inclusion would occur or such risk of forfeiture would lapse, with respect to the payment that would otherwise have been made (unless the Committee elects a later date for this purpose pursuant to Reg. 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted under Section 409A, including and to the extent applicable, the subsequent election provisions of Section 409A(a)(4)(C) of the Code and Reg. 1.409A-2(b)).

(d) Paragraph 14, Section 6(l) of the LTIP and Section 3.4 of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(e) Payments in respect of any portion of the Award may be made, if and to the extent elected by the Committee, later than the relevant Payment Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later payment is permitted under Section 409A).

(f) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the payment.

18. **Compliance of Award Agreement and LTIP with Section 162(m).** If you are or become considered by GS Inc. to be one of its "covered employees" within the meaning of Section 162(m) of the Code, then you will be subject to Section 6(d) of the LTIP and Section 3.21.3 of the Plan, as a result of which payment of the Payment Amount and Dividend Equivalent Payments may be delayed. In addition, to the extent provided in your Award Statement and, to the extent that Section 409A is applicable to you, consistent with Reg § 1.409A-2(b), the Firm may delay any Payment Date.

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

19. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply and to limit the forfeitures and repayments that result under Paragraphs 9 and 10. In addition, the Committee, in its sole discretion, may determine whether Paragraph 11 (c) will apply upon a termination of Employment.

20. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the LTIP and the Plan in any respect; *provided that*, notwithstanding the foregoing and Sections 2(b)(vi), 2(b)(viii) and 6(a) of the LTIP and Sections 1.3.2(f), 1.3.2(h) and 3.1 of the Plan, no such amendment will materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend the Award Agreement, the LTIP and the Plan as described in Section 2(b)(viii)(1) of the LTIP and Sections 1.3.2(h)(1), (2) and (4) of the Plan. A modification that impacts the tax consequences of this Award or the timing of payment will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

21. **Construction, Headings.** Unless the context requires otherwise, (i) words describing the singular number include the plural and vice versa, (ii) words denoting any gender include all genders and (iii) the words "include," "includes" and "including" will be deemed to be followed by the words "without limitation." The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan or LTIP provision will not be construed as limiting the applicability of any other Plan or LTIP provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of the Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment. "Association With a Covered Enterprise" will have its correlative meaning.

(c) "Covered Enterprise" means an existing or planned business enterprise that competes with the Firm (which, for this purpose means offering products or services that are the same as or similar to those offered by the Firm ("Firm Products or Services")), or reasonably may be expected to do so. The enterprises covered by this definition include enterprises that offer Firm Products or Services directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by, or being under common ownership with an enterprise that offers Firm Products or Services). An enterprise will be treated as providing Firm Products or Services if, solely by way of example, it provides products or services associated with investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than you or your family members), private banking, commercial banking, merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading. A Competitive Enterprise is a Covered Enterprise. **An enterprise that offers, or may reasonably be expected to offer, Firm Products or Services is a Covered Enterprise irrespective of whether the enterprise is a customer, client or counterparty of the Firm, and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(d) "Determination Date" means the date specified on your Award Statement as the date on which the Committee will determine whether or not, and to what extent, the Performance Goal was achieved for the Performance Period.

(e) "Dividend Equivalent Payments" means any payments made in respect of Dividend Equivalent Rights.

(f) "FDIC" means the Federal Deposit Insurance Corporation or any successor thereto.

(g) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(h) "Payment Amount" means an amount in cash (determined as described in the Award Statement) of a share of Common Stock.

(i) "Performance Goal" means the performance goal determined by the Committee that is specified on your Award Statement.

(j) "Performance Period" means the performance period determined by the Committee that is specified on your Award Statement.

(k) "Sarbanes Oxley" means the Sarbanes-Oxley Act of 2002, as amended.

(l) "Section 409A" means Section 409A of the Internal Revenue Code of 1986, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(m) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 9(b) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(n) "Share" means a share of Common Stock.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the LTIP:

(a) "Board" means the Board of Directors of GS Inc.

(b) "Committee" means the committee appointed by the Board to administer the LTIP pursuant to Section 2(a) of the LTIP.

(c) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(d) "Firm" means GS Inc. and its subsidiaries and affiliates.

(e) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in The Goldman Sachs Amended and Restated Stock Incentive Plan (2015):

(f) "Account" means any brokerage account, custody account or similar account, as approved or required by GS Inc. from time to time, into which shares of Common Stock, cash or other property in respect of an Award are delivered.

(g) "Award Agreement" means the written document or documents by which each Award is evidenced, including any Award Statement.

(h) "Award Statement" means a written statement that reflects certain Award terms.

(i) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(j) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(k) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(l) "Common Stock" means common stock of GS Inc., par value $0.01 per share.

(m) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(n) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(o) "Dividend Equivalent Right" means a dividend equivalent right granted under the Plan, which represents an unfunded and unsecured promise to pay to the Grantee amounts equal to all or any portion of the regular cash dividends that would be paid on shares of Common Stock covered by an Award if such shares had been delivered pursuant to an Award.

(p) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(q) "Grantee" means a person who receives an Award.

(r) "Outstanding" means any Award to the extent it has not been forfeited, cancelled, terminated, exercised or with respect to which the shares of Common Stock underlying the Award have not been previously delivered or other payments made.

(s) "RSU" means a restricted stock unit Award granted under the Plan, which represents an unfunded and unsecured promise to deliver shares of Common Stock in accordance with the terms of the RSU Award Agreement.

(t) "Section 409A" means Section 409A of the Code, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(u) "SIP Administrator" means each person designated by the Committee as a "SIP Administrator" with the authority to perform day-to-day administrative functions for the Plan.

(v) "SIP Committee" means the persons who have been delegated certain authority under the Plan by the Committee.

(w) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(x) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

EXHIBIT 10.61

THE GOLDMAN SACHS LONG-TERM PERFORMANCE INCENTIVE PLAN
PERFORMANCE-BASED CASH COMPENSATION AWARD

This Award Agreement, together with The Goldman Sachs Long-Term Performance Incentive Plan (the "Plan"), governs your award of performance-based cash compensation (your "Award"). You should read carefully this entire Award Agreement, which includes the Award Statement and any attached Appendix.

ACCEPTANCE

1. **You Must Decide Whether to Accept this Award Agreement. To be eligible to receive your Award, you must by the date specified agree to all the terms of your Award by executing the related signature card in accordance with its instructions. By executing the signature card, you confirm your agreement to all of the terms of this Award Agreement, including the arbitration and choice of forum provisions in Paragraph 16.**

DOCUMENTS THAT GOVERN YOUR AWARD; DEFINITIONS

2. **The Plan.** Your Award is granted under the Plan, and the Plan's terms apply to, and are a part of, this Award Agreement.

3. **Your Award Statement.** The Award Statement delivered to you contains some of your Award's specific terms. For example, it contains the dollar amount of your Award (*i.e.*, the initial notional value), the Performance Periods and the Performance Goals applicable to your Award.

4. **Definitions.** Capitalized terms that are not defined in the body of this Award Agreement are defined in the Definitions Appendix, which also includes terms that are defined in the Plan or in The Goldman Sachs Amended and Restated Stock Incentive Plan (2015).

VESTING OF YOUR AWARD

5. **Vesting**. Your Award is Vested on the Date of Grant. When an Award is Vested, it means **only** that your continued active Employment is not required for payment of the Award. **Vesting does not mean you have a non-forfeitable right to the Vested portion of your Award. The terms of this Award Agreement (including conditions to payment and satisfaction of the Performance Goals) continue to apply to your Award, and you can still forfeit your Award.**

PERFORMANCE GOALS

6. **Performance.** Payment of this Award is dependent, and may vary based, on achievement of the performance goals (the "Performance Goals") over the performance periods ("Performance Periods"), each as determined by the Committee. The Firm will notify you, following the end of the relevant Performance Period, whether or not the applicable Performance Goals for that Performance Period have been satisfied. All your rights with respect to any portion of this Award that is dependent on the satisfaction of a Performance Goal immediately will terminate upon the Committee's determination, in its sole discretion, that such Performance Goal has not been satisfied. If and to the extent provided in your Award Statement, the Committee may amend, modify or extend any Performance Period and may amend or modify any Performance Goal with respect to any Performance Period; *provided*, *however*, that, without your consent, no such amendment, modification or, if applicable, extension is permitted on or after a Change in Control.

PAYMENT OF YOUR AWARD

7. **Payment**. Subject to satisfaction of the terms of this Award Agreement, including satisfaction of Performance Goals, reasonably promptly (but no more than 30 Business Days) after the Payment Date listed on your Award Statement, you will receive payment (less applicable withholding as described in Paragraph 13(a)) equal to the amount or percentage of your Award specified next to that Payment Date. Until such payment, you have only the rights of a general unsecured creditor. Without limiting the Committee's authority under Section 2(b) of the Plan, the Firm may accelerate any Payment Date by up to 30 days.

TERMINATION OF EMPLOYMENT; DEATH

8. **Termination of Employment**. Unless the Committee determines otherwise, if your Employment terminates for any reason or you are otherwise no longer actively employed with the Firm (which includes off-premises notice periods, "garden leaves," pay in lieu of notice or any other similar status), the amount and payment of your Award will remain subject to satisfaction of the applicable Performance Goals. All other terms of this Award Agreement, including the forfeiture and repayment events in Paragraphs 10 and 11, continue to apply. Notwithstanding the foregoing, if your Employment terminates for any reason on or prior to _____, the Committee may, in its sole discretion, adjust the initial notional value of your Award downward to a minimum of zero, based on factors it determines appropriate, including, without limitation, your individual performance.

9. **Death**. If you die, the representative of your estate will, on the relevant Payment Date, be paid the amount or percentage of your Award that would have otherwise been payable pursuant to Paragraph 7, after such documentation as may be requested by the Committee is provided to the Committee.

FORFEITURE OF YOUR AWARD

10. **How You May Forfeit Your Award**. This Paragraph 10 sets forth the events that result in forfeiture of up to all of your Award and may require repayment to the Firm of up to all other amounts previously paid to you under your Award in accordance with Paragraph 11. More than one event may apply, and in no case will the occurrence of one event limit the forfeiture and repayment obligations as a result of the occurrence of any other event. In addition, the Firm reserves the right to (i) suspend payment of your Award or (ii) make payment into an escrow account in accordance with Paragraph 13(b)(iii).

(a) Award Forfeited if You Associate With a Covered Enterprise. If you Associate With a Covered Enterprise before the end of the Performance Period, your rights to your Award will terminate, and no payment will be made in respect thereof.

(b) Award Forfeited if You Solicit Clients or Employees, Interfere with Client or Employee Relationships or Participate in the Hiring of Employees. If any of the following occurs, your rights to any unpaid portion of your Award will terminate, and no payment will be made in respect thereof:

(i) you, in any manner, directly or indirectly, (A) Solicit any Client to transact business with a Covered Enterprise or to reduce or refrain from doing any business with the Firm, (B) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm and any Client, (C) Solicit any person who is an employee of the Firm to resign from the Firm or to apply for or accept employment with any Covered Enterprise or (D) on behalf of yourself or any person or Covered Enterprise hire, or participate in the hiring of, any Selected Firm Personnel or identify, or participate in the identification of, Selected Firm Personnel for potential hiring, whether as an employee or consultant or otherwise, or

(ii) Selected Firm Personnel are Solicited, hired or accepted into partnership, membership or similar status (A) by a Covered Enterprise that you form, that bears your name, in which you are a partner, member or have similar status, or in which you possess or control greater than a *de minimis* equity ownership, voting or profit participation or (B) by any Covered Enterprise where you have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Selected Firm Personnel.

(c) Award Forfeited Upon Certain Other Events. If any of the following occurs, your rights to your Award will terminate, and no payment will be made in respect thereof:

(i) You Failed to Consider Risk. The Committee determines that you Failed to Consider Risk during the Performance Period.

(ii) Your Conduct Constitutes Cause. Any event that constitutes Cause has occurred [(including, for the avoidance of doubt, Serious Misconduct)] before the Payment Date.

(iii) You Do Not Meet Your Obligations to the Firm. The Committee determines that, before the Payment Date, you failed to meet, in any respect, any obligation under any agreement with the Firm, or any agreement entered into in connection with your Employment or this Award, including the Firm's notice period requirement applicable to you, any offer letter, employment agreement or any shareholders' agreement relating to the Firm. Your failure to pay or reimburse the Firm, on demand, for any amount you owe to the Firm will constitute (A) failure to meet an obligation you have under an agreement, regardless of whether such obligation arises under a written agreement, and/or (B) a material violation of Firm policy constituting Cause.

(iv) You Do Not Provide Timely Certifications or Comply with Your Certifications. You fail to certify to GS Inc. that you have complied with all of the terms of the Plan and this Award Agreement, or the Committee determines that you have failed to comply with a term of the Plan or this Award Agreement to which you have certified compliance.

(v) You Do Not Follow Dispute Resolution/Arbitration Procedures. You attempt to have any dispute under the Plan or this Award Agreement resolved in any manner that is not provided for by Paragraph 16 or Section 6(h) of the Plan.

(vi) You Bring an Action that Results in a Determination that Any Award Agreement Term Is Invalid. As a result of any action brought by you, it is determined that any term of this Award Agreement is invalid.

(vii) You Receive Compensation in Respect of Your Award from Another Employer. Your Employment terminates for any reason or you otherwise are no longer actively employed with the Firm and another entity grants you cash, equity or other property (whether vested or unvested) to replace, substitute for or otherwise in respect of your Award; *provided*, *however*, that your rights will only be terminated in respect of the portion of the Award that is replaced, substituted for or otherwise considered by such other entity in making its grant.

(viii) GS Inc. fails to Maintain the Minimum Tier 1 Capital Ratio. Before the Payment Date, GS Inc. fails to maintain the required "Minimum Tier 1 Capital Ratio" as defined under Federal Reserve Board Regulations applicable to GS Inc. for a period of 90 consecutive business days.

(ix) GS Inc. is Determined to be in Default. Before the Payment Date, the Board of Governors of the Federal Reserve or the FDIC makes a written recommendation under Title II (Orderly Liquidation Authority) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the appointment of the FDIC as a receiver of GS Inc. based on a determination that GS Inc. is "in default" or "in danger of default."

(x) Accounting Restatement Required Under Sarbanes-Oxley. GS Inc. is required to prepare an accounting restatement due to GS Inc.'s material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws described in Section 304(a) of Sarbanes-Oxley; *provided*, *however*, that your rights with respect to the Award will only be terminated to the same extent that would be required under Section 304 of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).

(xi) [A Loss Event Occurs. If prior to the end of the Performance Period there occurs (A) an annual pre-tax loss at GS Inc. or (B) annual negative revenues in one or more reporting segments as disclosed in the Firm's Form 10-K other than the Investing & Lending segment, or annual negative revenues in the Investing & Lending segment of $5 billion or more, provided in either case that you are employed in a business within such reporting segment (each, a "Loss Event").]

(xii) [A Risk Event Occurs. Prior to the later of the last day of the Performance Period and _____, there occurs a loss of 5% or more of firmwide total capital from a reportable operational risk event determined in accordance with the firmwide Reporting Operational Risk Events Policy (a "Risk Event").]

(xiii) [You Failed to Supervise. The Committee determines that you Failed to Supervise during the Performance Period.]

REPAYMENT OF YOUR AWARD

11. **When You May Be Required to Repay Your Award.**

(a) Repayment Generally. If the Committee determines that any term of this Award was not satisfied, you will be required, immediately upon demand therefor, to repay to the Firm any amounts paid to you under this Award (without reduction for any amount applied to satisfy tax withholding or other obligations in respect of such payment). In addition, if any payment is made under this Award Agreement based on materially inaccurate financial statements (which includes, but is not limited to, statements of earnings, revenues or gains) or other materially inaccurate performance criteria, you will be obligated to repay to the Firm, immediately upon demand therefor, any excess amount paid, as determined by the Committee in its sole discretion.

(b) Repayment Upon Accounting Restatement Required Under Sarbanes-Oxley. If an event described in Paragraph 10(c)(x) (relating to a requirement under Sarbanes-Oxley that GS Inc. prepare an accounting restatement) occurs, any amounts paid to you in respect of your Award will be subject to repayment in accordance with the first sentence of Paragraph 11(a), but only to the same extent that would be required under Section 304 of Sarbanes-Oxley had you been a "chief executive officer" or "chief financial officer" of GS Inc. (regardless of whether you actually hold such position at the relevant time).

(c) [Repayment if you Engage in Serious Misconduct. If the Performance Period ends prior to _____ and you engage in Serious Misconduct during the period beginning on the last day of the Performance Period and ending on _____, then, in addition to Paragraph 10(c)(ii), any amounts paid to you in respect of your Award will be subject to repayment in accordance with the first sentence of Paragraph 11(a).]

(d) [Repayment if a Risk Event Occurs. If the Performance Period ends prior to _____ and a Risk Event occurs during the period beginning on the last day of the Performance Period and ending on _____, then, in addition to Paragraph 10(c)(xii), any amounts paid to you in respect of your Award will be subject to repayment in accordance with the first sentence of Paragraph 11 (a).]

EXCEPTIONS TO THE FORFEITURE OF YOUR AWARD

12. **Downsizing.** If (i) the Firm terminates your Employment solely by reason of a "downsizing" (and you have not engaged in conduct constituting Cause) and (ii) you execute a general waiver and release of claims and an agreement to pay any associated tax liability, in each case, in the form the Firm prescribes, then Paragraph 10(a) will not apply and your rights to your Award will not terminate if you Associate With a Covered Enterprise before the end of the Performance Period. All other terms of this Award Agreement, including the other forfeiture and repayment events in Paragraphs 10 and 11, continue to apply. Whether or not your Employment is terminated solely by reason of a "downsizing" will be determined by the Firm in its sole discretion.

OTHER TERMS, CONDITIONS AND AGREEMENTS

13. **Additional Terms, Conditions and Agreements.**

(a) You Must Satisfy Applicable Tax Withholding Requirements. The payment of your Award is conditioned on your satisfaction of any applicable withholding taxes in accordance with Section 6(k) of the Plan.

(b) You Agree to Certain Consents, Terms and Conditions. By accepting this Award you understand and agree that:

(i) You Agree to Certain Consents as a Condition to the Award. You have expressly consented to all of the items listed in Section 6(c)(ii) of the Plan, including the Firm's supplying to any third-party recordkeeper of the Plan or other person such personal information of yours as the Committee deems advisable to administer the Plan, and you agree to provide any additional consents that the Committee determines to be necessary or advisable;

(ii) You Will Be Deemed to Represent Your Compliance with All the Terms of Your Award if You Accept Payment. You will be deemed to have represented and certified that you have complied with all of the terms of the Plan and this Award Agreement when you accept payment in respect of your Award;

(iii) Firm May Deliver Your Award into an Escrow Account. The Firm may establish and maintain an escrow account on such terms (which may include your executing any documents related to, and your paying for any costs associated with, such account) as it may deem necessary or appropriate, and the payment of cash or other property may initially be

delivered into and held in that escrow account until such time as the Committee has received such documentation as it may have requested or until the Committee has determined that any other conditions or restrictions on payment of cash or other property required by this Award Agreement have been satisfied;

(iv) You May Be Required to Certify Compliance with Award Terms; You Are Responsible for Providing the Firm with Updated Address and Contact Information After Your Departure from the Firm. If your Employment terminates while you continue to hold your Award, from time to time, you may be required to provide certifications of your compliance with all of the terms of the Plan and this Award Agreement as described in Paragraph 10(c)(iv). You understand and agree that (A) your address on file with the Firm at the time any certification is required will be deemed to be your current address, (B) it is your responsibility to inform the Firm of any changes to your address to ensure timely receipt of the certification materials, (C) you are responsible for contacting the Firm to obtain such certification materials if not received and (D) your failure to return properly completed certification materials by the specified deadline (which includes your failure to timely return the completed certification because you did not provide the Firm with updated contact information) will result in the forfeiture of all of your Award and subject previously delivered amounts to repayment under Paragraphs 10(c)(iv) and 11;

(v) You Must Comply with Applicable Deadlines and Procedures to Appeal Determinations Made by the Committee. In order to appeal a determination by the Committee, or any of its delegates or designees, you must submit a written request for the appeal within 180 days after receipt of any such determination. You must exhaust all administrative remedies before seeking to resolve a dispute through arbitration pursuant to Paragraph 16 and Section 6(h) of the Plan; [and]

(vi) You Agree that Covered Persons Will Not Have Liability. In addition to and without limiting the generality of the provisions of Section 2(e) of the Plan, neither the Firm nor any Covered Person will have any liability to you or any other person for any action taken or omitted in respect of this or any other Award[; and

(vii) You Will Seek Arbitration as the Sole Means of Resolution of a Dispute under Paragraphs 11(c) and 11(d). Notwithstanding any provision in the Plan, this Award Agreement or any other agreement or arrangement you may have with the Firm, you understand that to the extent that there is any dispute arising out of or relating to the payment required by Paragraphs 11(c) and 11(d) (including, in each case, your refusal to remit payment), the parties will submit to arbitration in accordance with Paragraph 16 of this Award Agreement and Section 6(h) of the Plan as the sole means of resolution of such dispute (including the recovery by the Firm of the repayment amount)].

14. **Non-transferability.** Except as otherwise may be provided in this Paragraph 14 or as otherwise may be provided by the Committee, the limitations on transferability set forth in Section 6(b) of the Plan will apply to this Award. Any purported transfer or assignment in violation of the provisions of this Paragraph 14 or Section 6(b) of the Plan will be void. The Committee may adopt procedures pursuant to which some or all recipients of Awards may (i) transfer some or all of their Award through a gift for no consideration to any immediate family member, a trust or other estate planning vehicle approved by the Committee in which the recipient and/or the recipient's immediate family members in the aggregate have 100% of the beneficial interest or (ii) specifically bequeath some or all of your Award under your will to an organization described in Sections 501(c)(3) and 2055(a) of the Code (or such other similar charitable organization as may be approved by the Committee).

15. **Right of Offset.** Except as provided in Paragraph 18(c), the obligation to make payments under this Award Agreement is subject to Section 6(l) of the Plan, which provides for the Firm's right to offset against such obligation any outstanding amounts you owe to the Firm and any amounts the Committee deems appropriate pursuant to any tax equalization policy or agreement.

ARBITRATION, CHOICE OF FORUM AND GOVERNING LAW

16. **Arbitration; Choice of Forum.**

(a) BY ACCEPTING THIS AWARD, YOU ARE INDICATING THAT YOU UNDERSTAND AND AGREE THAT THE ARBITRATION AND CHOICE OF FORUM PROVISIONS SET FORTH IN SECTION 6(h) OF THE PLAN WILL APPLY TO THIS AWARD. THESE PROVISIONS, WHICH ARE EXPRESSLY INCORPORATED HEREIN BY REFERENCE, PROVIDE AMONG OTHER THINGS THAT ANY DISPUTE, CONTROVERSY OR CLAIM BETWEEN THE FIRM AND YOU ARISING OUT OF OR RELATING TO OR CONCERNING THE PLAN OR THIS AWARD AGREEMENT WILL BE FINALLY SETTLED BY ARBITRATION IN NEW YORK CITY, PURSUANT TO THE TERMS MORE FULLY SET FORTH IN SECTION 6(h) OF THE PLAN.

(b) To the fullest extent permitted by applicable law, no arbitrator will have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved.

(c) Notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this Award Agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it will be decided by a court and not an arbitrator.

(d) All references to the New York Stock Exchange in Section 6(h) of the Plan will be read as references to the Financial Industry Regulatory Authority.

(e) The Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the Plan and this Award Agreement, and all arbitration proceedings thereunder.

(f) Nothing in this Award Agreement creates a substantive right to bring a claim under U.S., Federal, state, or local employment laws.

17. **Governing Law. THIS AWARD WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.**

CERTAIN TAX PROVISIONS

18. **Compliance of Award Agreement and Plan with Section 409A.** The provisions of this Paragraph 18 apply to you only if you are a U.S. taxpayer.

(a) This Award Agreement and the Plan provisions that apply to this Award are intended and will be construed to comply with Section 409A (including the requirements applicable to, or the conditions for exemption from treatment as, 409A Deferred Compensation), whether by reason of short-term deferral treatment or other exceptions or provisions. The Committee will have full authority to give effect to this intent. To the extent necessary to give

effect to this intent, in the case of any conflict or potential inconsistency between the provisions of the Plan (including Section 2 (b) thereof) and this Award Agreement, the provisions of this Award Agreement will govern, and in the case of any conflict or potential inconsistency between this Paragraph 18 and the other provisions of this Award Agreement, this Paragraph 18 will govern.

(b) No payment under this Award will be delayed beyond the date on which all applicable conditions or restrictions on such payment required by this Award Agreement are satisfied, and each payment will occur by the March 15 coinciding with the last day of the applicable "short-term deferral" period described in Reg. § 1.409A-1(b)(4) in order for the payment to be within the short-term deferral exception unless, in order to permit such conditions or restrictions to be satisfied, the Committee elects, pursuant to Reg. § 1.409A-1(b)(4)(i)(D) or otherwise as may be permitted in accordance with Section 409A, to delay payment to a later date within the same calendar year or to such later date as may be permitted under Section 409A, including, as described in Paragraph 19 below and Reg. § 1.409A-2(b)(7) (in conjunction with Section 6(d) of the Plan) and Reg. § 1.409A-3(d). For the avoidance of doubt, if the Award includes a "series of installment payments" as described in Reg. § 1.409A-2(b)(2)(iii), your right to the series of installment payments will be treated as a right to a series of separate payments and not as a right to a single payment.

(c) Paragraph 15 and Section 6(l) of the Plan will not apply to Awards that are 409A Deferred Compensation except to the extent permitted under Section 409A.

(d) Payments in respect of any portion of the Award may be made, if and to the extent elected by the Committee, later than the relevant Payment Date or other date or period specified hereinabove (but, in the case of any Award that constitutes 409A Deferred Compensation, only to the extent that the later payment is permitted under Section 409A). Payments in respect of any portion of the Award may not be accelerated except to the limited extent permitted by Section 409A and in such cases in the sole discretion of the Committee (including, as set forth in Paragraph 7 and in the case of death or post-employment conflict with ethics laws or conflict of interest laws).

(e) You understand and agree that you are solely responsible for the payment of any taxes and penalties due pursuant to Section 409A, but in no event will you be permitted to designate, directly or indirectly, the taxable year of the payment.

19. **Compliance of Award Agreement and Plan with Section 162(m).** If you are or become considered by GS Inc. to be one of its "covered employees" within the meaning of Section 162(m), then you will be subject to Section 6(d) of the Plan, as a result of which payment may be delayed. In addition, to the extent provided in your Award Statement and, to the extent that Section 409A is applicable to you, consistent with Reg § 1.409A-2(b), the Firm may delay any Payment Date.

COMMITTEE AUTHORITY, AMENDMENT AND CONSTRUCTION

20. **Committee Authority.** The Committee has the authority to determine, in its sole discretion, that any event triggering forfeiture or repayment of your Award will not apply, to limit the forfeitures and repayments that result under Paragraphs 10 and 11. In addition, the Committee, in its sole discretion, may determine whether Paragraph 12 will apply upon a termination of Employment. [Without limiting any other provision of this Award Agreement, when determining whether and what portion of your Award will terminate under Paragraphs 10(c)(xi), (xii) and (xiii) and the amount subject to repayment under Paragraphs 11(c) and (d), the Committee will take into account such factors as it

determines relevant, including the reason for the Loss Event or Risk Event and the extent to which (i) you participated in the Loss Event or Risk Event, (ii) your compensation may have been adjusted to take into account the risk associated with the Loss Event, Risk Event, your Serious Misconduct or your Failure to Supervise and (iii) your compensation may be adjusted for the fiscal year in which the Loss Event, Risk Event, your Serious Misconduct or your Failure to Supervise is discovered.]

21. **Amendment.** The Committee reserves the right at any time to amend the terms of this Award Agreement, and the Board may amend the Plan in any respect; *provided that*, notwithstanding the foregoing and Sections 2(b)(vi), 2(b)(viii) and 6(a) of the Plan, no such amendment will reduce the amount of this Award or otherwise materially adversely affect your rights and obligations under this Award Agreement without your consent; and *provided further* that the Committee expressly reserves its rights to amend, modify or extend any Performance Period, amend or modify any Performance Goal or delay any Payment Date as described in Paragraphs 6 and 19, respectively, or otherwise to amend the Award Agreement and the Plan as described in Section 2(b)(viii)(1) of the Plan. A modification that impacts the tax consequences of this Award or the timing of payment will not be an amendment that materially adversely affects your rights and obligations under this Award Agreement. Any amendment of this Award Agreement will be in writing.

22. **Construction, Headings.** Unless the context requires otherwise, (i) words describing the singular number include the plural and vice versa, (ii) words denoting any gender include all genders and (iii) the words “include,” “includes” and “including” will be deemed to be followed by the words “without limitation.” The headings in this Award Agreement are for the purpose of convenience only and are not intended to define or limit the construction of the provisions hereof. References in this Award Agreement to any specific Plan provision will not be construed as limiting the applicability of any other Plan provision.

IN WITNESS WHEREOF, GS Inc. has caused this Award Agreement to be duly executed and delivered as of the Date of Grant.

THE GOLDMAN SACHS GROUP, INC.

DEFINITIONS APPENDIX

The following capitalized terms are used in this Award Agreement with the following meanings:

(a) "409A Deferred Compensation" means a "deferral of compensation" or "deferred compensation" as those terms are defined in the regulations under Section 409A.

(b) "Associate With a Covered Enterprise" means that you (i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Enterprise or (ii) associate in any capacity (including association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Enterprise. Associate With a Covered Enterprise may include, as determined in the discretion of the Committee, (i) becoming the subject of any publicly available announcement or report of a pending or future association with a Covered Enterprise and (ii) unpaid associations, including an association in contemplation of future employment.

(c) "Award Statement" means a written statement that reflects certain Award terms.

(d) A "Covered Enterprise" means an existing or planned business enterprise that competes with the Firm (which, for this purpose means offering products or services that are the same as or similar to those offered by the Firm ("Firm Products or Services")), or reasonably may be expected to do so. The enterprises covered by this definition include enterprises that offer Firm Products or Services directly, as well as those that do so indirectly by ownership or control (*e.g.*, by owning, being owned by, or being under common ownership with an enterprise that offers Firm Products or Services). An enterprise will be treated as providing Firm Products or Services if, solely by way of example, it provides products or services associated with investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than you or your family members), private banking, commercial banking, merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading. A Competitive Enterprise is a Covered Enterprise. **An enterprise that offers, or may reasonably be expected to offer, Firm Products or Services is a Covered Enterprise irrespective of whether the enterprise is a customer, client or counterparty of the Firm, and, because the Firm is a global enterprise, irrespective of where the Covered Enterprise is physically located.**

(e) "Date of Grant" means the date specified in the Grantee's Award Agreement as the date of grant of the Award.

(f) "FDIC" means the Federal Deposit Insurance Corporation or any successor thereto.

(g) "Failed to Consider Risk" means that you participated in the structuring or marketing of any product or service, or participated on behalf of the Firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the Firm or the broader financial system as a whole (for example, where you have improperly analyzed such risk or where you have failed sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Committee determines there has been, or reasonably could be expected to be, a material adverse impact on the Firm, your business unit or the broader financial system.

(h) ["Failed to Supervise" means that you are held accountable in whole or in part for a Supervised Employee's Serious Misconduct related to compliance, control or risk that occurred during the Performance Period.]

(i) "Sarbanes Oxley" means the Sarbanes-Oxley Act of 2002, as amended.

(j) "Section 162(m)" means Section 162(m) of the Internal Revenue Code of 1986, as amended.

(k) "Section 409A" means Section 409A of the Internal Revenue Code of 1986, as amended, including any amendments or successor provisions to that Section and any regulations and other administrative guidance thereunder, in each case as they, from time to time, may be amended or interpreted through further administrative guidance.

(l) "Selected Firm Personnel" means any individual who is or in the three months preceding the conduct prohibited by Paragraph 10(b) was (i) a Firm employee or consultant with whom you personally worked while employed by the Firm, (ii) a Firm employee or consultant who, at any time during the year preceding the date of the termination of your Employment, worked in the same division in which you worked or (iii) an Advisory Director, a Managing Director or a Senior Advisor of the Firm.

(m) ["Serious Misconduct" means conduct that the Firm reasonably considers, in its sole discretion, to be misconduct sufficient to justify summary termination of employment under English law.]

(n) ["Supervised Employee" means an individual with respect to whom the Committee determines you had supervisory responsibility as a result of direct or indirect reporting lines or your management responsibility for an office, division or business.]

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in the Plan:

(a) "Board" means the Board of Directors of GS Inc.

(b) "Committee" means the committee appointed by the Board to administer the Plan pursuant to Section 2(a) of the Plan.

(c) "Covered Person" means a member of the Board or the Committee or any employee of the Firm.

(d) "Firm" means GS Inc. and its subsidiaries and affiliates.

(e) "GS Inc." means The Goldman Sachs Group, Inc., and any successor thereto.

The following capitalized terms are used in this Award Agreement with the meanings that are assigned to them in The Goldman Sachs Amended and Restated Stock Incentive Plan (2015):

(a) "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions in New York City are authorized or obligated by Federal law or executive order to be closed.

(b) "Cause" means (i) the Grantee's conviction, whether following trial or by plea of guilty or *nolo contendere* (or similar plea), in a criminal proceeding (A) on a misdemeanor charge involving fraud, false statements or misleading omissions, wrongful taking, embezzlement, bribery, forgery, counterfeiting or extortion, or (B) on a felony charge, or (C) on an equivalent charge to those in clauses (A) and (B) in jurisdictions which do not use those designations, (ii) the Grantee's engaging in any conduct which constitutes an employment disqualification under applicable law (including statutory disqualification as defined under the Exchange Act), (iii) the Grantee's willful failure to perform the Grantee's duties to the Firm, (iv) the Grantee's violation of any securities or commodities laws, any rules or regulations issued

pursuant to such laws, or the rules and regulations of any securities or commodities exchange or association of which the Firm is a member, (v) the Grantee's violation of any Firm policy concerning hedging or pledging or confidential or proprietary information, or the Grantee's material violation of any other Firm policy as in effect from time to time, (vi) the Grantee's engaging in any act or making any statement which impairs, impugns, denigrates, disparages or negatively reflects upon the name, reputation or business interests of the Firm or (vii) the Grantee's engaging in any conduct detrimental to the Firm. The determination as to whether Cause has occurred shall be made by the Committee in its sole discretion and, in such case, the Committee also may, but shall not be required to, specify the date such Cause occurred (including by determining that a prior termination of Employment was for Cause). Any rights the Firm may have hereunder and in any Award Agreement in respect of the events giving rise to Cause shall be in addition to the rights the Firm may have under any other agreement with a Grantee or at law or in equity.

(c) "Change in Control" means the consummation of a merger, consolidation, statutory share exchange or similar form of corporate transaction involving GS Inc. (a "Reorganization") or sale or other disposition of all or substantially all of GS Inc.'s assets to an entity that is not an affiliate of GS Inc. (a "Sale"), that in each case requires the approval of GS Inc.'s shareholders under the law of GS Inc.'s jurisdiction of organization, whether for such Reorganization or Sale (or the issuance of securities of GS Inc. in such Reorganization or Sale), unless immediately following such Reorganization or Sale, either: (i) at least 50% of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of (A) the entity resulting from such Reorganization, or the entity which has acquired all or substantially all of the assets of GS Inc. in a Sale (in either case, the "Surviving Entity"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act, as such Rule is in effect on the date of the adoption of the 1999 SIP) of 50% or more of the total voting power (in respect of the election of directors, or similar officials in the case of an entity other than a corporation) of the Surviving Entity (the "Parent Entity") is represented by GS Inc.'s securities (the "GS Inc. Securities") that were outstanding immediately prior to such Reorganization or Sale (or, if applicable, is represented by shares into which such GS Inc. Securities were converted pursuant to such Reorganization or Sale) or (ii) at least 50% of the members of the board of directors (or similar officials in the case of an entity other than a corporation) of the Parent Entity (or, if there is no Parent Entity, the Surviving Entity) following the consummation of the Reorganization or Sale were, at the time of the Board's approval of the execution of the initial agreement providing for such Reorganization or Sale, individuals (the "Incumbent Directors") who either (A) were members of the Board on the Effective Date or (B) became directors subsequent to the Effective Date and whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Directors then on the Board (either by a specific vote or by approval of GS Inc.'s proxy statement in which such persons are named as nominees for director).

(d) "Client" means any client or prospective client of the Firm to whom the Grantee provided services, or for whom the Grantee transacted business, or whose identity became known to the Grantee in connection with the Grantee's relationship with or employment by the Firm.

(e) "Competitive Enterprise" means an existing or planned business enterprise that (i) engages, or may reasonably be expected to engage, in any activity, (ii) owns or controls, or may reasonably be expected to own or control, a significant interest in or (iii) is, or may reasonably be expected to be, owned by, or a significant interest in which is, or may reasonably expected to be, owned or controlled by, any entity that engages in any activity that, in any case, competes or will compete anywhere with any activity in which the Firm is engaged. The activities covered by this definition include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than the Grantee and members of the Grantee's family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

(f) "Employment" means the Grantee's performance of services for the Firm, as determined by the Committee. The terms "employ" and "employed" shall have their correlative meanings. The Committee in its sole discretion may determine (i) whether and when a Grantee's leave of absence results in a termination of Employment (for this purpose, unless the Committee determines otherwise, a Grantee shall be treated as terminating Employment with the Firm upon the occurrence of an Extended Absence), (ii) whether and when a change in a Grantee's association with the Firm results in a termination of Employment and (iii) the impact, if any, of any such leave of absence or change in association on Awards theretofore made. Unless expressly provided otherwise, any references in the Plan or any Award Agreement to a Grantee's Employment being terminated shall include both voluntary and involuntary terminations.

(g) "Grantee" means a person who receives an Award.

(h) "Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(i) "Vested" means, with respect to an Award, the portion of the Award that is not subject to a condition that the Grantee remain actively employed by the Firm in order for the Award to remain Outstanding. The fact that an Award becomes Vested shall not mean or otherwise indicate that the Grantee has an unconditional or nonforfeitable right to such Award, and such Award shall remain subject to such terms, conditions and forfeiture provisions as may be provided for in the Plan or in the Award Agreement.

EXHIBIT 10.62

The Goldman Sachs Group, Inc.

SIGNATURE CARD FOR _____ AWARDS
AND CONSENT TO RECEIVE ELECTRONIC DELIVERY

IMPORTANT: PLEASE REVIEW, EXECUTE AND RETURN THIS FORM TO: EQUITY COMPENSATION (DIVISION OF HCM), 200 WEST STREET, 26TH FLOOR, NEW YORK, NY 10282.

YOU MUST PROPERLY EXECUTE THIS FORM TO ACKNOWLEDGE ACCEPTANCE OF THE TERMS AND CONDITIONS OF YOUR AWARD(S) AND RELATED MATTERS.

1. I have received and agree to be bound by The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (the "SIP") and the Award Agreement(s) applicable to me in connection with the _____ Award(s) (the "Award(s)") that I have been granted by the Firm (as defined in the SIP). I confirm that I am accepting the Award(s) subject to the terms and conditions contained in the SIP, the Award Agreement(s), and this signature card (the "Signature Card"), including, but not limited to, the requirement that certain disputes be decided through arbitration in New York City and be governed by New York law. For the avoidance of doubt, references to a "share" or "Share" herein mean a share of the common stock of The Goldman Sachs Group, Inc. ("GS Inc.") and, where applicable, deliveries of cash or other property in lieu thereof.

As a condition of this grant, I understand that the Award(s) (as well as any other award that the Firm may grant to me under the SIP) is/are subject to other governing law provisions (as outlined in this Signature Card, in the current or otherwise then current Award Summary (as defined below) or otherwise as may be required under applicable law) and, as a condition to receiving such awards, I agree to be bound thereby. I also understand that the Firm may grant to me other awards under the SIP that also may contain (among other terms and conditions) arbitration and other governing law provisions and, as a condition to receiving such awards, I agree to be bound thereby. As a condition of this grant, I agree to provide upon request an appropriate certification regarding my U.S. tax status on Form W-8BEN, Form W-9, or other appropriate form, and I understand that failure to supply a required form may result in the imposition of backup withholding on certain payments I receive pursuant to this grant.

I understand and acknowledge that I am agreeing to arbitrate all claims relating to the SIP in accordance with the arbitration procedure set forth in the SIP and the Award Agreement(s). If I am employed in the U.S. or if I am otherwise subject to U.S. Federal, State, or local employment laws, I further agree to arbitrate, in accordance with the SIP-related arbitration procedure and to the fullest extent permitted by law, all claims arising out of or relating to my employment with the Firm or the termination thereof, or otherwise concerning any rights, obligations or other aspects of my employment relationship with the Firm (collectively, "Employment-Related Matters"). I agree that all provisions in the SIP (specifically Section 3.17 thereof) and any applicable Award Agreements that relate to arbitration and SIP-related dispute resolution (including without limitation the provisions concerning New York choice of law and New York City choice of forum) shall be applicable to resolution of disputes concerning Employment-Related Matters; provided, however, that Employment-Related Matters that do not relate to the SIP need not be presented to the Committee or the SIP Committee (each, as defined in the SIP) prior to being submitted to arbitration. None of the SIP, the Award Agreement(s), or this Signature Card includes an agreement to arbitrate claims (whether they are claims relating to Employment-Related Matters or otherwise) on a collective, class or representative basis. I explicitly agree that, to the fullest extent permitted by applicable law, no arbitrator shall have the authority to consider class, collective or representative claims, to order consolidation or to join different claimants or grant relief other than on an individual basis to the individual claimant involved and that, notwithstanding any applicable forum rules to the contrary, to the extent there is a question of enforceability of this agreement arising from a challenge to the arbitrator's jurisdiction or to the arbitrability of a claim, it shall be decided by a court and not an arbitrator. I also understand and agree that all references to the New York Stock Exchange in Section 3.17 of the SIP shall be read as references to the Financial Industry Regulatory Authority and that, for the avoidance of doubt, the Federal Arbitration Act governs interpretation and enforcement of all arbitration provisions under the SIP and this Signature Card, and all arbitration proceedings thereunder. I understand and agree that nothing herein creates a substantive right to bring a claim under U.S. Federal, State, or local employment laws. To the extent that I have entered into any prior agreement with the Firm requiring me to arbitrate certain claims, including Employment Related Matters, I understand and agree to continue to be bound by my obligation to arbitrate all such claims, including, but not limited to, under any agreement in connection with my receipt of year-end equity awards in prior years.

I irrevocably grant full power and authority to GS Inc. to register in its name, or that of any designee, any and all Restricted Shares (as defined in the applicable Award Agreement), Shares at Risk (as defined in the applicable Award Agreement) or other shares of GS Inc. common stock that have been or may be delivered to me subject to transfer restrictions or forfeiture provisions, and I irrevocably authorize GS Inc., or its designee, to sell, assign or transfer such shares to GS Inc. or such other persons as it may determine in the event of a forfeiture of such shares pursuant to any agreement with GS Inc.

Further, as a condition of this grant, if I am a person who has worked in the United Kingdom at any time during the earnings period relating to any award under the SIP, as determined by the Firm, when requested and as directed by the Firm, I will agree to a Joint Election under s431 ITEPA 2003 of the laws of the United Kingdom for full or partial disapplication of Chapter 2 Income Tax (Earnings and Pension) Act 2003 under the laws of the United Kingdom and will sign and return such election in respect of all future deliveries of Shares underlying the Award(s) and any previous grants made to me under the SIP and understand that the Firm intends to meet its delivery obligations in Shares with respect to my Award(s), except as may be prohibited by law or described in the accompanying Award Agreement(s) or supplementary materials.

If I have worked in Switzerland at any time during the earnings period relating to the Award(s) granted to me as determined by the Firm, (i) I acknowledge that my Award(s) are subject to tax in accordance with the rulings and method of calculation of taxable values to be agreed by the Firm with the Federal and/or Zurich/Geneva cantonal/communal tax authorities or as otherwise directed by the Firm, and (ii) I hereby agree to be bound by any rulings agreed by the Firm in respect of any Award(s), which is expected to result in taxation at the time of delivery of Shares, and (iii) I undertake to declare and make a full and accurate income tax declaration in respect of my Award(s) in accordance with the above ruling or as directed by the Firm.

2. I have read and understand the Firm's "Notice Periods for Recipients of Year-End Equity-Based Awards" policy (the "Notice Policy") available through the HR Workways® link on GSWeb or as otherwise provided to me, pursuant to which I am required to provide certain specified advance notice of my intent to leave employment with the Firm. By executing this form, I am agreeing to be bound by the Notice Policy as in effect from time to time and, where applicable, am agreeing to a permanent change in the terms and conditions of my employment. I agree to this change in consideration of my continued employment with the Firm and the Firm's offer of the Award(s). I understand that the Notice Policy requires me, among other things, to provide my employing entity with advance written notice of my intention to leave employment with the Firm as follows:

- In the Americas: 60 days in advance of my termination date;
- In Europe, the Middle East, Africa and India: 90 days in advance of my termination date; and
- In Japan and Asia Ex-Japan (including Australia and New Zealand and excluding India): 90 days in advance of my termination date if I am a Vice President or an Executive Director; 60 days in advance of my termination date in all other cases.

If, under local law or my contract of employment (for example, a Managing Director Agreement), I have a notice requirement that is longer than those specified above, I understand that the longer notice period will apply. I also understand that if my employment is subject to a probation period, the Notice Policy applies only if notice of termination is given after the probation period has ended.

I understand that if I fail to comply in any respect with the Notice Policy, I will have failed to meet an obligation I have under an agreement with the Firm, as a result of which the Firm may have certain legal and equitable rights and remedies, including, without limitation, forfeiture of the Award(s) and any other awards granted to me under the SIP. The Firm may forfeit such Award(s) for violation of the Notice Policy irrespective of whether this agreement constitutes a legally recognized permanent change to my terms and conditions of employment, and irrespective of whether applicable law permits me to make a payment in lieu of notice. In addition, the Firm may seek an order or injunction from a court or arbitration panel to stop a breach and may also seek other permissible remedies. The Firm may hold me personally liable for any damages it suffers as a result of the breach.

This agreement concerning my notice period is being made for and on behalf of my Goldman Sachs employing entity, and implementation of the Notice Policy does not create an employment relationship between me and GS Inc.

3. I have read and understand the Firm's hedging and pledging policies (including, without limitation, the Firm's "Policies With Respect to Transactions Involving GS Shares, Equity Awards and GS Options by Persons Affiliated with GS Inc."), and agree to be bound by them (with respect to the Award(s) and any prior awards under the SIP), both during and following my employment with the Firm.

4. As a condition to this grant, I agree to open and activate any brokerage, trust, sub-trust, custody or similar account (an "Account"), as required or approved by the Firm in its sole discretion. I agree to access, review, execute and be bound by any agreements that govern any such Account, including any provisions that provide for the applicable restrictions on transfers, pledges and withdrawals of Shares, permitting the Firm to monitor any such Account, and the limitations on the liability of the party (which may not be affiliated with the Firm) providing the Account and the Firm. I understand and agree that the Firm may direct the transfer of securities, cash or other assets in my Account to the Firm in connection with any indebtedness or any other obligation that I have to the Firm, as determined by the Firm in its sole discretion, however such obligation may have arisen. I also agree to open an Account with any other custodian, broker, trustee, transfer agent or similar party selected by the Firm, if the Firm, in its sole discretion, requires me to open an account with such custodian, broker, trustee, transfer agent or similar party as a condition to delivery of Shares underlying the Award(s).

5. If the Firm advanced or loaned me funds to pay certain taxes (including income taxes and Social Security, or similar contributions) in connection with the Award(s) (or does so in the future), and if I have not signed a separate loan agreement governing repayment, I authorize the Firm to withhold from my compensation any amounts required to reimburse it for any such advance or loan to the extent permitted by applicable law.

I understand and agree that, if I leave the Firm, I am required immediately to repay any outstanding amount. I further understand and agree that the Firm has the right to offset, to the extent permitted by the Award Agreement and applicable law (including Section 409A of the U.S. Internal Revenue Code of 1986, as amended, which limits the Firm's ability to offset in the case of United States taxpayers under certain circumstances), any outstanding amounts that I then owe the Firm against its delivery obligations under the Award(s), against any obligations to remove restrictions and/or other terms and conditions in respect of any Restricted Shares or Shares at Risk (each as defined in the applicable Award Agreement) or against any other amounts the Firm then owes me, including payments of dividends or dividend equivalent payments. I understand that the delivery of Shares pursuant to the Award(s) is conditioned on my satisfaction of any applicable taxes or Social Security contributions (collectively referred to as "tax" or "taxes" for purposes of the SIP and all related documents) in accordance with the SIP. To the extent permitted by applicable law, the Firm, in its sole discretion, may require me to provide amounts equal to all or a portion of any Federal, State, local, foreign or other tax obligations imposed on me or the Firm in connection with the grant, vesting or delivery of the Award(s) by requiring me to choose between remitting such amount (i) in cash (or through payroll deduction or otherwise), (ii) in the form of proceeds from the Firm's executing a sale of Shares delivered to me pursuant to the Award(s) or (iii) as otherwise permitted in the Award Agreement(s)**.** However, in no event shall any such choice or the choice specified in paragraph 6, below, determine, or give me any discretion to affect, the timing of the delivery of Shares or payment of tax obligations.

6. If I am an individual with separate employment contracts (at any time during and/or after _____), I acknowledge and agree that the Firm may, in its sole discretion, require (to the extent permitted by applicable law) that I provide for a reserve in an amount the Firm determines is advisable or necessary in connection with any actual, anticipated or potential tax consequences related to my separate employment contracts by requiring me to choose between remitting such amount (i) in cash (or through payroll deductions or otherwise) or (ii) in the form of proceeds from the Firm's executing a sale of Shares delivered to me pursuant to the Award(s) (or any other of my awards outstanding under the SIP).

7. In connection with any Award Agreement or other interest I may receive in the SIP or any Shares that I may receive in connection with the Award(s) or any award I have previously received or may receive, or in connection with any amendment or variation thereof or any documents listed in paragraph 8, I hereby consent to (a) the acceptance by me of the Award(s) electronically, (b) the giving of instructions in electronic form whether by me or the Firm, and (c) the receipt in electronic form at my email address maintained at Goldman Sachs or via Goldman Sachs' intranet site (or, if I am no longer employed by the Firm, at such other email address as I may specify, or via such other electronic means as the Firm and I may agree) all notices and information that the Firm is required by law to send to me in connection therewith including, without limitation, any document (or part thereof) constituting part of a prospectus covering securities that have been registered under the U.S. Securities Act of 1933, the information contained in any such document and any information required to be delivered to me under Rule 428 of the U.S. Securities Act of 1933, including, for example, the annual report to security holders or the annual report on Form 10-K of GS Inc. for its latest fiscal year, and that all prior elections that I may have made relating to the delivery of any such document in physical form are hereby revoked and superseded. I agree to check Goldman Sachs' intranet site (or, if I am no longer employed by the Firm, such other electronic site as notified to me by the Firm) periodically as I deem appropriate for any new notices or information concerning the SIP. I understand that I am not required to consent to the receipt of such documents in electronic form in order to receive the Award(s) and that I may decline to receive such documents in electronic form by contacting Equity Compensation (division of HCM), 200 West Street, 26th Floor, New York, NY 10282, telephone (212) 357-1444, which will provide me with hard copies of such documents upon request. I also understand that this consent is voluntary and may be revoked at any time on three business days' written notice.

8. I hereby acknowledge that I have received in electronic form in accordance with my consent in paragraph 7 the following documents:

- The Goldman Sachs Amended and Restated Stock Incentive Plan (2015);
- Summary of The Goldman Sachs Amended and Restated Stock Incentive Plan (2015);
- The _____ Annual Report for The Goldman Sachs Group, Inc.;
- The annual report on Form 10-K for The Goldman Sachs Group, Inc. for the fiscal year ended December 31, _____;
- The Award Agreement(s); and
- Summaries of the Award(s) ("Award Summary").

9. I expressly authorize any appropriate representative of the Firm to make any notifications, filings or remittances of funds that may be required in connection with the SIP or otherwise on my behalf. Further, if I am an employee who is resident in South Africa at a relevant time, by accepting my Award(s), I expressly authorize any appropriate representative of the Firm to make any required notification on my behalf to the Financial Surveillance Department of the South African Reserve Bank (or its authorized dealer) in relation to my participation in the SIP and to any acquisition of Shares for no consideration under the SIP or other similar filing that may otherwise be required in South Africa. I acknowledge that any such authorization is effective from the date of acceptance of my Award(s) until such time as I expressly revoke the authorization by written notice to any appropriate representative of the Firm. I understand that this authorization does not create any obligation on the Firm to deal with any such notifications, filings or remittances of funds that I may be required to make in connection with the SIP and I accept full responsibility in this regard.

10. The granting of the Award(s), the delivery of the underlying Shares and any subsequent dividends or dividend equivalent payments, and the receipt of any proceeds in connection with the Award(s) may result in legal or regulatory requirements in some jurisdictions. I understand and agree that it is my responsibility to ensure that I comply with any legal or regulatory requirements in respect of the Award(s).

11. I confirm that I have filed all tax returns that I am required to file and paid all taxes I am required to pay with respect to awards previously granted to me by the Firm, and I agree, with respect to both the Award(s) as well as awards previously granted to me by the Firm, to file all tax returns I am required to file in connection with the Award(s) and any sales of any Shares or other property delivered pursuant to the Award(s) and to pay all taxes I am required to pay.

12. The goodwill associated with the relationships between the Firm and its clients and prospective clients is a valuable asset of the Firm that is built and preserved through the combined services and efforts of the Firm and all of its personnel. The Firm provides its employees with a unique platform of financial products and services, confidential and proprietary information, professional training, access to specialized expertise, research, analytical, operational, and business development support, travel and entertainment expenses and other valuable resources to build and enhance the goodwill associated with the relationships between the Firm and its clients, as well as to foster and establish such relationships with prospective clients. Accordingly, I acknowledge and agree that (i) because the Firm contributes valuable resources to build and enhance client relationships, including those for which I provide services, it has a legitimate and essential business interest in protecting the goodwill associated with those relationships; (ii) by my continued employment, I confirm that I have assigned and will assign to the Firm all goodwill I have developed or will develop with persons or entities with whom I interact while at the Firm and/or who are or will become clients or prospective clients of the Firm in connection with my employment with the Firm, even if I did business with such persons or entities prior to joining the Firm; and (iii) while at the Firm I do not have and will not acquire any property, proprietary, contractual or other legal right or interest whatsoever in or to any client or prospective client with whom I interact or conduct business while employed by the Firm or (except to the extent otherwise provided in a written agreement between the Firm and me that governs my compensation) to any current or prospective revenues associated with such client or prospective client (all such interests being referred to herein as "Intangible Interests"). For the avoidance of doubt, I am hereby assigning all Intangible Interests to the Firm. I acknowledge and agree that my compensation during the term of my employment with the Firm is adequate financial consideration in this regard, and that no further consideration is necessary (including in respect of obligations applicable to me after my employment with the Firm has ended).

Consent to Data Collection, Processing and Transfers:

I understand and agree that in connection with the SIP and any other Firm benefit plan (the "Programs"), to the extent permitted under the laws of the applicable jurisdiction, the Firm may collect, process, transfer/transmit (internationally), and use various data that is personal to me, including but not limited to my name, address, work location, hire date, Social Security or Social Insurance or taxpayer identification number (required for tax purposes), type and amount of SIP or other benefit plan award, citizenship or residency (required for tax purposes) and other similar information reasonably necessary for the administration of such Programs (collectively referred to as "Information") and provide such Information to its affiliates , Computershare Limited and its affiliates (collectively "Computershare") and Fidelity Stock Plan Services, LLC, Fidelity Personal Trust Company, FSB and any of their affiliates (collectively "Fidelity") or any other service provider, whether in the United States or elsewhere, as is reasonably necessary for the administration of the Programs and under the laws of these jurisdictions. I understand that, in certain circumstances where required by law, foreign courts, law enforcement agencies or regulatory agencies may be entitled to access the Information. I understand that, unless I explicitly authorize otherwise, the Firm, its affiliates and its service providers (through their respective employees in charge of the relevant electronic and manual processing) will collect, process, transfer/transmit (internationally), and use this Information only for purposes of administering the Programs. I understand that, in the United States and in other countries to which such Information may be transferred for the administration of the Programs, the level of data protection is not equivalent to data protection standards in the member states of the European Economic Area, Switzerland, Canada or certain Canadian provinces or my home country. If I am employed in Monaco or Spain, I have also read the text in bold in the respective Monaco or Spain legal notice below in conjunction with this Consent to Data Collection, Processing and Transfers clause and I

understand that such text forms part of this clause and that in the event of any inconsistency such text shall prevail over this clause. I understand that, upon request to Equity Compensation (division of HCM), 200 West Street, 26th Floor, New York, NY 10282, telephone (212) 357-1444, email EquityCompensation@ny.email.gs.com, to the extent required under the laws of the applicable jurisdiction, I may have access to and obtain communication of the Information and may exercise any of my rights in respect of such Information, in each case free of charge, including objecting to the collecting, processing, (international) transfer/transmission, and any use of the Information and requesting that the Information be updated or corrected (if wrong), completed or clarified (if incomplete or equivocal), or erased (if cannot legally be collected or kept). Upon request, to the extent required under the laws of the applicable jurisdiction, Equity Compensation (division of HCM) will also provide me, free of charge, with a list of all the service providers used in connection with the Programs at the time of request. I understand that there is no legal obligation for me to provide the Firm with the Information and any Information is provided at my own will and consent. I understand that, if I refuse to authorize the collecting, processing, use and (international) transfer/transmission of the Information consistent with the above, I may not benefit from the Programs. I authorize the collecting, processing, use and (international) transfer/transmission of the Information consistent with the above for the period of administration of the Programs. In particular, I authorize (within the limits described above): (i) the data processing by the Firm (which means GS Inc. and any of its subsidiaries and affiliates); (ii) the data processing by Fidelity or Computershare; (iii) the data processing by the Firm's other service providers; and (iv) the data transfer to the United States and other countries, as described above for the purposes set forth herein. A list of the Firm's international offices and countries to which data that is personal to me can be transferred is set forth at http://www2.goldmansachs.com/who-we-are/locations/index.html. I further acknowledge that the Information may be retained by the aforementioned persons beyond the period of administration of the Programs to the extent permitted under the laws of the applicable jurisdiction and I so authorize.

FOR ALL NON-U.S. EMPLOYEES

By accepting (whether expressly or by implication) any benefit granted to you by GS Inc., including without limitation your Award (s), you acknowledge and agree to each of the following:

- ***Country-Specific Legal Notices:*** You have read the country-specific legal notices below that pertain to your place of employment and/or residence (and also the location of your employer, if different), if any, and understand that they apply throughout the term of your Award(s).
- ***No Public Offer:*** Awards under the SIP and the Firm's other compensation and benefit programs are strictly limited to eligible participants and are not intended to constitute a public offer in any jurisdiction, nor intended for registration in any jurisdiction outside of the U.S. You should keep all Award-related documents confidential and you may not reproduce, distribute or otherwise make public any part of such documents without GS Inc.'s express written consent. If you have received any such documents and you are not the intended recipient, please disregard and destroy them.
- ***Transferability:*** Any provisions permitting transfers to a third party in the Award documents will not apply to you (i) to the extent that the applicability of those provisions would affect the availability of relevant exemptions or tax favorable treatment, or (ii) otherwise in circumstances determined by the Firm in its sole discretion from time to time.
- ***Adequate Information:*** You acknowledge that you (i) have been provided with all relevant information and materials with respect to the Firm's operations and financial conditions and the terms and conditions of your Award(s), (ii) have read and understood such information and materials, (iii) are fully aware and knowledgeable of the terms and conditions of your Award(s), and (iv) completely and voluntarily agree to the terms and conditions of your Award(s).
- ***Independent Advice Recommended:*** The information provided by the Firm or its service providers in respect of an Award does not take into account the individual circumstances of recipients and does not constitute investment advice. Awards under the SIP involve certain risks and you should exercise caution. The Firm recommends that you consult your own independent legal, financial and tax advisors in all cases, and you acknowledge that you are provided with adequate opportunity to do so.
- ***No Employer Involvement:*** Except to the extent required by applicable law, all Awards are offered, issued and administered by GS Inc., a Delaware corporation, and your employer is not involved in the grant of your Award(s) or any other GS Inc. equity compensation. All documents related to the Awards, including the SIP, the Award Agreement, this Signature Card and the link by which you access these documents, are originated and maintained in the United States.
- ***No Effect on Employment-Related Rights:*** Any compensation you receive (even on a regular and repeated basis) in connection with the SIP is discretionary and does not constitute part of your base or normal salary or wages. It does not affect your rights and obligations under the terms of your employment and it will not be taken into account (except to the extent otherwise required by applicable law) in determining any other employment-related rights you may have, including without limitation rights in relation to severance, redundancy or end-of-service payments, bonuses, long-service awards,

pension or retirement benefits. In particular you waive any and all rights to compensation or damages in consequence of the termination of your employment for any reason whatsoever insofar as those rights arise or may arise from your ceasing to have rights under, or be entitled to receive payment in respect of, the SIP as a result of such termination, or from the loss or diminution in value of such rights or entitlements. This waiver applies whether or not such termination amounts to wrongful or unfair dismissal.

- ***No Additional Entitlements:*** The grant of an Award is strictly discretionary and voluntary and neither this Award (even if Award grants are made to you on a regular and repeated basis) nor your employment contract implies any expectation or right in relation to (i) the grant of any Award or similar compensation in the future, (ii) the terms, conditions and amount of any Award or similar compensation that GS Inc. may decide to grant in future, or (iii) continued employment in connection with any Award.
- ***Translations:*** The official Award documents (including contracts and communications) are in the English language. You are responsible for ensuring that you fully understand these documents. The English version of the documents will always prevail in the event of any inconsistency with translated or interpreted documents.
- ***Severability:*** If any provision (in whole or in part) of this Signature Card or the other Award documents is to any extent illegal, otherwise invalid, or incapable of being enforced, that provision will be excluded to the extent (only) of such invalidity or unenforceability. All other provisions will remain in full effect and, to the extent possible, the invalid or unenforceable provision will be deemed replaced by a provision that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable provision.

[NON-COMPETITION AND NON-SOLICITATION RESTRICTIONS FOR EMPLOYEES PROVIDING SERVICES IN ASIA

In addition to and without limiting any provisions in the SIP or the applicable Award Agreement(s) (including without limitation the Award vesting, delivery, forfeiture, termination or repayment provisions) unless provided otherwise in the Restrictions, if I am providing services to the Firm in Asia or to BGH, in view of my importance to the Firm and/or BGH, I hereby agree to and acknowledge the following:

(a) I hereby agree that the Firm or BGH would likely suffer significant harm from me competing with the Firm or BGH for some period of time after my employment ends. Accordingly, I hereby agree that I will not, without the written consent of the Firm or BGH, during the Restricted Period in the Geographic Area:

(i) form, or acquire a 5% or greater equity ownership, voting or profit participation interest in, any Covered Competitive Enterprise; or

(ii) associate (including, but not limited to, association as an officer, employee, partner, director, consultant, agent or advisor) with any Covered Competitive Enterprise and in connection with such association engage in, or directly or indirectly manage or supervise personnel engaged in, any activity:

A. which is similar or substantially related to any activity in which I was engaged, in whole or in part, at the Firm or BGH,

B. for which I had direct or indirect managerial or supervisory responsibility at the Firm or BGH, or

C. which calls for the application of the same or similar specialized knowledge or skills as those utilized by me in my activities with the Firm or BGH,

at any time during the one-year period immediately prior to the end of the Asia Service Period, and, in any such case, irrespective of the purpose of the activity or whether the activity is or was in furtherance of advisory, agency, proprietary or fiduciary business of either the Firm or BGH or the Covered Competitive Enterprise.

(By way of example only, this provision precludes an “advisory” investment banker from joining a leveraged-buyout firm, a research analyst from becoming a proprietary trader or joining a hedge fund, or an information systems professional from joining a management or other consulting firm and providing information technology consulting services or advice to any Covered Competitive Enterprise, in each case without the written consent of the Firm or BGH.)

(b) I hereby agree that during the Restricted Period, I will not, in any manner, directly or indirectly, (1) Solicit a Covered Client to transact business with a Covered Competitive Enterprise or to reduce or refrain from doing any business with the Firm or BGH, or (2) interfere with or damage (or attempt to interfere with or damage) any relationship between the Firm or BGH and a Covered Client.

(c) I hereby agree that during the Restricted Period, I will not, in any manner, directly or indirectly:

(i) Solicit any Covered Personnel to resign from the Firm or BGH or to apply for or accept employment, consultancy, partnership, membership or similar status with a Covered Competitive Enterprise;

(ii) hire or participate in the hiring of any Covered Personnel (whether as an employee, consultant, or otherwise) by a Covered Competitive Enterprise;

(iii) participate in the decision to offer Covered Personnel employment, consultancy, admission into partnership, membership or similar status with a Covered Competitive Enterprise; or

(iv) participate in the identification of Covered Personnel for potential hiring, consultancy or admission into partnership, membership or similar status with a Covered Competitive Enterprise.

I acknowledge that I will have violated this provision if, during the Restricted Period, any Covered Personnel are Solicited, hired, made a consultant or are accepted into partnership, membership or similar status:

(i) by any Covered Competitive Enterprise which I form, which bears my name, or in which I am a partner, a member or have similar status, or in which I possess or control a greater than de minimis equity ownership, voting or profit participation; or

(ii) by any Covered Competitive Enterprise, and I have, or are intended to have, direct or indirect managerial or supervisory responsibility for such Covered Personnel.

(d) I acknowledge and agree that these Restrictions form part of my terms and conditions of employment. I also acknowledge and agree that these Restrictions supersede any part of any other agreement (which, for the avoidance of doubt, excludes the SIP and the Award Agreement(s)), written or oral, that I am subject to in respect of the same subject matter unless I am notified in writing to the contrary.

(e) Prior to accepting employment with any other person or entity during the Restricted Period, I will provide any prospective employer with written notice of the Restrictions with a copy containing the prospective employer's name and contact information delivered simultaneously to the Firm.

(f) I understand that the Restrictions may limit my ability to earn a livelihood in a business similar to the business of the Firm or BGH. I acknowledge that a violation on my part of any of the Restrictions would cause immeasurable and irreparable damage to the Firm or BGH. Accordingly, I agree that the Firm and/or BGH will be entitled to injunctive relief in any court of competent jurisdiction for any actual or threatened violation of any of the Restrictions in addition to any other remedies it or they may have. In the event that I violate any of the Restrictions, I acknowledge that the Restricted Period shall automatically be extended by the period of time that I was in violation of the said Restriction(s). I also acknowledge that a violation of any of the Restrictions would constitute my failure to meet an obligation I have under an agreement between me and the Firm that was entered into in connection with my employment with the Firm and/or BGH, may be detrimental to the Firm and/or BGH and would constitute "Cause" for purposes of any equity-based awards granted to me by the Firm and/or BGH and will result in my forfeiting such equity-based awards.

(g) If any provision (or part of a provision) of the Restrictions is held by a court of competent jurisdiction to be invalid, illegal or unenforceable (whether in whole or in part), such provision will be deemed modified to the extent, but only to the extent, of such invalidity, illegality or unenforceability and the remaining such provisions will not be affected thereby; provided, however, that if any of the Restrictions are held by a court of competent jurisdiction to be invalid, illegal or unenforceable because it exceeds the maximum time period such court determines is acceptable to permit such provision to be enforceable, such Restrictions will be deemed to be modified to the minimum extent necessary to modify such time period in order to make such provision enforceable hereunder.

(h) The promises contained in the Restrictions are provided by me for the benefit of each Firm entity and BGH and I acknowledge and agree that each such entity may independently enforce the Restrictions against me. Any benefit that I give or am deemed to have given by virtue of the Restrictions is received jointly and severally by each Firm entity (including, for the avoidance of doubt, any Firm entity to which I provide services from time to time) and BGH.

(i) For the purposes of the Restrictions, GS Inc. enters into the SIP and Award Agreement(s) applicable to me in connection with the Award(s) in its own capacity and as agent for each other Firm entity and BGH. The consideration for the promises in these Restrictions is given to me by GS Inc. on its own behalf and on behalf of each other Firm entity (including, for the avoidance of doubt, any Firm entity to which I provide services from time to time) and BGH.

(j) I acknowledge that the Restrictions set out in this clause are reasonable and necessary for the protection of the legitimate interests of the Firm and/or BGH, and that, having regard to those interests, such restrictions do not impose an unreasonable burden on me.

(k) The Restrictions shall remain in full force and effect and survive the termination of my employment for any reason whatsoever.

(l) If I am subject to the Non-Competition and Non-Solicitation Agreement for Select Employees in the Equities Division, or a Managing Director subject to a Goldman Sachs Group, Inc. Managing Director Agreement, the Restrictions shall not apply to me.

(m) If I am a Private Wealth Management employee subject to an Employee Agreement Regarding Confidential and Proprietary Information and Materials and Non-Solicitation, I will be subject to the restrictions contained in clause (a) of the Restrictions but will not be subject to the restrictions contained in clauses (b) and (c) of the Restrictions. Nothing in the Restrictions will affect the operation of the Employee Agreement Regarding Confidential and Proprietary Information and Materials and Non-Solicitation.

(n) For the purposes of the Restrictions only, the following terms have the following meanings:

"Asia" means each state and territory in Australia, Brunei, Hong Kong SAR, India, Indonesia, Japan, Korea, Labuan, Macau SAR, Malaysia, Mongolia, New Zealand, Papua New Guinea, the Philippines, the PRC, Singapore, Taiwan, Thailand and Vietnam.

"Asia Service Period" means the period during which I am located in Asia and contracted to provide services to a member of the Firm in Asia or BGH. For the avoidance of doubt, the Asia Service Period does not end when I transfer to another member of the Firm in Asia or BGH.

"BGH" means Beijing Gao Hua Securities Company Limited, its subsidiaries and affiliates, and its or their respective successors**.**

"*Covered Client*" means any client or prospective client of the Firm or BGH (i) to whom I provided services in the one year period immediately prior to the end of the Asia Service Period, or (ii) for whom I transacted business in the one year period immediately prior to the end of the Asia Service Period, or (iii) whose identity became known to me in connection with my relationship with or employment by the Firm or BGH in the one year period immediately prior to the end of the Asia Service Period and with respect to whom I had access to confidential information.

"Covered Competitive Enterprise" means a business enterprise that (i) engages in any activity, or (ii) owns or controls a significant interest in any entity that engages in any activity that, in either case, competes anywhere with any activity in which the Firm or BGH is engaged. The activities covered by the previous sentence include, without limitation, financial services such as investment banking, public or private finance, lending, financial advisory services, private investing (for anyone other than me and members of my family), merchant banking, asset or hedge fund management, insurance or reinsurance underwriting or brokerage, property management, or securities, futures, commodities, energy, derivatives or currency brokerage, sales, lending, custody, clearance, settlement or trading.

"Covered Extended Absence" means my absence from active employment for at least 180 days in any 12-month period as a result of my incapacity due to mental or physical illness, as determined by the Firm or BGH (as applicable).

"Covered Personnel" means any Firm or BGH employee or consultant with whom I had material contact or dealings in the one year period immediately prior to the end of the Asia Service Period or in relation to whom I had access to confidential information.

"Effective Date" means (i) if the termination is for cause or Covered Extended Absence, the date on which such termination occurs; or (ii) if I repudiate my employment contract, the date of repudiation as determined by the Firm or BGH (as applicable).

"Firm" means GS Inc., its subsidiaries and affiliates and its and their respective successors.

"Geographic Area" means (i) the jurisdiction in Asia in which I am located as of the date of execution of the Signature Card; and/or (ii) any other jurisdiction in Asia in relation to which I have substantial product and/or geographical market responsibilities in the one year period immediately prior to the end of the Asia Service Period; and/or (iii) any other jurisdiction in Asia in relation to which I have substantial employee managerial responsibilities in the one year period immediately prior to the end of the Asia Service Period; and/or (iv) any other jurisdiction in Asia in relation to which I provided services in the one year period immediately prior to the end of the Asia Service Period.

"PRC" means, for the purpose of the Restrictions, the People's Republic of China, excluding Hong Kong SAR, Macau SAR and Taiwan.

"Restricted Period" means (i) in the event of the termination of my employment with the Firm in Asia or BGH, the Asia Service Period including any notice period applicable under the Notice Policy or, in the event I repudiate my notice requirement or exercise any statutory right to shorten the notice period or if my employment is terminated without notice or if the Firm elects to shorten the notice period in whole or in part with or without pay in lieu for any period of notice that has been waived or reduced, the Asia Service Period and the period of time equivalent to my notice requirement commencing from the Effective Date; or (ii) in the event of my employment with the Firm in Asia or BGH ending by reason of the transfer of my employment to another member of the Firm outside Asia, the Asia Service Period and the period of time equivalent to my notice requirement commencing from the conclusion of the Asia Service Period; or (iii) in the event of the termination of my secondment to the Firm in Asia or BGH and assignment or transfer of my employment to another member of the Firm outside Asia, the Asia Service Period and the period of time equivalent to my notice requirement commencing from the conclusion of the Asia Service Period.

"Restrictions" means the non-competition and non-solicitation restrictions for employees providing services in Asia as set out in (a) to (o) of this section of the Signature Card.

"Solicit" means any direct or indirect communication of any kind whatsoever, regardless of by whom initiated, inviting, advising, encouraging or requesting any person or entity, in any manner, to take or refrain from taking any action.

(o) Notwithstanding paragraph 1 of this Signature Card, the Restrictions shall be governed by and construed in accordance with the laws of the jurisdiction in which I am located and providing services to the Firm at the date of execution of the Signature Card. If I am located and providing services to the Firm in a state or territory in Australia, the laws of the jurisdiction shall be New South Wales. Notwithstanding paragraph 1, any Firm entity (including, for the avoidance of doubt, any Firm entity to which I provide services from time to time) or BGH may at any time elect to enforce the Restrictions in any competent court of any jurisdiction determined by such entity.]

Other Legal Notices:

FOR ARGENTINA EMPLOYEES ONLY

Your Award(s) are being offered to you in your capacity as an employee of the Firm. By receiving and accepting your Award(s), you are deemed to (i) acknowledge that the underlying Shares have not been authorized by the Argentine *Comisión Nacional de Valores* ("CNV") to be publicly offered in Argentina; and (ii) agree that you will not sell or offer to sell any Shares acquired upon settlement of your Award(s) in Argentina other than pursuant to transactions that would not qualify as a public offering under article 2 of Argentine Law 26,831.

The Award documents are being delivered to you in your capacity as an employee of the Firm. Accordingly, receipt and acceptance of the Award documents constitute your agreement that the information contained in the Award documents may not (i) be reproduced or used, in whole or in part, for any purpose whatsoever other than as a representation of your holding of Shares, or (ii) furnished to or discussed with any person (other than your personal advisors on a confidential basis) without the express written permission of GS Inc.

FOR AUSTRALIA EMPLOYEES ONLY

GS Inc. undertakes that it will, within a reasonable period of you so requesting and at no charge, provide you with a copy of the rules of the SIP. The market price of a Share can be accessed at the following link: https://www.nyse.com/index. The Australian dollar equivalent of that market price can be ascertained by applying the prevailing USD/AUD exchange rate published by the Reserve Bank of Australia, which can be accessed at the following link: http://www.rba.gov.au/statistics/frequency/exchange-rates.html. Any advice given by GS Inc. in connection with the SIP is general advice only. The documentation does not take into account the objectives, financial situation or needs of any particular person. Before acting on the information contained in the documentation, or making a decision to participate, you should consider obtaining your own financial product advice from a person who is licensed by the Australian Securities and Investments Commission (ASIC) to give such advice.

Throughout the period in which you hold a dividend equivalent right you may obtain copies of all information filed by GS Inc. with the U.S. Securities and Exchange Commission (SEC) which is accessible by GS Inc.'s shareholders and the general public ("shareholder information") by going to the SEC's website (www.sec.gov) or to the GS Inc. website (www.gs.com), and at http://www2.goldmansachs.com/our-firm/investors/financials/index.html. You should be aware that shareholder information can affect the value of your dividend equivalent rights from time to time.

The actual value you receive in respect of the Shares acquired by you will depend on the number of Shares you receive, the market value of a Share, the value of any dividend and dividend equivalent payments made in respect of a Share, and the USD/AUD exchange rate.

There are risks associated with an investment in Shares and the value of any Shares you receive may be less than the value of those Shares today. Some of those risks are specific to GS Inc.'s business activities while others are of a more general nature. For more detail on those risks, please refer to GS Inc.'s most recent annual report. Individually or in combination, those risks may affect the value of Shares.

Fidelity Personal Trust Company, FSB ("Trustee") will hold Shares that are the subject of Award(s). Any Shares, and income gained, held on your behalf may only be dealt with by the Trustee with your direction. You may direct the Trustee on the exercise of any applicable voting rights that you hold in respect of such Shares. GS Inc. undertakes that it will, within a reasonable period of you so requesting and at no charge, provide you with a copy of the trust deed.

FOR BRAZIL EMPLOYEES ONLY

Please note that the offer of an award under the SIP does not constitute a public offer in Brazil, and therefore it is not subject to registration with the Brazilian authorities.

According to Brazilian regulations, individuals resident in Brazil must inform the Central Bank of Brazil yearly the amounts of any nature, the assets and rights (including cash and other deposits) held outside of the Brazilian territory. Please consult your own legal counsel on the terms and conditions for presentation of such information.

By accepting the Award(s), you acknowledge that the Firm has provided you with Portuguese translations of the Award Summary, Award Agreement and Signature Card, but that the original English versions of these documents control. (Ao aceitar esta outorga, Você reconhece que a Empresa Ihe disponibilizou a versão em português do Award Summary, do Award Agreement e do Signature Card; porém a versão original em inglês desses documentos prevalecerá.)

FOR CHILE EMPLOYEES ONLY

Neither GS Inc., the SIP nor the Shares have been registered in the *Registro de Valores* (Securities Registry) or in the *Registro de Valores Extranjeros* (Foreign Securities Registry) of the *Superintendencia de Valores y Seguros* (Chilean Securities and Insurance Commission or SVS) and they are not subject to the control of the SVS. If such securities are offered within Chile, they will be offered and sold only pursuant to *Norma de Carácter, General 336* (General Regulation 336) of the SVS, an exemption to the registration requirements, or in circumstances which do not constitute a public offer of securities in Chile within the meaning of Article 4 of the Chilean Securities Market Law 18,045. As the Shares are not registered, the issuer has no obligation under Chilean law to deliver public information regarding the Shares in Chile. The Shares shall not be subject to public offering in Chile unless they are registered in the Foreign Securities Registry of the SVS. The commencement date of the offer is the date on which these documents were first provided to you via email.

The official plan documents are in the English language. If you do not understand their content, please contact your HCM contact in order to obtain a Spanish version.

Ni GS Inc., ni el SIP, ni las Acciones, han sido registradas en el Registro de Valores o Registro de Valores Extranjeros que lleva la Superintendencia de Valores y Seguros (SVS) y ninguno de ellos está sujeto a la fiscalización de la SVS. Si dichos valores son ofrecidos dentro de Chile, serán ofrecidos y colocados sólo de acuerdo a la Norma de Carácter General 336 de la SVS, una excepción a la obligación de registro, o en circunstancias que no constituyan una oferta pública de valores en Chile según lo definido por el Artículo 4 de la Ley 18.045 de Mercado de Valores de Chile. Por tratarse de valores no inscritos, el emisor de las Acciones no tiene obligación bajo la ley chilena de entregar en Chile información pública acerca de las Acciones. Las Acciones no pueden ser ofrecidas públicamente en Chile en tanto éstas no se registren en el Registro de Valores Extranjeros de la SVS. Se informa que la fecha de inicio de la presente oferta será aquella en que estos documentos fueron entregados a usted por primera vez vía email.

Los documentos oficiales del SIP se encuentran en idioma inglés. En caso que usted no entienda el contenido de estos documentos, por favor comuníquese con su encargado de recursos humanos, a fin de obtener una versión en español.

FOR THE PEOPLE'S REPUBLIC OF CHINA EMPLOYEES ONLY

All documentation in relation to the Award(s) is intended for your personal use and in your capacity as an employee of the Firm (and/or its affiliate) and is being given to you solely for the purpose of providing you with information concerning the Award(s) which the Firm may grant to you as an employee of the Firm (and/or its affiliate) in accordance with the terms of the SIP, this documentation and the applicable Award Agreement(s). The grant of the Award(s) has not been and will not be registered with the China Securities Regulatory Commission of the People's Republic of China pursuant to relevant securities laws and regulations, and the Award(s) may not be offered or sold within the mainland of the People's Republic of China by means of any of the documentation in relation to the Award(s) through a public offering or in circumstances which require a registration or approval of the China Securities Regulatory Commission of the People's Republic of China in accordance with the relevant securities laws and regulations.

You agree that notwithstanding anything to the contrary under the SIP or the Award Agreement(s), the Award(s) may be settled in cash in Renminbi or such other currency, payable by your employing entity in the mainland of the People's Republic of China or such other entity, in each case, as may be determined by the Firm in its sole discretion.

FOR FRANCE EMPLOYEES ONLY

Disclaimer: The current Award(s) is not covered by any prospectus which is the subject of the AMF's approval. Grantees can only receive this award for their own account ("compte propre") in the conditions laid down by articles L. 411-2, D. 411-1, D. 411-4, D. 744-1, D. 754-1 and D. 764-1 of the French Monetary and Financial Code. Any direct or indirect dissemination into the public of the financial instruments acquired can only take place within the conditions of articles L. 411-1, L. 411-2, L. 412-1 and L. 621-8 to L. 621-8-3 of the French Monetary and Financial Code.

By accepting the Award(s), you acknowledge that the Firm has provided you with French translations of the Award Summary, Award Agreement and Signature Card, but that the original English versions of these documents control.

The provisions of the Award Agreement will apply only in respect of the year to which the Award Agreement relates and will not in any circumstances create any right or entitlement to you for any future fiscal years.

Avertissement: La présente attribution ne donne pas lieu à un prospectus soumis au visa de l'Autorité des marchés financiers. Les personnes qui y participent ne peuvent le faire que pour compte propre dans les conditions fixées par les articles L. 411-2, D. 411-1,D.411-4, D. 744-1, D. 754-1 et D. 764-1 du Code monetaire et financier. La diffusion, directe ou indirecte, dans le public des instruments financiers ainsi acquis, ne peut être réalisée que dans les conditions prévues aux articles L. 411-1, L. 411-2, L. 412-1 et L. 621-8 à L. 621-8-3 du Code monétaire et financier.

En acceptant cet octroi, vous reconnaissez que la Société vous a transmis une version français de l'*Award Summary* (Résumé de l'Octroi), l'*Award Agreement* (Contrat d'Octroi) et de la *Signature Card* (Carte de Signature), mais que seule la version originale en langue anglaise fait foi.

Les dispositions de l'Accord de prime s'appliquent uniquement à l'année concernée par l'Accord de prime et ne créent en aucune circonstance tous droits ou habilitations s'agissant des années fiscales à venir.

FOR GERMANY EMPLOYEES ONLY

The Award(s) are offered to you by GS Inc. in accordance with the terms of the SIP which are summarized in the Award Summary. More information about GS Inc. is available on www.gs.com. You are being offered the Award(s) under the SIP in order to provide an additional incentive and to encourage employee share ownership and so increase your interest in the Firm's success. Please refer to the section entitled *Shares Available for Awards* in the SIP for information on the maximum number of GS Inc. shares that can be offered under the SIP. The obligation to publish a prospectus under the Prospectus Directive does not apply to the offer because of Article 4(1)(e) of that directive. This document is not a prospectus within the meaning of that directive.

Die Prämien werden Ihnen von der GS Inc. nach den in der Prämienübersicht aufgeführten Bestimmungen des Erwerbsplans angeboten. Weitere Informationen über GS Inc. finden Sie unter www.gs.com. Die Prämien werden Ihnen im Rahmen des Erwerbsplans zu Ihrer Motivation angeboten und um Sie durch das Halten von Aktien am Erfolg des Unternehmens teilhaben zu lassen. Informationen zur Anzahl der im Rahmen des Plans angebotenen GS Inc.-Aktien entnehmen Sie bitte dem Abschnitt *Shares Available for Awards* (Als Prämien erhältliche Aktien) im Erwerbsplan. Es besteht auf Grund von Artikel 4(1)(e) der Prospektrichtlinie für dieses Angebot keine Verpflichtung zur Veröffentlichung eines Emissionsprospekts. Dieses Dokument ist kein Prospekt im Sinne dieser Richtlinie.

FOR HONG KONG EMPLOYEES ONLY

WARNING:

The contents of this document have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in doubt about any of the contents of this document, you should obtain independent professional advice.

By accepting the Award(s), you acknowledge and accept that you will not be permitted to transfer awards to persons who fall outside the definition of 'qualifying persons' in the Companies Ordinance (*i.e.*, a person who is not a current or former director, employee, officer, consultant of the Firm or a person other than the offeree's wife, husband, widow, widower, child or step-child under the age of 18 years, or as otherwise defined), even if otherwise permitted under the SIP or any of the related documents.

FOR INDIA EMPLOYEES ONLY

This website does not invite offers from the public for subscription or purchase of the securities of any body corporate under any law for the time being in force in India. The website is not a prospectus under the applicable laws for the time being in force in India. GS Inc. does not intend to market, promote, invite offers for subscription or purchase of the securities of any body corporate by this website. The information provided on this website is for the record only. Any person who subscribes or purchases securities of any body corporate should consult his own investment advisors before making any investments. GS Inc. shall not be liable or responsible for any such investment decision made by any person.

FOR INDONESIA EMPLOYEES ONLY

By accepting the Award(s), you acknowledge that the Firm has provided you with Bahasa Indonesia translations of the Award Summary, Award Agreement and Signature Card, but that the original English versions of these documents control.

Dengan menerima Putusan, Anda menyatakan bahwa Perusahaan telah memberikan Anda terjemahan Bahasa Indonesia dari Ikhtisar Putusan, Perjanjian Putusan dan Perjanjian dengan Tanda Tangan, tapi versi asli dalam Bahasa Inggris dari dokumen-dokumen ini tetap mengendalikan.

FOR ITALY EMPLOYEES ONLY

No person resident or located in Italy other than the original recipients of this document and any other document related to the Award(s) may rely on such documents or their content. The offer of the Award(s) under the SIP (and the delivery of underlying Shares) is exempted from prospectus requirements under Italian securities legislation.

Under Italian rules, Italian taxpayers must report in their annual tax return the value of any financial instruments held abroad at year-end (such as financial and real estate assets). Please consult your own advisors regarding the terms and conditions of this reporting obligation.

FOR MONACO EMPLOYEES ONLY

If you are a Monégasque national (or if otherwise applicable), by accepting your Award(s), you expressly renounce the jurisdiction of Monaco and notably the application of articles 3.2° and 5bis of the Monégasque Procedural Civil Code in connection with any dispute relating to your Award(s).

If you are a French national (or if otherwise applicable), by accepting your Award(s), you expressly renounce the jurisdiction of France and notably the application of articles 14 and 15 of the French Civil Code in connection with any dispute relating to your Award(s).

Additional data protection information for Monaco employees (which should be read in conjunction with, and forms part of, the Consent to Data Collection, Processing and Transfers clause above (together with this additional information, the "Clause")): If you are employed in Monaco, you acknowledge and agree that in the event of any inconsistency between this Clause and the law in force, the law 1.165 on the protection of personal data (or other relevant law) as amended shall prevail over this Clause.

FOR NEW ZEALAND EMPLOYEES ONLY

The Financial Markets Authority in New Zealand has issued the Securities Act (Overseas Employee Share Purchase Schemes) Exemption Notice 2002 (Notice), which sets out the way in which GS Inc. can offer you securities under the SIP. In accordance with the requirements of the Notice, the following information has been made available to you:

1. GS Inc.'s most recent annual report on http://www2.goldmansachs.com/our-firm/investors/financials/index.html.
2. The SIP documentation (which constitutes the current rules of the employee share purchase scheme for the purposes of the Notice) on https://hcm.web.gs.com/newaward.
3. A copy of the Award Agreement on https://hcm.web.gs.com/newaward.
4. GS Inc.'s most recent published financial statements on http://www2.goldmansachs.com/our-firm/investors/financials/index.html.

You may request copies of the documents listed above free of charge from Head of Securities Compliance – Goldman Sachs Australia Pty Ltd.

FOR POLAND EMPLOYEES ONLY

The Award(s) are offered to you by GS Inc. in accordance with the terms of the SIP which are summarized in the Award Summary. More information about GS Inc. is available on www.gs.com. You are being offered Award(s) under the SIP in order to provide an additional incentive and to encourage employee share ownership and so increase your interest in the Firm's success. Please refer to the section entitled *Shares Available for Awards* in the SIP for information on the maximum number of GS Inc. shares that can be offered under the SIP. The obligation to publish a prospectus under the 2003/71 Prospectus Directive does not apply to the offer because of Article 3(2)(b) of that directive.

The Goldman Sachs Group, Inc. („GS Inc.") przyznaje Państwu Premię (premie) zgodnie z warunkami Motywacyjnego Programu Akcji Pracowniczych opisanymi w Ogólnych Warunkach Przyznania Premii. Więcej informacji na temat GS Inc. można uzyskać na stronie www.gs.com. Oferowana Państwu na podstawie Motywacyjnego Programu Akcji Pracowniczych Premia ma stanowić dodatkową motywację i rozwijać akcjonariat pracowniczy a w konsekwencji zwiększyć Państwa zaangażowanie w sukces Firmy. Prosimy zapoznać się z działem zatytułowanym Akcje dostępne w ramach Premii w Motywacyjnym Programie Akcji Pracowniczych, w celu uzyskania informacji na temat maksymalnej liczby akcji GS Inc. oferowanych na podstawie Motywacyjnego Programu Akcji Pracowniczych. Obowiązek publikowania prospektu wynikający z Dyrektywy w Sprawie Prospektu Emisyjnego 2003/71 oraz Ustawy z dnia 29 lipca 2005 r. o Ofercie Publicznej nie ma zastosowania do niniejszej oferty, ze względu na brzmienie art. 3 ust. 2 lit. (b) wskazanej powyżej dyrektywy oraz art. 3 ust. 1 powyższej Ustawy.

FOR RUSSIA EMPLOYEES ONLY

None of the information contained in the documents referred to in paragraph 8 of this Signature Card or in this Signature Card constitutes an advertisement of the Award(s) in Russia and must not be passed on to third parties or otherwise be made publicly available in Russia. The Award(s) have not been and will not be registered in Russia and are not intended for "placement" or "public circulation" in Russia.

FOR SAUDI ARABIA EMPLOYEES ONLY

The Award(s) are offered to you on behalf of Goldman Sachs Saudi Arabia, Commercial Registration Number 1010256672, 25th Floor, Kingdom Tower, Post Office Box 52969, Riyadh 11573, Saudi Arabia. The SIP documents may not be distributed in the Kingdom except to such persons as are permitted under the Offers of Securities Regulations issued by the Capital Market Authority. The Capital Market Authority does not make any representation as to the accuracy or completeness of the SIP documents, and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of the SIP documents. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of the SIP documents you should consult an authorized financial adviser.

FOR SPAIN EMPLOYEES ONLY

Please note that the offer of an Award under the SIP does not constitute a public offer in Spain, and therefore it is not subject to registration with the Spanish authorities. The Award(s) are offered to you by GS Inc. in accordance with the terms and conditions set forth in the SIP and the Award Agreement(s). The grantees may be subject to certain reporting obligations for the acquisition or disposal of Shares under the SIP, the opening of cash or brokerage bank accounts abroad and the transfer or receipt of funds. Please consult your own advisors regarding these and other legal or tax obligations that may be applicable.

Additional data protection information for Spain employees (which should be read in conjunction with, and forms part of, the Consent to Data Collection, Processing and Transfers clause above (together with this additional information, the "Clause")):

- **Your consent as described in the Clause is obtained in accordance with the provisions of the Spanish Data Protection Act 15/1999.**
- **Capitalized and abbreviated terms used in the Clause are defined as specified throughout this Signature Card.**
- **References to the Firm in the Clause should be read as including your employer (as identified in your employment contract), its ultimate parent company (The Goldman Sachs Group, Inc. or "GS Inc."), and any of GS Inc.'s other subsidiaries and affiliates.**
- **The relevant data controllers for the purposes of Spanish law are your employer and GS Inc., both represented in respect of the Programs by Equity Compensation at the address listed above.**

FOR TURKEY EMPLOYEES ONLY

This offer is not a public offering in terms of the Turkish Capital Markets legislation and the information provided herein cannot be construed as a public offering.

FOR UK EMPLOYEES ONLY

This document does not have regard to the specific investment objectives, financial situation and particular needs of any specific person who may receive it. Recipients should seek their own financial advice.

The Award(s) are subject to the terms and conditions set forth in the SIP and the Award Agreement(s). The price of shares and the income from such shares (if any) can fluctuate and may be affected by changes in the exchange rate for U.S. Dollars. Past performance will not necessarily be repeated. Levels and bases of taxation may change from time to time. Investors should consult their own tax advisors in order to understand tax consequences. GS Inc. has (and its associates may have) a material interest in the shares and the investments that are the subject of this document.

Signature: _____

Print Name: _____

Date: _____

Employee ID #: _____

EXHIBIT 12.1

THE GOLDMAN SACHS GROUP, INC. AND SUBSIDIARIES

COMPUTATION OF RATIOS OF EARNINGS TO FIXED CHARGES AND RATIOS OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

	Year Ended December				
$ in millions	**2015**	2014	2013	2012	2011
Net earnings	**$ 6,083**	$ 8,477	$ 8,040	$ 7,475	$ 4,442
Add:					
Provision for taxes	**2,695**	3,880	3,697	3,732	1,727
Portion of rents representative of an interest factor	**83**	103	108	125	159
Interest expense on all indebtedness	**5,388**	5,557	6,668	7,501	7,982
Pre-tax earnings, as adjusted	**$14,249**	$18,017	$18,513	$18,833	$14,310
Fixed charges [1]:					
Portion of rents representative of an interest factor	**$ 83**	$ 103	$ 108	$ 125	$ 159
Interest expense on all indebtedness	**5,403**	5,569	6,672	7,509	7,987
Total fixed charges	**$ 5,486**	$ 5,672	$ 6,780	$ 7,634	$ 8,146
Preferred stock dividend requirements	**743**	583	458	274	2,683
Total combined fixed charges and preferred stock dividends	**$ 6,229**	$ 6,255	$ 7,238	$ 7,908	$10,829
Ratio of earnings to fixed charges	**2.60x**	3.18x	2.73x	2.47x	1.76x
Ratio of earnings to combined fixed charges and preferred stock dividends	**2.29x**	2.88x	2.56x	2.38x	1.32x

1. Fixed charges include capitalized interest of $15 million for 2015, $12 million for 2014, $4 million for 2013, $8 million for 2012 and $5 million for 2011.

EXHIBIT 21.1

Significant Subsidiaries of the Registrant

The following are significant subsidiaries of The Goldman Sachs Group, Inc. as of December 31, 2015 and the states or jurisdictions in which they are organized. Each subsidiary is indented beneath its principal parent. The Goldman Sachs Group, Inc. owns, directly or indirectly, at least 99% of the voting securities of substantially all of the subsidiaries included below. The names of particular subsidiaries have been omitted because, considered in the aggregate as a single subsidiary, they would not constitute, as of the end of the year covered by this report, a "significant subsidiary" as that term is defined in Rule 1-02(w) of Regulation S-X under the Securities Exchange Act of 1934.

Name	State or Jurisdiction of Organization of Entity
The Goldman Sachs Group, Inc.	Delaware
Goldman, Sachs & Co.	New York
Goldman Sachs Paris Inc. et Cie	France
Goldman Sachs (UK) L.L.C.	Delaware
Goldman Sachs Group UK Limited	United Kingdom
Goldman Sachs International Bank	United Kingdom
Goldman Sachs International	United Kingdom
Goldman Sachs Asset Management International	United Kingdom
Goldman Sachs Group Holdings (U.K.) Limited	United Kingdom
Rothesay Life (Cayman) Limited	Cayman Islands
Broad Street Principal Investments International, Ltd.	Cayman Islands
Goldman Sachs Global Holdings L.L.C.	Delaware
GS Asian Venture (Delaware) L.L.C.	Delaware
Elevatech Limited	Hong Kong
Goldman Sachs Strategic Investments (Asia) L.L.C.	Delaware
GS (Asia) L.P.	Delaware
Goldman Sachs (Japan) Ltd.	British Virgin Islands
Goldman Sachs Japan Co., Ltd.	Japan
J. Aron Holdings, L.P.	Delaware
J. Aron & Company	New York
Goldman Sachs Asset Management, L.P.	Delaware
Goldman Sachs Hedge Fund Strategies LLC	Delaware
Goldman Sachs (Cayman) Holding Company	Cayman Islands
Goldman Sachs (Asia) Corporate Holdings L.P.	Delaware
Goldman Sachs Holdings (Hong Kong) Limited	Hong Kong
Goldman Sachs (Asia) Finance	Mauritius
Goldman Sachs (Asia) L.L.C.	Delaware
GS EMEA Funding Limited Partnership	United Kingdom
Goldman Sachs Holdings (Singapore) PTE. Ltd.	Singapore
J. Aron & Company (Singapore) PTE.	Singapore
Goldman Sachs (Singapore) PTE.	Singapore
Goldman Sachs Holdings ANZ Pty Limited	Australia
GS HLDGS Anz II Pty Ltd	Australia
Goldman Sachs Australia Group Holdings Pty Ltd	Australia
Goldman Sachs Australia Capital Markets Limited	Australia
Goldman Sachs Australia Pty Ltd	Australia
GS Holdings (Delaware) L.L.C. II	Delaware
GS Lending Partners Holdings LLC	Delaware
Goldman Sachs Lending Partners LLC	Delaware
Swancastle Limited	Ireland
Goldman Sachs Bank USA	New York
Goldman Sachs Mortgage Company	New York
Goldman Sachs Execution & Clearing, L.P.	New York
GS Financial Services II, LLC	Delaware
GS Funding Europe	United Kingdom
GS Funding Europe I Ltd.	Cayman Islands
GS Funding Europe II Ltd.	Cayman Islands
GS Investment Strategies, LLC	Delaware
MLQ Investors, L.P.	Delaware
PIA Holdings Cayman	Cayman Islands
GS PIA Holdings GK	Japan
Crane Holdings Ltd.	Japan

Name	State or Jurisdiction of Organization of Entity
ELQ Holdings (Del) LLC	Delaware
ELQ Holdings (UK) Ltd	United Kingdom
ELQ Investors VII Ltd	United Kingdom
GS Sapphire Holding Limited	United Kingdom
ELQ Investors IX Ltd	United Kingdom
ELQ Investors II Ltd	United Kingdom
ELQ Investors VIII Ltd	United Kingdom
Goldman Sachs Specialty Lending Holdings, Inc.	Delaware
Special Situations Investing Group II, LLC	Delaware
MTGRP, L.L.C.	Delaware
GS Diversified Funding LLC	Delaware
Hull Trading Asia Limited	Hong Kong
Goldman Sachs LLC	Mauritius
Goldman Sachs Venture LLC	Mauritius
GS Power Holdings LLC	Delaware
MTGLQ Investors, L.P.	Delaware
Broad Street Principal Investments Superholdco LLC	Delaware
Broad Street Principal Investments, L.L.C.	Delaware
Broad Street Credit Holdings LLC	Delaware
GS Direct, L.L.C.	Delaware
GS Fund Holdings, L.L.C.	Delaware
Shoelane GP, L.L.C.	Delaware
Shoelane, L.P.	Delaware
GSFS Investments I Corp.	Delaware

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (File No. 333-198735) and on Form S-8 (File Nos. 333-80839, 333-42068, 333-106430 and 333-120802) of The Goldman Sachs Group, Inc. of our report dated February 19, 2016 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K. We also consent to the incorporation by reference in such Registration Statements of our report dated February 19, 2016 relating to Selected Financial Data, which appears in Exhibit 99.1 of this Form 10-K.

/s/ PRICEWATERHOUSECOOPERS LLP

New York, New York
February 19, 2016

EXHIBIT 31.1

CERTIFICATIONS

I, Lloyd C. Blankfein, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2015 of The Goldman Sachs Group, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Lloyd C. Blankfein

Name: Lloyd C. Blankfein
Title: Chief Executive Officer

Date: February 19, 2016

CERTIFICATIONS

I, Harvey M. Schwartz, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2015 of The Goldman Sachs Group, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Harvey M. Schwartz

Name: Harvey M. Schwartz
Title: Chief Financial Officer

Date: February 19, 2016

EXHIBIT 32.1

Certification

Pursuant to 18 U.S.C. § 1350, the undersigned officer of The Goldman Sachs Group, Inc. (the "Company") hereby certifies that the Company's Annual Report on Form 10-K for the year ended December 31, 2015 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 19, 2016

/s/ Lloyd C. Blankfein

Lloyd C. Blankfein
Chief Executive Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

Certification

Pursuant to 18 U.S.C. § 1350, the undersigned officer of The Goldman Sachs Group, Inc. (the "Company") hereby certifies that the Company's Annual Report on Form 10-K for the year ended December 31, 2015 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 19, 2016

/s/ Harvey M. Schwartz
Harvey M. Schwartz
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C.§ 1350 and is not being filed as part of the Report or as a separate disclosure document.

EXHIBIT 99.1

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON SELECTED FINANCIAL DATA

To the Board of Directors and the Shareholders of
The Goldman Sachs Group, Inc.:

We have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements of The Goldman Sachs Group, Inc. and subsidiaries (the "Company") at December 31, 2015 and December 31, 2014, and for each of the three years in the period ended December 31, 2015, and the effectiveness of the Company's internal control over financial reporting as of December 31, 2015, and in our report dated February 19, 2016, we expressed unqualified opinions thereon. We have also previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated statements of financial condition of the Company as of December 31, 2013, 2012 and 2011, and the related consolidated statements of earnings, comprehensive income, changes in shareholders' equity and cash flows for the years ended December 31, 2012 and 2011 (none of which are presented herein), and we expressed unqualified opinions on those consolidated financial statements. In our opinion, the information of The Goldman Sachs Group, Inc. and subsidiaries for each of the five years in the period ended December 31, 2015 set forth in the (i) income statement data, (ii) balance sheet data and (iii) common share data in the Selected Financial Data appearing on page 210 in Part II, Item 8 of this Form 10-K, is fairly stated, in all material respects, in relation to the consolidated financial statements from which it has been derived.

/s/ PRICEWATERHOUSECOOPERS LLP

New York, New York
February 19, 2016

EXHIBIT 99.2

Debt and Trust Preferred Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
5.793% Fixed-to-Floating Rate Normal Automatic Preferred Enhanced Capital Securities of Goldman Sachs Capital II (and Registrant's guarantee with respect thereto)	New York Stock Exchange
Floating Rate Normal Automatic Preferred Enhanced Capital Securities of Goldman Sachs Capital III (and Registrant's guarantee with respect thereto)	New York Stock Exchange
4.647% Senior Guaranteed Trust Securities due 2017 of Murray Street Investment Trust I (and Registrant's guarantee with respect thereto)	New York Stock Exchange
4.404% Senior Guaranteed Trust Securities due 2016 of Vesey Street Investment Trust I (and Registrant's guarantee with respect thereto)	New York Stock Exchange
Medium-Term Notes, Series A, Index-Linked Notes due 2037 of GS Finance Corp. (and Registrant's guarantee with respect thereto)	NYSE Arca
Medium-Term Notes, Series B, Index-Linked Notes due 2037	NYSE Arca
Medium-Term Notes, Series D, 7.50% Notes due 2019	New York Stock Exchange
6.50% Notes due 2061	New York Stock Exchange

Consolidated Statement of Financial Condition

December 31, 2015

Goldman, Sachs & Co.

Established 1869

GOLDMAN, SACHS & CO. AND SUBSIDIARIES

Consolidated Statement of Financial Condition and Supplemental Schedules

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Report of Independent Registered Public Accounting Firm

To the Partners of Goldman, Sachs & Co.:

In our opinion, the accompanying consolidated statement of financial condition presents fairly, in all material respects, the financial position of Goldman, Sachs & Co. and its subsidiaries ("the Firm") at December 31, 2015 in conformity with accounting principles generally accepted in the United States of America. The consolidated statement of financial condition is the responsibility of the Firm's management. Our responsibility is to express an opinion on the consolidated statement of financial condition based on our audit. We conducted our audit of this consolidated statement in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated statement of financial condition is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated statement of financial condition, assessing the accounting principles used and significant estimates made by management, and evaluating the overall consolidated statement of financial condition presentation. We believe that our audit of the consolidated statement of financial condition provides a reasonable basis for our opinion.

The Supplemental Financial Information Pursuant to Regulation 1.10 is supplemental information required by Regulation 1.10 under the Commodity Exchange Act. The supplemental information is the responsibility of the Firm's management. The supplemental information has been subjected to audit procedures performed in conjunction with the audit of the Firm's financial statements. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information, we evaluated whether the supplemental information, including its form and content, is presented in conformity with Regulation 1.10 under the Commodity Exchange Act. In our opinion, the Supplemental Financial Information Pursuant to Regulation 1.10 is fairly stated, in all material respects, in relation to the financial statements as a whole.

PricewaterhouseCoopers LLP

February 22, 2016

PricewaterhouseCoopers LLP, PricewaterhouseCoopers Center, 300 Madison Avenue, New York, NY 10017
T: (646) 471 3000, F: (813) 286 6000, www.pwc.com/us

GOLDMAN, SACHS & CO. AND SUBSIDIARIES

Consolidated Statement of Financial Condition

$ in millions	As of December 2015
Assets	
Cash and cash equivalents	**$ 3,977**
Cash and securities segregated for regulatory and other purposes (includes $37,647 at fair value)	**40,973**
Collateralized agreements:	
Securities purchased under agreements to resell, at fair value	**89,293**
Securities borrowed (includes $74,019 at fair value)	**189,852**
Receivables:	
Brokers, dealers and clearing organizations	**10,383**
Customers and counterparties (includes $313 at fair value)	**15,514**
Financial instruments owned, at fair value (includes $38,749 pledged as collateral)	**102,156**
Other assets	**2,603**
Total assets	**$454,751**
Liabilities and partners' capital	
Collateralized financings:	
Securities sold under agreements to repurchase, at fair value	**$103,805**
Securities loaned (includes $28,978 at fair value)	**53,562**
Other secured financings (includes $12,713 at fair value)	**55,530**
Payables:	
Brokers, dealers and clearing organizations	**1,666**
Customers and counterparties	**148,850**
Financial instruments sold, but not yet purchased, at fair value	**45,003**
Unsecured short-term borrowings	**6,369**
Unsecured long-term borrowings	**25**
Other liabilities and accrued expenses	**11,537**
Subordinated borrowings	**18,500**
Total liabilities	**444,847**
Commitments, contingencies and guarantees	
Partners' capital	
Partners' capital	**9,893**
Accumulated other comprehensive income	**11**
Total partners' capital	**9,904**
Total liabilities and partners' capital	**$454,751**

The accompanying notes are an integral part of this consolidated statement of financial condition.

Note 1.

Description of Business

Goldman, Sachs & Co. (GS&Co.), a limited partnership registered as a U.S. broker-dealer and futures commission merchant, together with its consolidated subsidiaries (collectively, the firm), is an indirectly wholly owned subsidiary of The Goldman Sachs Group, Inc. (Group Inc.), a Delaware corporation.

The firm conducts its activities in the following four business lines:

Investment Banking

The firm provides a broad range of investment banking services to a diverse group of corporations, financial institutions, investment funds and governments. Services include strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings, spin-offs and risk management, and debt and equity underwriting of public offerings and private placements, including local and cross-border transactions and acquisition financing, as well as derivative transactions directly related to these activities.

Institutional Client Services

The firm facilitates client transactions and makes markets in fixed income, equity, currency and commodity products, primarily with institutional clients such as corporations, financial institutions, investment funds and governments. The firm also makes markets in and clears client transactions on major stock, options and futures exchanges worldwide and provides financing, securities lending and other prime brokerage services to institutional clients.

Investing & Lending

The firm's investing and lending activities, which are typically longer-term, include investing directly in various asset classes, primarily debt securities and loans, and public and private equity securities.

Investment Management

The firm provides investment management services and offers investment products (primarily through separately managed accounts and commingled vehicles, such as mutual funds and private investment funds) across all major asset classes to a diverse set of institutional and individual clients. The firm also offers wealth advisory services, including portfolio management and financial counseling, and brokerage and other transaction services to high-net-worth individuals and families.

Note 2.

Basis of Presentation

This consolidated statement of financial condition is prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) and includes the accounts of GS&Co. and all other entities in which the firm has a controlling financial interest. Intercompany transactions and balances have been eliminated.

All references to 2015 refer to the date December 31, 2015. Any reference to a future year refers to a year ending on December 31 of that year.

Note 3.

Significant Accounting Policies

The firm's significant accounting policies include when and how to measure the fair value of assets and liabilities and when to consolidate an entity. See Notes 5 through 8 for policies on fair value measurements and below and Note 11 for policies on consolidation accounting. All other significant accounting policies are either described below or included in the following footnotes:

Financial Instruments Owned, at Fair Value and Financial Instruments Sold, But Not Yet Purchased, at Fair Value	Note 4
Fair Value Measurements	Note 5
Cash Instruments	Note 6
Derivative Activities	Note 7
Fair Value Option	Note 8
Collateralized Agreements and Financings	Note 9
Securitization Activities	Note 10
Variable Interest Entities	Note 11
Other Assets	Note 12
Short-Term Borrowings	Note 13
Long-Term Borrowings	Note 14
Other Liabilities and Accrued Expenses	Note 15
Commitments, Contingencies and Guarantees	Note 16
Transactions with Related Parties	Note 17
Income Taxes	Note 18
Credit Concentrations	Note 19
Legal Proceedings	Note 20
Employee Benefit Plans	Note 21
Employee Incentive Plans	Note 22

Consolidation

The firm consolidates entities in which the firm has a controlling financial interest. The firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity (VIE).

Voting Interest Entities. Voting interest entities are entities in which (i) the total equity investment at risk is sufficient to enable the entity to finance its activities independently and (ii) the equity holders have the power to direct the activities of the entity that most significantly impact its economic performance, the obligation to absorb the losses of the entity and the right to receive the residual returns of the entity. The usual condition for a controlling financial interest in a voting interest entity is ownership of a majority voting interest. If the firm has a majority voting interest in a voting interest entity, the entity is consolidated.

Variable Interest Entities. A VIE is an entity that lacks one or more of the characteristics of a voting interest entity. The firm has a controlling financial interest in a VIE when the firm has a variable interest or interests that provide it with (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE. See Note 11 for further information about VIEs.

Equity-Method Investments. When the firm does not have a controlling financial interest in an entity but can exert significant influence over the entity's operating and financial policies, the investment is accounted for either (i) under the equity method of accounting or (ii) at fair value by electing the fair value option available under U.S. GAAP. Significant influence generally exists when the firm owns 20% to 50% of the entity's common stock or in-substance common stock.

In general, the firm accounts for investments acquired after the fair value option became available, at fair value. In certain cases, the firm applies the equity method of accounting to new investments that are strategic in nature or closely related to the firm's principal business activities, when the firm has a significant degree of involvement in the cash flows or operations of the investee or when cost-benefit considerations are less significant.

Use of Estimates

Preparation of this consolidated statement of financial condition requires management to make certain estimates and assumptions, the most important of which relate to fair value measurements and the provisions for losses that may arise from litigation, regulatory proceedings and tax audits. These estimates and assumptions are based on the best available information but actual results could be materially different.

Revenue Recognition

Financial Assets and Financial Liabilities at Fair Value. Financial instruments owned, at fair value and Financial instruments sold, but not yet purchased, at fair value are recorded at fair value either under the fair value option or in accordance with other U.S. GAAP. In addition, the firm has elected to account for certain of its other financial assets and financial liabilities at fair value by electing the fair value option. The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. See Notes 5 through 8 for further information about fair value measurements.

Investment Banking. Fees from financial advisory assignments and underwriting revenues are recognized in earnings when the services related to the underlying transaction are completed under the terms of the assignment. Expenses associated with such transactions are deferred until the related revenue is recognized or the assignment is otherwise concluded. Expenses associated with financial advisory assignments are recorded net of client reimbursements. Underwriting revenues are presented net of related expenses.

Investment Management. The firm provides investment management services and offers investment management products across all major asset classes to a diverse set of institutional and individual clients. Assets under management and other client assets typically generate fees as a percentage of net asset value, invested capital or commitments. All fees are recognized over the period that the related service is provided.

Commissions and Fees. The firm earns commissions and fees from executing and clearing client transactions on stock, options and futures markets, as well as over-the-counter (OTC) transactions. Commissions and fees are recognized on the day the trade is executed.

Transfers of Assets

Transfers of assets are accounted for as sales when the firm has relinquished control over the assets transferred. For transfers of assets accounted for as sales, any gains or losses are recognized in net revenues. Assets or liabilities that arise from the firm's continuing involvement with transferred assets are recognized at fair value. For transfers of assets that are not accounted for as sales, the assets remain in "Financial instruments owned, at fair value" and the transfer is accounted for as a collateralized financing, with the related interest expense recognized over the life of the transaction. See Note 9 for further information about transfers of assets accounted for as collateralized financings.

Cash and Cash Equivalents

The firm defines cash equivalents as highly liquid overnight deposits held in the ordinary course of business.

Receivables from and Payables to Brokers, Dealers and Clearing Organizations

Receivables from and payables to brokers, dealers and clearing organizations are accounted for at cost plus accrued interest, which generally approximates fair value. While these receivables and payables are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these receivables and payables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015.

Receivables from Customers and Counterparties

Receivables from customers and counterparties generally relate to collateralized transactions. Such receivables are primarily comprised of customer margin loans, certain transfers of assets accounted for as secured loans rather than purchases at fair value and collateral posted in connection with certain derivative transactions. Substantially all of these receivables are accounted for at amortized cost net of estimated uncollectible amounts. Certain of the firm's receivables from customers and counterparties are accounted for at fair value under the fair value option. See Note 8 for further information about receivables from customers and counterparties accounted for at fair value under the fair value option.

As of December 2015, the carrying value of receivables not accounted for at fair value generally approximated fair value. While these items are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these items been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015. Interest on receivables from customers and counterparties is recognized over the life of the transaction.

Payables to Customers and Counterparties

Payables to customers and counterparties primarily consist of customer credit balances related to the firm's prime brokerage activities. Payables to customers and counterparties are accounted for at cost plus accrued interest, which generally approximates fair value. While these payables are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these payables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015. Interest on payables to customers and counterparties is recognized over the life of the transaction.

Offsetting Assets and Liabilities

To reduce credit exposures on derivatives and securities financing transactions, the firm may enter into master netting agreements or similar arrangements (collectively, netting agreements) with counterparties that permit it to offset receivables and payables with such counterparties. A netting agreement is a contract with a counterparty that permits net settlement of multiple transactions with that counterparty, including upon the exercise of termination rights by a non-defaulting party. Upon exercise of such termination rights, all transactions governed by the netting agreement are terminated and a net settlement amount is calculated. In addition, the firm receives and posts cash and securities collateral with respect to its derivatives and securities financing transactions, subject to the terms of the related credit support agreements or similar arrangements (collectively, credit support agreements). An enforceable credit support agreement grants the non-defaulting party exercising termination rights the right to liquidate the collateral and apply the proceeds to any amounts owed. In order to assess enforceability of the firm's right of setoff under netting and credit support agreements, the firm evaluates various factors including applicable bankruptcy laws, local statutes and regulatory provisions in the jurisdiction of the parties to the agreement.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) in the consolidated statement of financial condition when a legal right of setoff exists under an enforceable netting agreement. Resale and repurchase agreements and securities borrowed and loaned transactions with the same term and currency are presented on a net-by-counterparty basis in the consolidated statement of financial condition when such transactions meet certain settlement criteria and are subject to netting agreements.

In the consolidated statement of financial condition, derivatives are reported net of cash collateral received and posted under enforceable credit support agreements, when transacted under an enforceable netting agreement. In the consolidated statement of financial condition, resale and repurchase agreements, and securities borrowed and loaned, are not reported net of the related cash and securities received or posted as collateral. See Note 9 for further information about collateral received and pledged, including rights to deliver or repledge collateral. See Notes 7 and 9 for further information about offsetting.

Foreign Currency Translation

Assets and liabilities denominated in non-U.S. currencies are translated at rates of exchange prevailing on the date of the consolidated statement of financial condition and revenues and expenses are translated at average rates of exchange for the period. Foreign currency remeasurement gains or losses on transactions in nonfunctional currencies are recognized in earnings. Gains or losses on translation of the financial statements of a non-U.S. operation, when the functional currency is other than the U.S. dollar, are included, net of hedges, in comprehensive income.

Recent Accounting Developments

Revenue from Contracts with Customers (ASC 606). In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." ASU No. 2014-09 provides comprehensive guidance on the recognition of revenue from customers arising from the transfer of goods and services. The ASU also provides guidance on accounting for certain contract costs, and requires new disclosures. ASU No. 2014-09, as amended in August 2015 by ASU No. 2015-14, is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Early adoption is permitted for annual reporting periods beginning after December 15, 2016. The firm is still evaluating the effect of the ASU on its financial condition.

Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures (ASC 860). In June 2014, the FASB issued ASU No. 2014-11, "Transfers and Servicing (Topic 860) — Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures." ASU No. 2014-11 changes the accounting for repurchase- and resale-to-maturity agreements by requiring that such agreements be recognized as financing arrangements, and requires that a transfer of a financial asset and a repurchase agreement entered into contemporaneously be accounted for separately. ASU No. 2014-11 also requires additional disclosures about certain transferred financial assets accounted for as sales and certain securities financing transactions. The accounting changes and additional disclosures about certain transferred financial assets accounted for as sales were effective for the first interim and annual reporting periods beginning after December 15, 2014. The additional disclosures for certain securities financing transactions were required for annual reporting periods beginning after December 15, 2014 and for interim reporting periods beginning after March 15, 2015. Adoption of ASU No. 2014-11 did not materially affect the firm's financial condition.

Measuring the Financial Assets and the Financial Liabilities of a Consolidated Collateralized Financing Entity (ASC 810). In August 2014, the FASB issued ASU No. 2014-13, "Consolidation (Topic 810) — Measuring the Financial Assets and the Financial Liabilities of a Consolidated Collateralized Financing Entity (CFE)." ASU No. 2014-13 provides an alternative to reflect changes in the fair value of the financial assets and the financial liabilities of the CFE by measuring either the fair value of the assets or liabilities, whichever is more observable. ASU No. 2014-13 provides new disclosure requirements for those electing this approach, and was effective for interim and annual periods beginning after December 15, 2015. Adoption of ASU No. 2014-13 in the first quarter of 2016 did not materially affect the firm's financial condition.

Amendments to the Consolidation Analysis (ASC 810). In February 2015, the FASB issued ASU No. 2015-02, "Consolidation (Topic 810) — Amendments to the Consolidation Analysis." ASU No. 2015-02 eliminates the deferral of the requirements of ASU No. 2009-17, "Consolidations (Topic 810) — Improvements to Financial Reporting by Enterprises Involved with Variable Interest Entities" for certain interests in investment funds and provides a scope exception from Topic 810 for certain investments in money market funds. The ASU also makes several modifications to the consolidation guidance for VIEs and general partners' investments in limited partnerships, as well as modifications to the evaluation of whether limited partnerships are VIEs or voting interest entities. ASU No. 2015-02 is effective for interim and annual reporting periods beginning after December 15, 2015. ASU No. 2015-02 is required to be adopted under a modified retrospective approach or retrospectively to all periods presented. Early adoption was permitted. The firm adopted ASU No. 2015-02 effective January 1, 2016, using a modified retrospective approach. The impact of adoption was not material.

Simplifying the Accounting for Measurement-Period Adjustments (ASC 805). In September 2015, the FASB issued ASU No. 2015-16, "Business Combinations (Topic 805) — Simplifying the Accounting for Measurement-Period Adjustments." ASU No. 2015-16 eliminates the requirement for an acquirer in a business combination to account for measurement-period adjustments retrospectively. ASU No. 2015-16 was effective for annual reporting periods beginning after December 15, 2015, including interim periods within that reporting period. Adoption of ASU No. 2015-16 in the first quarter of 2016 did not materially affect the firm's financial condition.

Recognition and Measurement of Financial Assets and Financial Liabilities (ASC 825). In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments (Topic 825) — Recognition and Measurement of Financial Assets and Financial Liabilities." ASU No. 2016-01 amends certain aspects of recognition, measurement, presentation and disclosure of financial instruments. This guidance includes a requirement to present separately in other comprehensive income changes in fair value attributable to a firm's own credit spreads (debt valuation adjustments or DVA), net of tax, on financial liabilities for which the fair value option was elected. ASU No. 2016-01 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. Early adoption is permitted under a modified retrospective approach for the requirements related to DVA. Adoption of ASU No. 2016-01 is not expected to materially affect the firm's financial condition.

Note 4.

Financial Instruments Owned, at Fair Value and Financial Instruments Sold, But Not Yet Purchased, at Fair Value

Financial instruments owned, at fair value and financial instruments sold, but not yet purchased, at fair value are accounted for at fair value either under the fair value option or in accordance with other U.S. GAAP. See Note 8 for further information about other financial assets and financial liabilities accounted for at fair value primarily under the fair value option.

The table below presents the firm's financial instruments owned, at fair value, and financial instruments sold, but not yet purchased, at fair value.

	As of December 2015	
$ in millions	Financial Instruments Owned	Financial Instruments Sold, But Not Yet Purchased
Commercial paper, certificates of deposit and other money market instruments	$ 1,088	$ –
U.S. government and federal agency obligations	32,801	14,381
Non-U.S. government and agency obligations	1,220	578
Loans and securities backed by commercial real estate	1,516	–
Loans and securities backed by residential real estate	2,345	–
Bank loans	2	–
Corporate debt securities	9,541	3,736
State and municipal obligations	970	2
Other debt obligations	866	–
Equities and convertible debentures	44,959	16,742
Subtotal	95,308	35,439
Derivatives	6,848	9,564
Total	$102,156	$45,003

Note 5.

Fair Value Measurements

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. The firm measures certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks).

The best evidence of fair value is a quoted price in an active market. If quoted prices in active markets are not available, fair value is determined by reference to prices for similar instruments, quoted prices or recent transactions in less active markets, or internally developed models that primarily use market-based or independently sourced parameters as inputs including, but not limited to, interest rates, volatilities, equity or debt prices, foreign exchange rates, commodity prices, credit spreads and funding spreads (i.e., the spread, or difference, between the interest rate at which a borrower could finance a given financial instrument relative to a benchmark interest rate).

U.S. GAAP has a three-level fair value hierarchy for disclosure of fair value measurements. The fair value hierarchy prioritizes inputs to the valuation techniques used to measure fair value, giving the highest priority to level 1 inputs and the lowest priority to level 3 inputs. A financial instrument's level in the fair value hierarchy is based on the lowest level of input that is significant to its fair value measurement.

The fair value hierarchy is as follows:

Level 1. Inputs are unadjusted quoted prices in active markets to which the firm had access at the measurement date for identical, unrestricted assets or liabilities.

Level 2. Inputs to valuation techniques are observable, either directly or indirectly.

Level 3. One or more inputs to valuation techniques are significant and unobservable.

The fair values for substantially all of the firm's financial assets and financial liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors such as counterparty and the firm's credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads. Valuation adjustments are generally based on market evidence.

See Notes 6 through 8 for further information about fair value measurements of cash instruments, derivatives and other financial assets and financial liabilities accounted for at fair value primarily under the fair value option (including information about transfers in and out of level 3), respectively.

The table below presents financial assets and financial liabilities accounted for at fair value under the fair value option or in accordance with other U.S. GAAP. Counterparty and cash collateral netting represents the impact on derivatives of netting across levels of the fair value hierarchy. Netting among positions classified in the same level is included in that level.

$ in millions	**As of December 2015**
Total level 1 financial assets	**$ 84,846**
Total level 2 financial assets	**216,550**
Total level 3 financial assets	**3,814**
Counterparty and cash collateral netting	**(1,782)**
Total financial assets at fair value	**$303,428**
Total assets [1]	**$454,751**
Total level 3 financial assets as a percentage of total assets	**0.8%**
Total level 3 financial assets as a percentage of total financial assets at fair value	**1.3%**
Total level 1 financial liabilities	**$ 31,137**
Total level 2 financial liabilities	**159,976**
Total level 3 financial liabilities	**1,933**
Counterparty and cash collateral netting	**(2,547)**
Total financial liabilities at fair value	**$190,499**
Total level 3 financial liabilities as a percentage of total financial liabilities at fair value	**1.0%**

1. Includes approximately $452 billion that is carried at fair value or at amounts that generally approximate fair value.

The table below presents a summary of level 3 financial assets. See Notes 6 through 8 for further information about level 3 financial assets.

$ in millions	**Level 3 Financial Assets as of December 2015**
Cash instruments	**$ 3,231**
Derivatives	**583**
Total	**$ 3,814**

Note 6.

Cash Instruments

Cash instruments include U.S. government and federal agency obligations, non-U.S. government and agency obligations, mortgage-backed loans and securities, bank loans, corporate debt securities, equities and convertible debentures, and other non-derivative financial instruments owned and financial instruments sold, but not yet purchased. See below for the types of cash instruments included in each level of the fair value hierarchy and the valuation techniques and significant inputs used to determine their fair values. See Note 5 for an overview of the firm's fair value measurement policies.

Level 1 Cash Instruments

Level 1 cash instruments include U.S. government obligations and certain non-U.S. government obligations, actively traded listed equities, certain government agency obligations and money market instruments. These instruments are valued using quoted prices for identical unrestricted instruments in active markets.

The firm defines active markets for equity instruments based on the average daily trading volume both in absolute terms and relative to the market capitalization for the instrument. The firm defines active markets for debt instruments based on both the average daily trading volume and the number of days with trading activity.

Level 2 Cash Instruments

Level 2 cash instruments include commercial paper, certificates of deposit, most U.S. government agency obligations, most non-U.S. government obligations, most corporate debt securities, certain mortgage-backed loans and securities, certain bank loans, restricted or less liquid listed equities and most state and municipal obligations.

Valuations of level 2 cash instruments can be verified to quoted prices, recent trading activity for identical or similar instruments, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Valuation adjustments are typically made to level 2 cash instruments (i) if the cash instrument is subject to transfer restrictions and/or (ii) for other premiums and liquidity discounts that a market participant would require to arrive at fair value. Valuation adjustments are generally based on market evidence.

Level 3 Cash Instruments

Level 3 cash instruments have one or more significant valuation inputs that are not observable. Absent evidence to the contrary, level 3 cash instruments are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequently, the firm uses other methodologies to determine fair value, which vary based on the type of instrument. Valuation inputs and assumptions are changed when corroborated by substantive observable evidence, including values realized on sales of financial assets.

Valuation Techniques and Significant Inputs

The table below presents the valuation techniques and the nature of significant inputs. These valuation techniques and significant inputs are generally used to determine the fair values of each type of level 3 cash instrument.

Level 3 Cash Instruments	Valuation Techniques and Significant Inputs
Loans and securities backed by commercial real estate • Directly or indirectly collateralized by a single commercial real estate property or a portfolio of properties • May include tranches of varying levels of subordination	Valuation techniques vary by instrument, but are generally based on discounted cash flow techniques. Significant inputs are generally determined based on relative value analyses and include: • Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral and the basis, or price difference, to such prices • Market yields implied by transactions of similar or related assets and/or current levels and changes in market indices such as the CMBX (an index that tracks the performance of commercial mortgage bonds) • A measure of expected future cash flows in a default scenario (recovery rates) implied by the value of the underlying collateral, which is mainly driven by current performance of the underlying collateral, capitalization rates and multiples. Recovery rates are expressed as a percentage of notional or face value of the instrument and reflect the benefit of credit enhancements on certain instruments • Timing of expected future cash flows (duration) which, in certain cases, may incorporate the impact of other unobservable inputs (e.g., prepayment speeds)
Loans and securities backed by residential real estate • Directly or indirectly collateralized by portfolios of residential real estate • May include tranches of varying levels of subordination	Valuation techniques vary by instrument, but are generally based on discounted cash flow techniques. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons to instruments with similar collateral and risk profiles. Significant inputs include: • Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral • Market yields implied by transactions of similar or related assets • Cumulative loss expectations, driven by default rates, home price projections, residential property liquidation timelines, related costs and subsequent recoveries • Duration, driven by underlying loan prepayment speeds and residential property liquidation timelines
Non-U.S. government and agency obligations Bank loans Corporate debt securities State and municipal obligations Other debt obligations	Valuation techniques vary by instrument, but are generally based on discounted cash flow techniques. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include: • Market yields implied by transactions of similar or related assets and/or current levels and trends of market indices such as CDX and LCDX (indices that track the performance of corporate and credit loans, respectively) • Current performance and recovery assumptions and, where the firm uses credit default swaps to value the related cash instrument, the cost of borrowing the underlying reference obligation • Duration
Equities and convertible debentures (including private equity investments)	Recent third-party completed or pending transactions (e.g., merger proposals, tender offers, debt restructurings) are considered to be the best evidence for any change in fair value. When these are not available, the following valuation methodologies are used, as appropriate: • Industry multiples (primarily EBITDA multiples) and public comparables • Transactions in similar instruments • Discounted cash flow techniques • Third-party appraisals The firm also considers changes in the outlook for the relevant industry and financial performance of the issuer as compared to projected performance. Significant inputs include: • Market and transaction multiples • Discount rates, long-term growth rates, earnings compound annual growth rates and capitalization rates • For equity instruments with debt-like features: market yields implied by transactions of similar or related assets, current performance and recovery assumptions, and duration

Significant Unobservable Inputs

The table below presents the ranges and weighted averages of significant unobservable inputs used to value the firm's level 3 cash instruments. In the table below:

- Ranges represent the significant unobservable inputs that were used in the valuation of each type of cash instrument.
- Weighted averages are calculated by weighting each input by the relative fair value of the financial instruments.
- The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one cash instrument. For example, the highest multiple presented in the table below for private equity investments is appropriate for valuing a specific private equity investment but may not be appropriate for valuing any other private equity investment. Accordingly, the ranges of inputs presented below do not represent uncertainty in, or possible ranges of, fair value measurements of the firm's level 3 cash instruments.
- Increases in yield, discount rate, duration or cumulative loss rate used in the valuation of the firm's level 3 cash instruments would result in a lower fair value measurement, while increases in recovery rate, basis or multiples would result in a higher fair value measurement. Due to the distinctive nature of each of the firm's level 3 cash instruments, the interrelationship of inputs is not necessarily uniform within each product type.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, market comparables and discounted cash flows may be used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Level 3 Cash Instruments	Valuation Techniques and Significant Unobservable Inputs	Range of Significant Unobservable Inputs (Weighted Average) as of December 2015
Loans and securities backed by commercial real estate • Directly or indirectly collateralized by a single commercial real estate property or a portfolio of properties • May include tranches of varying levels of subordination *($599 million of level 3 assets as of December 2015)*	Discounted cash flows: • Yield • Recovery rate • Duration (years) • Basis	5.1% to 22.0% (15.5%) 19.6% to 93.3% (61.3%) 0.5 to 5.2 (2.4) (11) points to 4 points ((2) points)
Loans and securities backed by residential real estate • Directly or indirectly collateralized by portfolios of residential real estate • May include tranches of varying levels of subordination *($1.05 billion of level 3 assets as of December 2015)*	Discounted cash flows: • Yield • Cumulative loss rate • Duration (years)	3.6% to 13.8% (7.2%) 4.6% to 44.2% (26.5%) 1.6 to 13.8 (7.8)
Non-U.S. government and agency obligations Bank loans Corporate debt securities State and municipal obligations Other debt obligations *($968 million of level 3 assets as of December 2015)*	Discounted cash flows: • Yield • Recovery rate • Duration (years)	0.9% to 25.6% (10.9%) 0.0% to 70.0% (59.8%) 1.1 to 11.4 (5.1)
Equities and convertible debentures (including private equity investments) *($617 million of level 3 assets as of December 2015)*	Market comparables and discounted cash flows: • Multiples • Discount rate/yield	2.8x to 11.1x (5.9x) 10.0% to 14.0% (12.0%)

Fair Value of Cash Instruments by Level

The table below presents cash instrument assets and liabilities at fair value by level within the fair value hierarchy. In the table below:

- Cash instrument assets and liabilities are included in "Financial instruments owned, at fair value" and "Financial instruments sold, but not yet purchased, at fair value," respectively.
- Cash instrument assets are shown as positive amounts and cash instrument liabilities are shown as negative amounts.

	Cash Instruments at Fair Value as of December 2015			
$ in millions	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Commercial paper, certificates of deposit and other money market instruments	$ 371	$ 717	$ –	$ 1,088
U.S. government and federal agency obligations	20,895	11,906	–	32,801
Non-U.S. government and agency obligations	338	871	11	1,220
Loans and securities backed by commercial real estate	–	917	599	1,516
Loans and securities backed by residential real estate	–	1,298	1,047	2,345
Bank loans	–	1	1	2
Corporate debt securities	76	8,733	732	9,541
State and municipal obligations	–	891	79	970
Other debt obligations	–	721	145	866
Equities and convertible debentures	43,557	785	617	44,959
Total cash instrument assets	$ 65,237	$ 26,840	$ 3,231	$ 95,308
Liabilities				
U.S. government and federal agency obligations	$ (14,325)	$ (56)	$ –	$ (14,381)
Non-U.S. government and agency obligations	(168)	(410)	–	(578)
Corporate debt securities	(1)	(3,734)	(1)	(3,736)
State and municipal obligations	–	(2)	–	(2)
Equities and convertible debentures	(16,631)	(110)	(1)	(16,742)
Total cash instrument liabilities	$ (31,125)	$ (4,312)	$ (2)	$ (35,439)

In the table above:

- Total cash instrument assets includes collateralized debt obligations (CDOs) and collateralized loan obligations (CLOs) backed by real estate and corporate obligations of $287 million in level 2 and $632 million in level 3.
- Level 3 equities and convertible debentures includes $307 million of private equity investments and $310 million of convertible debentures.

Transfers Between Levels of the Fair Value Hierarchy

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur.

During 2015:

- Transfers into level 2 from level 1 of cash instruments were $85 million, reflecting transfers of public equity securities primarily due to decreased market activity in these instruments.
- Transfers into level 1 from level 2 of cash instruments were $32 million, reflecting transfers of public equity securities due to increased market activity in these instruments.
- Transfers into level 3 from level 2 were $255 million, primarily reflecting transfers of certain loans and securities backed by residential real estate, corporate debt securities and loans and securities backed by commercial real estate, principally due to reduced price transparency as a result of a lack of market evidence, including fewer market transactions in these instruments.
- Transfers out of level 3 to level 2 were $588 million, primarily reflecting transfers of certain loans and securities backed by residential and commercial real estate, other debt obligations and corporate debt securities, principally due to increased price transparency as a result of market evidence, including market transactions in these instruments.

Note 7.

Derivative Activities

Derivative Activities

Derivatives are instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors. Derivatives may be traded on an exchange (exchange-traded) or they may be privately negotiated contracts, which are usually referred to as OTC derivatives. Certain of the firm's OTC derivatives are cleared and settled through central clearing counterparties (OTC-cleared), while others are bilateral contracts between two counterparties (bilateral OTC).

Market-Making. As a market maker, the firm enters into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. In this capacity, the firm typically acts as principal and is consequently required to commit capital to provide execution. As a market maker, it is essential to maintain an inventory of financial instruments sufficient to meet expected client and market demands.

Risk Management. The firm also enters into derivatives to actively manage risk exposures that arise from its market-making and investing and lending activities in derivative and cash instruments. The firm's holdings and exposures are hedged, in many cases, on either a portfolio or risk-specific basis, as opposed to an instrument-by-instrument basis.

The firm enters into various types of derivatives, including:

- **Futures and Forwards.** Contracts that commit counterparties to purchase or sell financial instruments, commodities or currencies in the future.

- **Swaps.** Contracts that require counterparties to exchange cash flows such as currency or interest payment streams. The amounts exchanged are based on the specific terms of the contract with reference to specified rates, financial instruments, commodities, currencies or indices.

- **Options.** Contracts in which the option purchaser has the right, but not the obligation, to purchase from or sell to the option writer financial instruments, commodities or currencies within a defined time period for a specified price.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement (counterparty netting). Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements (cash collateral netting). Derivative assets and liabilities are included in "Financial instruments owned, at fair value" and "Financial instruments sold, but not yet purchased, at fair value," respectively.

Notes to Consolidated Statement of Financial Condition

The table below presents the gross fair value and the notional amount of derivative contracts by major product type, the amounts of counterparty and cash collateral netting in the consolidated statement of financial condition, as well as cash and securities collateral posted and received under enforceable credit support agreements that do not meet the criteria for netting under U.S. GAAP.

In the table below:

- Gross fair values exclude the effects of both counterparty netting and collateral, and therefore are not representative of the firm's exposure.
- Where the firm has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.
- Notional amounts, which represent the sum of gross long and short derivative contracts, provide an indication of the volume of the firm's derivative activity and do not represent anticipated losses.

	As of December 2015		
$ in millions	Derivative Assets	Derivative Liabilities	Notional Amount
Derivatives			
Exchange-traded	$ 7	$ 4	$ 218,660
OTC-cleared	2	1	996
Bilateral OTC	17,855	17,618	1,225,093
Total interest rates	17,864	17,623	1,444,749
Bilateral OTC	5,780	6,153	171,610
Total credit	5,780	6,153	171,610
Exchange-traded	4	1	3,238
Bilateral OTC	9,125	9,084	739,897
Total currencies	9,129	9,085	743,135
Exchange-traded	2	2	262
Bilateral OTC	175	244	1,213
Total commodities	177	246	1,475
Exchange-traded	5,238	3,622	269,855
Bilateral OTC	15,611	20,551	455,301
Total equities	20,849	24,173	725,156
Total gross fair value/notional amount of derivatives	$ 53,799 [1]	$ 57,280 [1]	$3,086,125
Amounts that have been offset in the consolidated statement of financial condition			
Exchange-traded	$ (1,817)	$ (1,817)	
Bilateral OTC	(43,652)	(43,652)	
Total counterparty netting	(45,469)	(45,469)	
Bilateral OTC	(1,482)	(2,247)	
Total cash collateral netting	(1,482)	(2,247)	
Total counterparty and cash collateral netting	$(46,951)	$(47,716)	
Amounts included in financial instruments owned/financial instruments sold, but not yet purchased			
Exchange-traded	$ 3,434	$ 1,812	
OTC-cleared	2	1	
Bilateral OTC	3,412	7,751	
Total amounts included in the consolidated statement of financial condition	$ 6,848	$ 9,564	
Amounts that have not been offset in the consolidated statement of financial condition			
Cash collateral received/posted	$ (61)	$ (111)	
Securities collateral received/posted	(135)	–	
Total	$ 6,652	$ 9,453	

1. Includes derivative assets and derivative liabilities of $3.00 billion and $5.85 billion, respectively, which are not subject to an enforceable netting agreement or are subject to a netting agreement that the firm has not yet determined to be enforceable.

Valuation Techniques for Derivatives

The firm's level 2 and level 3 derivatives are valued using derivative pricing models (e.g., discounted cash flow models, correlation models, and models that incorporate option pricing methodologies, such as Monte Carlo simulations). Price transparency of derivatives can generally be characterized by product type, as described below.

- **Interest Rate.** In general, the key inputs used to value interest rate derivatives are transparent, even for most long-dated contracts. Interest rate swaps and options denominated in the currencies of leading industrialized nations are characterized by high trading volumes and tight bid/offer spreads. Interest rate derivatives that reference indices, such as an inflation index, or the shape of the yield curve (e.g., 10-year swap rate vs. 2-year swap rate) are more complex, but the key inputs are generally observable.

- **Credit.** Price transparency for credit default swaps, including both single names and baskets of credits, varies by market and underlying reference entity or obligation. Credit default swaps that reference indices, large corporates and major sovereigns generally exhibit the most price transparency. For credit default swaps with other underliers, price transparency varies based on credit rating, the cost of borrowing the underlying reference obligations, and the availability of the underlying reference obligations for delivery upon the default of the issuer. Credit default swaps that reference loans, asset-backed securities and emerging market debt instruments tend to have less price transparency than those that reference corporate bonds. In addition, more complex credit derivatives, such as those sensitive to the correlation between two or more underlying reference obligations, generally have less price transparency.

- **Currency.** Prices for currency derivatives based on the exchange rates of leading industrialized nations, including those with longer tenors, are generally transparent. The primary difference between the price transparency of developed and emerging market currency derivatives is that emerging markets tend to be observable for contracts with shorter tenors.

- **Commodity.** Commodity derivatives include transactions referenced to energy (e.g., oil and natural gas), metals (e.g., precious and base) and soft commodities (e.g., agricultural). Price transparency varies based on the underlying commodity, delivery location, tenor and product quality (e.g., diesel fuel compared to unleaded gasoline). In general, price transparency for commodity derivatives is greater for contracts with shorter tenors and contracts that are more closely aligned with major and/or benchmark commodity indices.

- **Equity.** Price transparency for equity derivatives varies by market and underlier. Options on indices and the common stock of corporates included in major equity indices exhibit the most price transparency. Equity derivatives generally have observable market prices, except for contracts with long tenors or reference prices that differ significantly from current market prices. More complex equity derivatives, such as those sensitive to the correlation between two or more individual stocks, generally have less price transparency.

Liquidity is essential to observability of all product types. If transaction volumes decline, previously transparent prices and other inputs may become unobservable. Conversely, even highly structured products may at times have trading volumes large enough to provide observability of prices and other inputs. See Note 5 for an overview of the firm's fair value measurement policies.

Level 1 Derivatives

Level 1 derivatives include short-term contracts for future delivery of securities when the underlying security is a level 1 instrument, and exchange-traded derivatives if they are actively traded and are valued at their quoted market price.

Level 2 Derivatives

Level 2 derivatives include OTC derivatives for which all significant valuation inputs are corroborated by market evidence and exchange-traded derivatives that are not actively traded and/or that are valued using models that calibrate to market-clearing levels of OTC derivatives. In evaluating the significance of a valuation input, the firm considers, among other factors, a portfolio's net risk exposure to that input.

The selection of a particular model to value a derivative depends on the contractual terms of and specific risks inherent in the instrument, as well as the availability of pricing information in the market. For derivatives that trade in liquid markets, model selection does not involve significant management judgment because outputs of models can be calibrated to market-clearing levels.

Valuation models require a variety of inputs, such as contractual terms, market prices, yield curves, discount rates (including those derived from interest rates on collateral received and posted as specified in credit support agreements for collateralized derivatives), credit curves, measures of volatility, prepayment rates, loss severity rates and correlations of such inputs. Significant inputs to the valuations of level 2 derivatives can be verified to market transactions, broker or dealer quotations or other alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Level 3 Derivatives

Level 3 derivatives are valued using models which utilize observable level 1 and/or level 2 inputs, as well as unobservable level 3 inputs. The significant unobservable inputs used to value the firm's level 3 derivatives are described below.

- For level 3 interest rate derivatives, significant unobservable inputs are illiquid credit spreads.

- For level 3 credit derivatives, significant unobservable inputs include illiquid credit spreads and upfront credit points, which are unique to specific reference obligations and reference entities, recovery rates and certain correlations required to value credit and mortgage derivatives (e.g., the likelihood of default of the underlying reference obligation relative to one another).

- For level 3 equity derivatives, significant unobservable inputs generally include equity volatility inputs for options that are long-dated and/or have strike prices that differ significantly from current market prices. In addition, the valuation of certain structured trades requires the use of level 3 correlation inputs, such as the correlation of the price performance of two or more individual stocks or the correlation of the price performance for a basket of stocks to another asset class such as commodities.

Subsequent to the initial valuation of a level 3 derivative, the firm updates the level 1 and level 2 inputs to reflect observable market changes and any resulting gains and losses are recorded in level 3. Level 3 inputs are changed when corroborated by evidence such as similar market transactions, third-party pricing services and/or broker or dealer quotations or other empirical market data. In circumstances where the firm cannot verify the model value by reference to market transactions, it is possible that a different valuation model could produce a materially different estimate of fair value. See below for further information about significant unobservable inputs used in the valuation of level 3 derivatives.

Valuation Adjustments

Valuation adjustments are integral to determining the fair value of derivative portfolios and are used to adjust the mid-market valuations produced by derivative pricing models to the appropriate exit price valuation. These adjustments incorporate bid/offer spreads, the cost of liquidity, credit valuation adjustments and funding valuation adjustments, which account for the credit and funding risk inherent in the uncollateralized portion of derivative portfolios. The firm also makes funding valuation adjustments to collateralized derivatives where the terms of the agreement do not permit the firm to deliver or repledge collateral received. Market-based inputs are generally used when calibrating valuation adjustments to market-clearing levels.

In addition, for derivatives that include significant unobservable inputs, the firm makes model or exit price adjustments to account for the valuation uncertainty present in the transaction.

Significant Unobservable Inputs

The table below presents the ranges, averages and medians of significant unobservable inputs used to value the firm's level 3 derivatives. In the table below:

- Ranges represent the significant unobservable inputs that were used in the valuation of each type of derivative.
- Averages represent the arithmetic average of the inputs and are not weighted by the relative fair value or notional of the respective financial instruments. An average greater than the median indicates that the majority of inputs are below the average.
- The ranges, averages and medians of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one derivative. For example, the highest correlation presented in the table below for equity derivatives is appropriate for valuing a specific equity derivative but may not be appropriate for valuing any other equity derivative. Accordingly, the ranges of inputs presented below do not represent uncertainty in, or possible ranges of, fair value measurements of the firm's level 3 derivatives.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, option pricing models and discounted cash flows models are typically used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Level 3 Derivative Product Type	Valuation Techniques and Significant Unobservable Inputs	Range of Significant Unobservable Inputs (Average / Median) as of December 2015
Interest rates *($28 million of net level 3 assets as of December 2015)*	Option pricing model: Credit spreads	 61 basis points (bps) to 127 bps (101 bps / 110 bps)
Credit *($61 million of net level 3 assets as of December 2015)*	Option pricing models, correlation models and discounted cash flows models: Credit spreads Upfront credit points Recovery rates	 7 basis points (bps) to 395 bps (78 bps / 52 bps) 0 points to 100 points (41 points / 40 points) 52% to 71% (69% / 71%)
Equities *($1.41 billion of net level 3 liabilities as of December 2015)*	Option pricing models: Correlation Volatility	 27% to 88% (50% / 50%) 15% to 76% (33% / 28%)

Range of Significant Unobservable Inputs

The following is information about the ranges of significant unobservable inputs used to value the firm's level 3 derivative instruments.

- **Correlation.** Ranges for correlation cover a variety of underliers both within one market (e.g., equity index and equity single stock names) and across markets (e.g., correlation of an interest rate and an equity price), as well as across regions.
- **Volatility.** Ranges for volatility cover numerous underliers across a variety of markets, maturities and strike prices. For example, volatility of equity indices is generally lower than volatility of single stocks.
- **Credit spreads, upfront credit points and recovery rates.** The ranges for credit spreads, upfront credit points and recovery rates cover a variety of underliers (index and single names), regions, sectors, maturities and credit qualities (high-yield and investment-grade). The broad range of this population gives rise to the width of the ranges of significant unobservable inputs.

Sensitivity of Fair Value Measurement to Changes in Significant Unobservable Inputs

The following is a description of the directional sensitivity of the firm's level 3 fair value measurements to changes in significant unobservable inputs, in isolation.

- **Correlation.** In general, for contracts where the holder benefits from the convergence of the underlying asset or index prices (e.g., interest rates, credit spreads, foreign exchange rates, inflation rates and equity prices), an increase in correlation results in a higher fair value measurement.

- **Volatility.** In general, for purchased options, an increase in volatility results in a higher fair value measurement.

- **Credit spreads, upfront credit points and recovery rates.** In general, the fair value of purchased credit protection increases as credit spreads or upfront credit points increase or recovery rates decrease. Credit spreads, upfront credit points and recovery rates are strongly related to distinctive risk factors of the underlying reference obligations, which include reference entity-specific factors such as leverage, volatility and industry, market-based risk factors, such as borrowing costs or liquidity of the underlying reference obligation, and macroeconomic conditions.

Due to the distinctive nature of each of the firm's level 3 derivatives, the interrelationship of inputs is not necessarily uniform within each product type.

Fair Value of Derivatives by Level

The table below presents the fair value of derivatives on a gross basis by level and major product type as well as the impact of netting. In the table below:

- The gross fair values exclude the effects of both counterparty netting and collateral netting, and therefore are not representative of the firm's exposure.
- Counterparty netting is reflected in each level to the extent that receivable and payable balances are netted within the same level and is included in "Counterparty netting within levels." Where the counterparty netting is across levels, the netting is reflected in "Cross-level counterparty netting."
- Derivative assets are shown as positive amounts and derivative liabilities are shown as negative amounts.

	Derivatives at Fair Value as of December 2015			
$ in millions	Level 1	Level 2	Level 3	Total
Assets				
Interest rates	$ 3	$ 17,833	$ 28	$ 17,864
Credit	–	3,819	1,961	5,780
Currencies	–	9,128	1	9,129
Commodities	–	176	1	177
Equities	44	20,425	380	20,849
Gross fair value of derivative assets	47	51,381	2,371	53,799
Counterparty netting within levels	–	(43,381)	(1,788)	(45,169)
Subtotal	$ 47	$ 8,000	$ 583	$ 8,630
Cross-level counterparty netting				(300)
Cash collateral netting				(1,482)
Fair value included in financial instruments owned				$ 6,848
Liabilities				
Interest rates	$ (4)	$ (17,619)	$ –	$ (17,623)
Credit	–	(4,253)	(1,900)	(6,153)
Currencies	–	(9,084)	(1)	(9,085)
Commodities	–	(246)	–	(246)
Equities	(8)	(22,374)	(1,791)	(24,173)
Gross fair value of derivative liabilities	(12)	(53,576)	(3,692)	(57,280)
Counterparty netting within levels	–	43,381	1,788	45,169
Subtotal	$ (12)	$ (10,195)	$ (1,904)	$ (12,111)
Cross-level counterparty netting				300
Cash collateral netting				2,247
Fair value included in financial instruments sold, but not yet purchased				$ (9,564)

Transfers into level 3 derivatives from level 2 during 2015 were $69 million, reflecting transfers of certain equity derivative liabilities, principally due to reduced transparency of certain volatility inputs used to value these derivatives.

Transfers out of level 3 derivatives to level 2 during 2015 were $46 million, reflecting transfers of certain equity derivative liabilities, principally due to increased transparency of certain volatility inputs used to value these derivatives.

Credit Derivatives

The firm enters into a broad array of credit derivatives in locations around the world to facilitate client transactions and to manage the credit risk associated with market-making and investing and lending activities. Credit derivatives are actively managed based on the firm's net risk position.

Credit derivatives are individually negotiated contracts and can have various settlement and payment conventions. Credit events include failure to pay, bankruptcy, acceleration of indebtedness, restructuring, repudiation and dissolution of the reference entity.

The firm enters into the following types of credit derivatives:

- **Credit Default Swaps.** Single-name credit default swaps protect the buyer against the loss of principal on one or more bonds, loans or mortgages (reference obligations) in the event the issuer (reference entity) of the reference obligations suffers a credit event. The buyer of protection pays an initial or periodic premium to the seller and receives protection for the period of the contract. If there is no credit event, as defined in the contract, the seller of protection makes no payments to the buyer of protection. However, if a credit event occurs, the seller of protection is required to make a payment to the buyer of protection, which is calculated in accordance with the terms of the contract.

- **Credit Indices, Baskets and Tranches.** Credit derivatives may reference a basket of single-name credit default swaps or a broad-based index. If a credit event occurs in one of the underlying reference obligations, the protection seller pays the protection buyer. The payment is typically a pro-rata portion of the transaction's total notional amount based on the underlying defaulted reference obligation. In certain transactions, the credit risk of a basket or index is separated into various portions (tranches), each having different levels of subordination. The most junior tranches cover initial defaults and once losses exceed the notional amount of these junior tranches, any excess loss is covered by the next most senior tranche in the capital structure.

- **Total Return Swaps.** A total return swap transfers the risks relating to economic performance of a reference obligation from the protection buyer to the protection seller. Typically, the protection buyer receives from the protection seller a floating rate of interest and protection against any reduction in fair value of the reference obligation, and in return the protection seller receives the cash flows associated with the reference obligation, plus any increase in the fair value of the reference obligation.

- **Credit Options.** In a credit option, the option writer assumes the obligation to purchase or sell a reference obligation at a specified price or credit spread. The option purchaser buys the right, but does not assume the obligation, to sell the reference obligation to, or purchase it from, the option writer. The payments on credit options depend either on a particular credit spread or the price of the reference obligation.

The firm economically hedges its exposure to written credit derivatives primarily by entering into offsetting purchased credit derivatives with identical underliers. Substantially all of the firm's purchased credit derivative transactions are with financial institutions and are subject to stringent collateral thresholds. In addition, upon the occurrence of a specified trigger event, the firm may take possession of the reference obligations underlying a particular written credit derivative, and consequently may, upon liquidation of the reference obligations, recover amounts on the underlying reference obligations in the event of default.

As of December 2015, written and purchased credit derivatives had total gross notional amounts of $82.67 billion and $88.94 billion, respectively, for total net notional purchased protection of $6.27 billion. Substantially all of the firm's written and purchased credit derivatives are credit default swaps.

The table below presents certain information about credit derivatives. In the table below:

- Fair values exclude the effects of both netting of receivable balances with payable balances under enforceable netting agreements, and netting of cash received or posted under enforceable credit support agreements, and therefore are not representative of the firm's credit exposure.
- Tenor is based on expected duration for mortgage-related credit derivatives and on remaining contractual maturity for other credit derivatives.
- The credit spread on the underlier, together with the tenor of the contract, are indicators of payment/performance risk. The firm is less likely to pay or otherwise be required to perform where the credit spread and the tenor are lower.
- Offsetting purchased credit derivatives represent the notional amount of purchased credit derivatives that economically hedge written credit derivatives with identical underliers and are included in "Offsetting."
- Other purchased credit derivatives represent the notional amount of all other purchased credit derivatives not included in "Offsetting."

	As of December 2015				
	Credit Spread on Underlier (basis points)				
$ in millions	0 - 250	251 - 500	501 - 1,000	Greater than 1,000	Total
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	$13,741	$ 132	$ 135	$ 4,382	$ 18,390
1 - 5 years	39,317	2,830	2,157	5,071	49,375
Greater than 5 years	11,980	2,219	511	195	14,905
Total	$65,038	$ 5,181	$ 2,803	$ 9,648	$ 82,670
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	$62,394	$ 4,582	$ 2,667	$ 8,306	$ 77,949
Other	9,241	469	561	720	10,991
Fair Value of Written Credit Derivatives					
Asset	$ 1,185	$ 60	$ 25	$ 33	$ 1,303
Liability	814	263	305	3,933	5,315
Net asset/(liability)	$ 371	$ (203)	$ (280)	$ (3,900)	$ (4,012)

Derivatives with Credit-Related Contingent Features

Certain of the firm's derivatives have been transacted under bilateral agreements with counterparties who may require the firm to post collateral or terminate the transactions based on changes in the firm's credit ratings. The firm assesses the impact of these bilateral agreements by determining the collateral or termination payments that would occur assuming a downgrade by all rating agencies. A downgrade by any one rating agency, depending on the agency's relative ratings of the firm at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies.

The table below presents the aggregate fair value of net derivative liabilities under such agreements (excluding application of collateral posted to reduce these liabilities), the related aggregate fair value of the assets posted as collateral and the additional collateral or termination payments that could have been called at the reporting date by counterparties in the event of a one-notch and two-notch downgrade in the firm's credit ratings.

$ in millions	As of December 2015
Net derivative liabilities under bilateral agreements	$409
Collateral posted	229
Additional collateral or termination payments for a one-notch downgrade	28
Additional collateral or termination payments for a two-notch downgrade	60

Note 8.

Fair Value Option

Other Financial Assets and Financial Liabilities at Fair Value

In addition to all cash and derivative instruments included in "Financial instruments owned, at fair value" and "Financial instruments sold, but not yet purchased, at fair value," the firm accounts for certain of its other financial assets and financial liabilities at fair value primarily under the fair value option. The primary reasons for electing the fair value option are to:

- Reflect economic events in earnings on a timely basis;
- Mitigate volatility in earnings from using different measurement attributes (e.g., transfers of financial instruments owned accounted for as financings are recorded at fair value whereas the related secured financing would be recorded on an accrual basis absent electing the fair value option); and
- Address simplification and cost-benefit considerations (e.g., accounting for hybrid financial instruments at fair value in their entirety versus bifurcation of embedded derivatives).

Hybrid financial instruments are instruments that contain bifurcatable embedded derivatives and do not require settlement by physical delivery of non-financial assets. If the firm elects to bifurcate the embedded derivative from the associated debt, the derivative is accounted for at fair value and the host contract is accounted for at amortized cost. If the firm does not elect to bifurcate, the entire hybrid financial instrument is accounted for at fair value under the fair value option. As of December 2015, the firm did not elect to bifurcate any hybrid financial instruments.

Other financial assets and financial liabilities accounted for at fair value under the fair value option include:

- Resale and repurchase agreements;
- Certain securities borrowed and loaned;
- Certain other secured financings; and
- Certain receivables from customers and counterparties, including transfers of assets accounted for as secured loans rather than purchases and certain margin loans.

These financial assets and financial liabilities at fair value are generally valued based on discounted cash flow techniques, which incorporate inputs with reasonable levels of price transparency, and are generally classified as level 2 because the inputs are observable. Valuation adjustments may be made for liquidity and for counterparty and the firm's credit quality.

See below for information about the significant inputs used to value other financial assets and financial liabilities at fair value.

Resale and Repurchase Agreements and Securities Borrowed and Loaned. The significant inputs to the valuation of resale and repurchase agreements and securities borrowed and loaned are funding spreads, the amount and timing of expected future cash flows and interest rates. As of December 2015, the firm had no level 3 resale and repurchase agreements, securities borrowed or securities loaned. See Note 9 for further information about collateralized agreements and financings.

Other Secured Financings. The significant inputs to the valuation of other secured financings at fair value are the amount and timing of expected future cash flows, interest rates, funding spreads, the fair value of the collateral delivered by the firm (which is determined using the amount and timing of expected future cash flows, market prices, market yields and recovery assumptions) and the frequency of additional collateral calls. As of December 2015, the firm's level 3 other secured financings were not material. See Note 9 for further information about collateralized agreements and financings.

Receivables from Customers and Counterparties. Receivables from customers and counterparties at fair value are primarily comprised of certain margin loans and certain transfers of assets accounted for as secured loans rather than purchases. The significant inputs to the valuation of such receivables are interest rates, the amount and timing of expected future cash flows and funding spreads. As of December 2015, there were no level 3 receivables from customers and counterparties.

Fair Value of Other Financial Assets and Financial Liabilities by Level

The table below presents, by level within the fair value hierarchy, other financial assets and financial liabilities accounted for at fair value primarily under the fair value option. In the table below:

- Securities segregated for regulatory and other purposes include segregated securities accounted for at fair value under the fair value option and consists of securities borrowed and resale agreements.
- Level 1 other financial assets at fair value include U.S. Treasury securities segregated for regulatory and other purposes accounted for at fair value under other U.S. GAAP.
- Other financial assets are shown as positive amounts and other financial liabilities are shown as negative amounts.

	Other Financial Assets and Liabilities at Fair Value as of December 2015			
$ in millions	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Securities segregated for regulatory and other purposes	**$ 19,562**	**$ 18,085**	**$ –**	**$ 37,647**
Securities purchased under agreements to resell	**–**	**89,293**	**–**	**89,293**
Securities borrowed	**–**	**74,019**	**–**	**74,019**
Receivables from customers and counterparties	**–**	**313**	**–**	**313**
Total	**$ 19,562**	**$ 181,710**	**$ –**	**$ 201,272**
Liabilities				
Securities sold under agreements to repurchase	**$ –**	**$ (103,805)**	**$ –**	**$ (103,805)**
Securities loaned	**–**	**(28,978)**	**–**	**(28,978)**
Other secured financings	**–**	**(12,686)**	**(27)**	**(12,713)**
Total	**$ –**	**$ (145,469)**	**$ (27)**	**$ (145,496)**

Transfers Between Levels of the Fair Value Hierarchy

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. There were no transfers of other financial assets and financial liabilities between level 1 and level 2 or between level 2 and level 3 during 2015.

Long-Term Debt Instruments

The aggregate contractual principal amount of long-term other secured financings for which the fair value option was elected exceeded the related fair value by $210 million as of December 2015.

Note 9.

Collateralized Agreements and Financings

Collateralized agreements are securities purchased under agreements to resell (resale agreements) and securities borrowed. Collateralized financings are securities sold under agreements to repurchase (repurchase agreements), securities loaned and other secured financings. The firm enters into these transactions in order to, among other things, facilitate client activities, invest excess cash, acquire securities to cover short positions and finance certain firm activities.

Collateralized agreements and financings are presented on a net-by-counterparty basis when a legal right of setoff exists. Interest on collateralized agreements and collateralized financings is recognized over the life of the transaction.

The table below presents the carrying value of resale and repurchase agreements and securities borrowed and loaned transactions.

$ in millions	As of December 2015
Securities purchased under agreements to resell [1]	**$ 89,293**
Securities borrowed [2]	**189,852**
Securities sold under agreements to repurchase [1]	**103,805**
Securities loaned [2]	**53,562**

1. Resale and repurchase agreements are carried at fair value under the fair value option. See Note 8 for further information about the valuation techniques and significant inputs used to determine fair value.
2. Includes $74.02 billion of securities borrowed and $28.98 billion of securities loaned at fair value.

Resale and Repurchase Agreements

A resale agreement is a transaction in which the firm purchases financial instruments from a seller, typically in exchange for cash, and simultaneously enters into an agreement to resell the same or substantially the same financial instruments to the seller at a stated price plus accrued interest at a future date.

A repurchase agreement is a transaction in which the firm sells financial instruments to a buyer, typically in exchange for cash, and simultaneously enters into an agreement to repurchase the same or substantially the same financial instruments from the buyer at a stated price plus accrued interest at a future date.

The financial instruments purchased or sold in resale and repurchase agreements typically include U.S. government and federal agency obligations and equities and convertible debentures.

The firm receives financial instruments purchased under resale agreements and makes delivery of financial instruments sold under repurchase agreements. To mitigate credit exposure, the firm monitors the market value of these financial instruments on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the financial instruments, as appropriate. For resale agreements, the firm typically requires collateral with a fair value approximately equal to the carrying value of the relevant assets in the consolidated statement of financial condition.

Even though repurchase and resale agreements (including “repos- and reverses-to-maturity”) involve the legal transfer of ownership of financial instruments, they are accounted for as financing arrangements because they require the financial instruments to be repurchased or resold at the maturity of the agreement. A repo-to-maturity is a transaction in which the firm transfers a security under an agreement to repurchase the security where the maturity date of the repurchase agreement matches the maturity date of the underlying security. Prior to January 2015, repos-to-maturity were accounted for as sales. The firm had no repos-to-maturity as of December 2015. See Note 3 for information about changes to the accounting for repos-to-maturity which became effective in January 2015.

Securities Borrowed and Loaned Transactions

In a securities borrowed transaction, the firm borrows securities from a counterparty in exchange for cash or securities. When the firm returns the securities, the counterparty returns the cash or securities. Interest is generally paid periodically over the life of the transaction.

In a securities loaned transaction, the firm lends securities to a counterparty in exchange for cash or securities. When the counterparty returns the securities, the firm returns the cash or securities posted as collateral. Interest is generally paid periodically over the life of the transaction.

The firm receives securities borrowed and makes delivery of securities loaned. To mitigate credit exposure, the firm monitors the market value of these securities on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the securities, as appropriate. For securities borrowed transactions, the firm typically requires collateral with a fair value approximately equal to the carrying value of the securities borrowed transaction.

Certain of the firm's securities borrowed and loaned are recorded at fair value under the fair value option. See Note 8 for further information about securities borrowed and loaned accounted for at fair value.

All other securities borrowed and loaned are recorded based on the amount of cash collateral advanced or received plus accrued interest. As these arrangements generally can be terminated on demand, they exhibit little, if any, sensitivity to changes in interest rates. Therefore, the carrying value of such arrangements approximates fair value. While these arrangements are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these arrangements been included in the firm's fair value hierarchy, they would have been classified in level 2 as of December 2015.

Offsetting Arrangements

The table below presents the gross and net resale and repurchase agreements and securities borrowed and loaned transactions, and the related amount of counterparty netting included in the consolidated statement of financial condition. The table below also presents the amounts not offset in the consolidated statement of financial condition, including counterparty netting that does not meet the criteria for netting under U.S. GAAP and the fair value of cash or securities collateral received or posted subject to enforceable credit support agreements.

	As of December 2015			
	Assets		Liabilities	
$ in millions	Resale agreements	Securities borrowed	Repurchase agreements	Securities loaned
Amounts included in the consolidated statement of financial condition				
Gross carrying value	$112,745	$ 194,534	$ 113,854	$ 53,562
Counterparty netting	(10,049)	–	(10,049)	–
Total	102,696 [1]	194,534 [1]	103,805	53,562
Amounts not offset in the consolidated statement of financial condition				
Counterparty netting	(4,325)	(36,488)	(4,325)	(36,488)
Collateral	(96,545)	(151,215)	(97,684)	(16,790)
Total	$ 1,826	$ 6,831	$ 1,796	$ 284

1. The firm had $13.40 billion of securities received under resale agreements and $4.68 billion of securities borrowed transactions that were segregated to satisfy certain regulatory requirements. These securities are included in "Cash and securities segregated for regulatory and other purposes."

In the table above:

- Substantially all of the gross carrying values of these arrangements are subject to enforceable netting agreements.
- Where the firm has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.

Gross Carrying Value of Repurchase Agreements and Securities Loaned

The table below presents the gross carrying value of repurchase agreements and securities loaned by class of collateral pledged.

	As of December 2015	
$ in millions	Repurchase agreements	Securities loaned
Commercial paper, certificates of deposit, time deposits and other money market instruments	$ 797	$ –
U.S. government and federal agency obligations	88,513	3,485
Non-U.S. government and agency obligations	278	16,019
Securities backed by commercial real estate	458	9
Securities backed by residential real estate	2,452	55
Bank loans and bridge loans	–	1
Corporate debt securities	3,595	2,522
State and municipal obligations	609	–
Other debt obligations	101	–
Equities and convertible debentures	17,051	31,471
Total	**$113,854**	**$53,562**

The table below presents the gross carrying value of repurchase agreements and securities loaned by maturity date.

	As of December 2015	
$ in millions	Repurchase agreements	Securities loaned
No stated maturity and overnight	$ 54,831	$53,562
2 - 30 days	22,029	–
31 - 90 days	12,744	–
91 days - 1 year	20,884	–
Greater than 1 year	3,366	–
Total	**$113,854**	**$53,562**

In the table above:

- Repurchase agreements and securities loaned that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Repurchase agreements and securities loaned that are redeemable prior to maturity at the option of the holders are reflected at the earliest dates such options become exercisable.

Other Secured Financings

In addition to repurchase agreements and securities loaned transactions, the firm funds certain assets through the use of other secured financings and pledges financial instruments as collateral in these transactions. These other secured financings consist of:

- Secured financings from Group Inc.;
- Liabilities of consolidated VIEs; and
- Other structured financing arrangements.

Other secured financings include arrangements that are nonrecourse. As of December 2015, nonrecourse other secured financings were $131 million.

The firm has elected to apply the fair value option to certain other secured financings because the use of fair value eliminates non-economic volatility in earnings that would arise from using different measurement attributes. See Note 8 for further information about other secured financings that are accounted for at fair value.

Other secured financings that are not recorded at fair value are recorded based on the amount of cash received plus accrued interest, which generally approximates fair value. While these financings are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these financings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015.

The table below presents other secured financings by maturity date.

$ in millions	As of December 2015
Other secured financings (short-term)	$51,669
Other secured financings (long-term):	
2017	3,109
2018	523
2019	99
2020	17
2021 - thereafter	113
Total other secured financings (long-term)	3,861
Total other secured financings [1]	**$55,530**

1. The weighted average interest rate on $42.82 billion of other secured financings accounted for at amortized cost was 2.53%.

In the table above:

- Long-term secured financings that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Long-term secured financings that are redeemable prior to maturity at the option of the holders are reflected at the earliest dates such options become exercisable.

Collateral Received and Pledged

The firm receives cash and securities (e.g., U.S. government and federal agency, other sovereign and corporate obligations, as well as equities and convertible debentures) as collateral, primarily in connection with resale agreements, securities borrowed, derivative transactions and customer margin loans. The firm obtains cash and securities as collateral on an upfront or contingent basis for derivative instruments and collateralized agreements to reduce its credit exposure to individual counterparties.

In many cases, the firm is permitted to deliver or repledge financial instruments received as collateral when entering into repurchase agreements and securities loaned transactions, primarily in connection with secured client financing activities. The firm is also permitted to deliver or repledge these financial instruments in connection with other secured financings, collateralized derivative transactions and firm or customer settlement requirements.

The firm also pledges certain financial instruments owned, at fair value in connection with repurchase agreements, securities loaned transactions and other secured financings in connection with other secured financings to counterparties who may or may not have the right to deliver or repledge them.

The table below presents financial instruments at fair value received as collateral that were available to be delivered or repledged and were delivered or repledged by the firm.

$ in millions	**As of December 2015**
Collateral available to be delivered or repledged [1]	**$447,352**
Collateral that was delivered or repledged	**404,578**

1. Amount excludes $13.40 billion of securities received under resale agreements, and $4.68 billion of securities borrowed transactions that contractually had the right to be delivered or repledged, but were segregated to satisfy certain regulatory requirements.

The table below presents information about assets pledged.

$ in millions	**As of December 2015**
Financial instruments owned, at fair value pledged to counterparties that:	
Had the right to deliver or repledge	**$ 38,749**
Did not have the right to deliver or repledge	**38,323**

Note 10.

Securitization Activities

The firm securitizes residential and commercial mortgages, corporate bonds and other types of financial assets by selling these assets to securitization vehicles (e.g., trusts, corporate entities and limited liability companies) or through a resecuritization. The firm acts as underwriter of the beneficial interests that are sold to investors. The firm's residential mortgage securitizations are substantially all in connection with U.S. government agency securitizations.

Beneficial interests issued by securitization entities are debt or equity securities that give the investors rights to receive all or portions of specified cash inflows to a securitization vehicle and include senior and subordinated interests in principal, interest and/or other cash inflows. The proceeds from the sale of beneficial interests are used to pay the transferor for the financial assets sold to the securitization vehicle or to purchase securities which serve as collateral.

The firm accounts for a securitization as a sale when it has relinquished control over the transferred assets. Prior to securitization, the firm accounts for assets pending transfer at fair value and therefore does not typically recognize significant gains or losses upon the transfer of assets. Net revenues from underwriting activities are recognized in connection with the sales of the underlying beneficial interests to investors.

The firm generally receives cash in exchange for the transferred assets but may also have continuing involvement with transferred assets, including ownership of beneficial interests in securitized financial assets, primarily in the form of senior or subordinated securities. The firm may also purchase senior or subordinated securities issued by securitization vehicles (which are typically VIEs) in connection with secondary market-making activities.

The primary risks included in beneficial interests and other interests from the firm's continuing involvement with securitization vehicles are the performance of the underlying collateral, the position of the firm's investment in the capital structure of the securitization vehicle and the market yield for the security. These interests are accounted for at fair value, are included in "Financial instruments owned, at fair value" and are substantially all classified in level 2 of the fair value hierarchy. See Notes 5 through 8 for further information about fair value measurements.

The table below presents the firm's continuing involvement in nonconsolidated securitization entities to which the firm sold assets, as well as the total outstanding principal amount of transferred assets in which the firm has continuing involvement.

	As of December 2015		
$ in millions	Outstanding Principal Amount	Fair Value of Retained Interests	Fair Value of Purchased Interests
U.S. government agency-issued collateralized mortgage obligations	$ 39,088	$ 846	$ 20
Other residential mortgage-backed	2,195	154	17
Other commercial mortgage-backed	6,042	55	21
CDOs	496	6	–
Total	$ 47,821	$ 1,061	$ 58

In the table above:

- The outstanding principal amount is presented for the purpose of providing information about the size of the securitization entities in which the firm has continuing involvement and is not representative of the firm's risk of loss.
- For retained or purchased interests, the firm's risk of loss is limited to the fair value of these interests.
- Purchased interests represent senior and subordinated interests, purchased in connection with secondary market-making activities, in securitization entities in which the firm also holds retained interests.
- Substantially all of the total outstanding principal amount and total fair value of retained interests as of December 2015 relate to securitizations during 2012 and thereafter.

The firm did not have continuing involvement in the form of derivative transactions with nonconsolidated VIEs as of December 2015.

The table below presents the weighted average key economic assumptions used in measuring the fair value of mortgage-backed retained interests and the sensitivity of this fair value to immediate adverse changes of 10% and 20% in those assumptions.

$ in millions	As of December 2015
Fair value of retained interests	$ 1,055
Weighted average life (years)	7.8
Constant prepayment rate	10.4%
Impact of 10% adverse change	$ (22)
Impact of 20% adverse change	(43)
Discount rate	5.6%
Impact of 10% adverse change	$ (28)
Impact of 20% adverse change	(54)

In the table above:

- Amounts do not reflect the benefit of other financial instruments that are held to mitigate risks inherent in these retained interests.
- Changes in fair value based on an adverse variation in assumptions generally cannot be extrapolated because the relationship of the change in assumptions to the change in fair value is not usually linear.
- The impact of a change in a particular assumption is calculated independently of changes in any other assumption. In practice, simultaneous changes in assumptions might magnify or counteract the sensitivities disclosed above.
- The constant prepayment rate is included only for positions for which it is a key assumption in the determination of fair value.
- The discount rate for retained interests that relate to U.S. government agency-issued collateralized mortgage obligations does not include any credit loss.
- Expected credit loss assumptions are reflected in the discount rate for the remainder of retained interests.

The firm has other retained interests not reflected in the table above with a fair value of $6 million and a weighted average life of 8.5 years as of December 2015. Due to the nature and current fair value of certain of these retained interests, the weighted average assumptions for constant prepayment and discount rates and the related sensitivity to adverse changes are not meaningful. The firm's maximum exposure to adverse changes in the value of these interests is the carrying value of $6 million.

Note 11.

Variable Interest Entities

VIEs generally finance the purchase of assets by issuing debt and equity securities that are either collateralized by or indexed to the assets held by the VIE. The debt and equity securities issued by a VIE may include tranches of varying levels of subordination. The firm's involvement with VIEs includes securitization of financial assets, as described in Note 10, and investments in and loans to other types of VIEs, as described below. See Note 10 for additional information about securitization activities, including the definition of beneficial interests. See Note 3 for the firm's consolidation policies, including the definition of a VIE.

The firm is principally involved with VIEs through the following business activities:

Mortgage-Backed VIEs and Corporate CDO and CLO VIEs. The firm sells residential and commercial mortgage securities to mortgage-backed VIEs and corporate bonds to corporate CDO and CLO VIEs and may retain beneficial interests in the assets sold to these VIEs. The firm purchases and sells beneficial interests issued by mortgage-backed and corporate CDO and CLO VIEs in connection with market-making activities.

Real Estate, Credit-Related and Other Investing VIEs. The firm purchases equity and debt securities issued by and makes loans to VIEs that hold real estate, performing and nonperforming debt, distressed loans and equity securities. The firm typically does not sell assets to, or enter into derivatives with, these VIEs.

Other Asset-Backed VIEs. The firm structures VIEs that issue notes to clients, and purchases and sells beneficial interests issued by other asset-backed VIEs in connection with market-making activities.

Power-Related VIEs. The firm purchases debt and equity securities issued by VIEs that hold power-related assets, and may provide commitments to these VIEs. The firm typically does not sell assets to, or enter into derivatives with, these VIEs.

VIE Consolidation Analysis

A variable interest in a VIE is an investment (e.g., debt or equity securities) or other interest (e.g., derivatives or loans) in a VIE that will absorb portions of the VIE's expected losses and/or receive portions of the VIE's expected residual returns.

The firm's variable interests in VIEs include senior and subordinated debt in residential and commercial mortgage-backed and other asset-backed securitization entities, CDOs and CLOs; loans; limited and general partnership interests; and preferred and common equity.

The enterprise with a controlling financial interest in a VIE is known as the primary beneficiary and consolidates the VIE. The firm determines whether it is the primary beneficiary of a VIE by performing an analysis that principally considers:

- Which variable interest holder has the power to direct the activities of the VIE that most significantly impact the VIE's economic performance;
- Which variable interest holder has the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE;
- The VIE's purpose and design, including the risks the VIE was designed to create and pass through to its variable interest holders;
- The VIE's capital structure;
- The terms between the VIE and its variable interest holders and other parties involved with the VIE; and
- Related-party relationships.

The firm reassesses its initial evaluation of whether an entity is a VIE when certain reconsideration events occur. The firm reassesses its determination of whether it is the primary beneficiary of a VIE on an ongoing basis based on current facts and circumstances.

Nonconsolidated VIEs

The table below presents information about nonconsolidated VIEs in which the firm holds variable interests.

$ in millions	**Nonconsolidated VIEs as of December 2015**
Mortgage-backed [1]	
Assets in VIEs	**$57,215**
Carrying value of variable interests - assets	**1,972**
Maximum Exposure to Loss	
Retained interests	**1,055**
Purchased interests	**917**
Total maximum exposure to loss	**$ 1,972**
Corporate CDOs and CLOs	
Assets in VIEs	**$ 602**
Carrying value of variable interests - assets	**27**
Maximum Exposure to Loss	
Purchased interests	**27**
Total maximum exposure to loss	**$ 27**
Real estate, credit-related and other investing	
Assets in VIEs	**$ 460**
Carrying value of variable interests - assets	**6**
Maximum Exposure to Loss	
Loans and investments	**6**
Total maximum exposure to loss	**$ 6**
Other asset-backed	
Assets in VIEs	**$ 2,048**
Carrying value of variable interests - assets	**104**
Maximum Exposure to Loss	
Retained interests	**6**
Purchased interests	**98**
Total maximum exposure to loss	**$ 104**
Power-related	
Assets in VIEs	**$ 515**
Carrying value of variable interests - assets	**1**
Maximum Exposure to Loss	
Loans and investments	**1**
Total maximum exposure to loss	**$ 1**
Total nonconsolidated VIEs	
Assets in VIEs	**$60,840**
Carrying value of variable interests - assets	**2,110**
Maximum Exposure to Loss	
Retained interests	**1,061**
Purchased interests	**1,042**
Loans and investments	**7**
Total maximum exposure to loss	**$ 2,110**

1. Assets in VIEs and maximum exposure to loss include $3.86 billion and $280 million, respectively, related to CDOs backed by mortgage obligations.

The firm's exposure to the obligations of VIEs is generally limited to its interests in these entities.

In the table above, nonconsolidated VIEs are aggregated based on principal business activity. The nature of the firm's variable interests can take different forms, as described in the rows under maximum exposure to loss. In the table above:

- The maximum exposure to loss excludes the benefit of offsetting financial instruments that are held to mitigate the risks associated with these variable interests.
- For retained and purchased interests, and loans and investments, the maximum exposure to loss is the carrying value of these interests.

The carrying values of substantially all of the firm's variable interests in nonconsolidated VIEs are included in "Financial instruments owned, at fair value."

Consolidated VIEs

The table below presents the carrying amount and classification of assets and liabilities in consolidated VIEs, excluding the benefit of offsetting financial instruments that are held to mitigate the risks associated with the firm's variable interests.

$ in millions	**Consolidated VIEs as of December 2015**
Mortgage-backed	
Assets	
Financial instruments owned, at fair value	**$ 140**
Other assets	**15**
Total	**$ 155**
Liabilities	
Other secured financings	**$ 113**
Total	**$ 113**

In the table above:

- Assets and liabilities of consolidated VIEs are presented net of intercompany eliminations.
- Substantially all the assets can only be used to settle obligations of the VIE. The liabilities of mortgage-backed VIEs do not have recourse to the general credit of the firm.

Note 12.

Other Assets

Other assets are generally less liquid, non-financial assets. The table below presents other assets by type.

$ in millions	**As of December 2015**
Property, leasehold improvements and equipment	**$ 751**
Goodwill and identifiable intangible assets [1]	**128**
Income tax-related assets	**1,255**
Receivables from affiliates	**177**
Miscellaneous receivables and other	**292**
Total	**$2,603**

1. The net carrying amount of the firm's goodwill and identifiable intangible assets was $50 million and $78 million, respectively. Intangible assets primarily include customer lists.

Property, Leasehold Improvements and Equipment

Property, leasehold improvements and equipment in the table above is net of accumulated depreciation and amortization of $2.79 billion as of December 2015. Property and equipment is depreciated on a straight-line basis over the useful life of the asset. Leasehold improvements are amortized on a straight-line basis over the useful life of the improvement or the term of the lease, whichever is shorter. Certain costs of software developed or obtained for internal use are capitalized and amortized on a straight-line basis over the useful life of the software.

Goodwill

Goodwill is the cost of acquired companies in excess of the fair value of net assets, including identifiable intangible assets, at the acquisition date.

Identifiable Intangible Assets

Intangible assets in the table above are represented net of accumulated amortization. As of December 2015, the gross carrying amount of the firm's identifiable intangible assets was $464 million. The related accumulated amortization was $386 million, resulting in a net carrying amount of $78 million.

The firm's identifiable intangible assets are considered to have finite useful lives and are amortized over their estimated useful lives using the straight-line method. The weighted average remaining useful life of the firm's identifiable intangible assets is four years.

Impairments

The firm tests property, leasehold improvements and equipment, identifiable intangible assets and other assets for impairment whenever events or changes in circumstances suggest that an asset's or asset group's carrying value may not be fully recoverable. To the extent the carrying value of an asset exceeds the projected undiscounted cash flows expected to result from the use and eventual disposal of the asset or asset group, the firm determines the asset is impaired and records an impairment equal to the difference between the estimated fair value and the carrying value of the asset or asset group. In addition, the firm will recognize an impairment prior to the sale of an asset if the carrying value of the asset exceeds its estimated fair value. During 2015, no impairments were recorded.

Note 13.

Short-Term Borrowings

The table below presents details about the firm's short-term borrowings.

$ in millions	As of December 2015
Other secured financings (short-term)	**$51,669**
Unsecured short-term borrowings	**6,369**
Total	**$58,038**

See Note 9 for information about other secured financings.

The firm obtains unsecured short-term borrowings primarily from Group Inc. The carrying value of unsecured short-term borrowings that are not recorded at fair value generally approximates fair value due to the short-term nature of the obligations. While these unsecured short-term borrowings are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these borrowings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015.

The table below presents details about the firm's unsecured short-term borrowings.

$ in millions	As of December 2015
Borrowings from affiliates	**$ 6,266**
Other short-term borrowings	**103**
Total	**$ 6,369**
Weighted average interest rate	**2.06%**

Note 14.

Long-Term Borrowings

The table below presents details about the firm's long-term borrowings.

$ in millions	As of December 2015
Other secured financings (long-term)	**$ 3,861**
Unsecured long-term borrowings (including subordinated debt)	**18,525**
Total	**$22,386**

See Note 9 for information about other secured financings.

Subordinated Borrowings

As of December 2015, the firm had outstanding borrowings of $5.00 billion from Group Inc. under four subordinated loan agreements, which mature in 2017. In addition, the firm has a $20.09 billion revolving subordinated loan agreement with Group Inc., which also matures in 2017. As of December 2015, $13.50 billion was outstanding.

Amounts borrowed under these subordinated loan agreements bear interest at a rate of LIBOR plus .75% per annum. The carrying value of these borrowings approximates fair value. While these subordinated loan agreements are carried at amounts that approximate fair value, they are not accounted for at fair value under the fair value option or at fair value in accordance with other U.S. GAAP and therefore are not included in the firm's fair value hierarchy in Notes 6 through 8. Had these borrowings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of December 2015.

The subordinated borrowings from Group Inc. are available in computing net capital under the U.S. Securities and Exchange Commission's (SEC) uniform net capital rule. To the extent that such borrowings are required for the firm's continued compliance with minimum net capital requirements, they may not be repaid.

Note 15.

Other Liabilities and Accrued Expenses

The table below presents other liabilities and accrued expenses by type.

$ in millions	As of December 2015
Compensation and benefits	**$ 3,134**
Income tax-related liabilities	**752**
Payables to affiliates	**3,046**
Accrued expenses and other [1]	**4,605**
Total	**$11,537**

1. Primarily relates to provisions for the agreement in principle with the Residential Mortgage-Backed Securities Working Group of the U.S. Financial Fraud Enforcement Task Force (RMBS Working Group). See Note 20 for further information about this agreement in principle.

Note 16.

Commitments, Contingencies and Guarantees

Commitments

The table below presents the firm's commitments by type.

$ in millions	As of December 2015
Commitments to extend credit	$ 14
Contingent and forward starting resale and securities borrowing agreements	16,492
Forward starting repurchase and secured lending agreements	308
Other [1]	1,597
Total commitments	**$18,411**

1. Other commitments primarily include underwriting commitments.

The table below presents the firm's commitments by period of expiration.

	Commitment Amount by Period of Expiration as of December 2015			
$ in millions	2016	2017 - 2018	2019 - 2020	2021 - Thereafter
Commitments to extend credit	$ –	$ 14	$ –	$ –
Contingent and forward starting resale and securities borrowing agreements	16,492	–	–	–
Forward starting repurchase and secured lending agreements	298	10	–	–
Other	1,535	60	–	2
Total commitments	**$ 18,325**	**$ 84**	**$ –**	**$ 2**

Commitments to Extend Credit

The firm's commitments to extend credit are agreements to lend with fixed termination dates and depend on the satisfaction of all contractual conditions to borrowing. These commitments are presented net of amounts syndicated to third parties. The total commitment amount does not necessarily reflect actual future cash flows because the firm may syndicate all or substantial additional portions of these commitments. In addition, commitments can expire unused or be reduced or cancelled at the counterparty's request.

The firm accounts for commitments to extend credit at fair value.

Contingent and Forward Starting Resale and Securities Borrowing Agreements/Forward Starting Repurchase and Secured Lending Agreements

The firm enters into resale and securities borrowing agreements and repurchase and secured lending agreements that settle at a future date, generally within three business days. The firm also enters into commitments to provide contingent financing to its clients and counterparties through resale agreements. The firm's funding of these commitments depends on the satisfaction of all contractual conditions to the resale agreement and these commitments can expire unused.

Leases

The firm has a contractual obligation under a long-term noncancelable lease agreement, for office space, expiring in 2018. The agreement is subject to periodic escalation provisions for increases in real estate taxes and other charges.

The table below presents future minimum rental payments, net of minimum sublease rentals.

$ in millions	As of December 2015
2016	$ 3
2017	3
2018	2
2019	–
2020	–
2021 - thereafter	–
Total	**$ 8**

Operating leases include office space held in excess of current requirements. The firm records a liability, based on the fair value of the remaining lease rentals reduced by any potential or existing sublease rentals, for leases where the firm has ceased using the space and management has concluded that the firm will not derive any future economic benefits. Costs to terminate a lease before the end of its term are recognized and measured at fair value on termination.

Contingencies — Legal Proceedings

See Note 20 for information about legal proceedings, including certain mortgage-related matters.

Guarantees

The table below presents information about certain derivatives that meet the definition of a guarantee and certain other guarantees.

	As of December 2015	
$ in millions	**Derivatives**	**Other financial guarantees**
Carrying Value of Net Liability	**$ 31**	**$ –**
Maximum Payout/Notional Amount by Period of Expiration		
2016	**$ 950**	**$ –**
2017 - 2018	**523**	**12**
2019 - 2020	**46**	**–**
2021 - thereafter	**47**	**–**
Total	**$ 1,566**	**$ 12**

In the table above, the maximum payout is based on the notional amount of the contract and does not represent anticipated losses.

Derivative Guarantees. The firm enters into various derivatives that meet the definition of a guarantee under U.S. GAAP, including written equity and commodity put options, written currency contracts and interest rate caps, floors and swaptions. These derivatives are risk managed together with derivatives that do not meet the definition of a guarantee, and therefore the amounts in the table above do not reflect the firm's overall risk related to its derivative activities. Disclosures about derivatives are not required if they may be cash settled and the firm has no basis to conclude it is probable that the counterparties held the underlying instruments at inception of the contract. The firm has concluded that these conditions have been met for certain large, internationally active commercial and investment bank counterparties, central clearing counterparties and certain other counterparties. Accordingly, the firm has not included such contracts in the table above. In addition, see Note 7 for information about credit derivatives that meet the definition of a guarantee which are not included in the table above.

Derivatives are accounted for at fair value and therefore the carrying value is considered the best indication of payment/performance risk for individual contracts. However, the carrying values in the table above exclude the effect of counterparty and cash collateral netting.

Other Financial Guarantees. In the ordinary course of business, the firm provides other financial guarantees of the obligations of third parties (e.g., standby letters of credit and other guarantees to enable clients to complete transactions and fund-related guarantees). These guarantees represent obligations to make payments to beneficiaries if the guaranteed party fails to fulfill its obligation under a contractual arrangement with that beneficiary.

Indemnities and Guarantees of Service Providers. In the ordinary course of business, the firm indemnifies and guarantees certain service providers, such as clearing and custody agents, trustees and administrators, against specified potential losses in connection with their acting as an agent of, or providing services to, the firm or its affiliates.

The firm may also be liable to some clients or other parties for losses arising from its custodial role or caused by acts or omissions of third-party service providers, including sub-custodians and third-party brokers. In certain cases, the firm has the right to seek indemnification from these third-party service providers for certain relevant losses incurred by the firm. In addition, the firm is a member of payment, clearing and settlement networks as well as securities exchanges around the world that may require the firm to meet the obligations of such networks and exchanges in the event of member defaults and other loss scenarios.

In connection with its prime brokerage and clearing businesses, the firm agrees to clear and settle on behalf of its clients the transactions entered into by them with other brokerage firms. The firm's obligations in respect of such transactions are secured by the assets in the client's account as well as any proceeds received from the transactions cleared and settled by the firm on behalf of the client. In connection with joint venture investments, the firm may issue loan guarantees under which it may be liable in the event of fraud, misappropriation, environmental liabilities and certain other matters involving the borrower.

The firm is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the firm will have to make any material payments under these arrangements, and no material liabilities related to these guarantees and indemnifications have been recognized in the consolidated statement of financial condition as of December 2015.

Other Representations, Warranties and Indemnifications. The firm provides representations and warranties to counterparties in connection with a variety of commercial transactions and occasionally indemnifies them against potential losses caused by the breach of those representations and warranties. The firm may also provide indemnifications protecting against changes in or adverse application of certain U.S. tax laws in connection with ordinary-course transactions such as securities issuances, borrowings or derivatives.

In addition, the firm may provide indemnifications to some counterparties to protect them in the event additional taxes are owed or payments are withheld, due either to a change in or an adverse application of certain non-U.S. tax laws.

These indemnifications generally are standard contractual terms and are entered into in the ordinary course of business. Generally, there are no stated or notional amounts included in these indemnifications, and the contingencies triggering the obligation to indemnify are not expected to occur. The firm is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the firm will have to make any material payments under these arrangements, and no material liabilities related to these arrangements have been recognized in the consolidated statement of financial condition as of December 2015.

Note 17.

Transactions with Related Parties

The firm enters into transactions with Group Inc. and affiliates in the normal course of business as part of market making and general operations.

Amounts payable to, and receivable from, such affiliates are reflected in the consolidated statement of financial condition as set forth below:

$ in millions	As of December 2015
Assets	
Collateralized agreements:	
Securities purchased under agreements to resell, at fair value	**$ 29,244**
Securities borrowed (includes $44,827 at fair value)	**72,627**
Receivables:	
Brokers, dealers and clearing organizations	**4,176**
Customers and counterparties	**315**
Financial instruments owned, at fair value [1]	**2,237**
Other assets	**177**
Liabilities	
Collateralized financings:	
Securities sold under agreements to repurchase, at fair value	**$ 37,913**
Securities loaned (includes $28,983 at fair value)	**52,981**
Other secured financings	**42,509**
Payables:	
Brokers, dealers and clearing organizations	**250**
Customers and counterparties	**12,439**
Financial instruments sold, but not yet purchased, at fair value [2]	**1,663**
Unsecured short-term borrowings	**6,266**
Other liabilities and accrued expenses	**3,046**
Subordinated borrowings	**18,500**

1. The firm, from time to time, makes markets in debt issued by Group Inc. and certain affiliates. "Financial instruments owned, at fair value" in the table above primarily includes such issuances of $1.92 billion and affiliate derivative contracts of $298 million.
2. Consists of derivative contracts with affiliates.

The firm receives and provides operational and administrative support and management services to affiliates and allocates costs for the services provided.

The firm enters into various types of activities with affiliates and allocates revenues to, and receives revenues from, such affiliates for their participation.

The firm acts as the investment manager for numerous related party funds of Group Inc. and is entitled to receive management fees and, in certain cases, advisory fees from these funds.

The firm acts as underwriter for certain debt issuances of related parties.

Note 18.

Income Taxes

Provision for Income Taxes

Effective November 29, 2003, GS&Co. elected to be taxed as a corporation for U.S. federal income tax purposes. As a corporation, for tax purposes, the firm is subject to U.S. federal and various state and local income taxes on its earnings. The firm is also subject to taxes in foreign jurisdictions on certain of its operations. The firm is included with Group Inc. and subsidiaries in the consolidated corporate federal tax return as well as consolidated/combined state and local tax returns. The firm computes its tax liability on a modified separate company basis and settles such liability with Group Inc. pursuant to the tax sharing agreement. To the extent the firm generates tax benefits from losses it will be reimbursed by Group Inc. pursuant to the tax sharing agreement. The firm's state and local tax liabilities are allocated to reflect its share of the consolidated/combined state and local income tax liability.

Income taxes are provided for using the asset and liability method under which deferred tax assets and liabilities are recognized for temporary differences between the financial reporting and tax bases of assets and liabilities.

Deferred Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities. These temporary differences result in taxable or deductible amounts in future years and are measured using the tax rates and laws that will be in effect when such differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets to the amount that more likely than not will be realized. As of December 2015, the firm did not record a valuation allowance to reduce deferred tax assets. Tax assets and liabilities are presented as a component of "Other assets" and "Other liabilities and accrued expenses," respectively.

The table below presents the significant components of deferred tax assets and liabilities.

$ in millions	As of December 2015
Deferred tax assets	
Compensation and benefits	**$1,129**
Reserves	**508**
Occupancy-related	**70**
Other, net	**17**
Total deferred tax assets	**$1,724**
Deferred tax liabilities	
Unrealized gains	**$ 136**
Depreciation and amortization	**344**
Total deferred tax liabilities	**$ 480**

Unrecognized Tax Benefits

The firm recognizes tax positions in the consolidated statement of financial condition only when it is more likely than not that the position will be sustained on examination by the relevant taxing authority based on the technical merits of the position. A position that meets this standard is measured at the largest amount of benefit that will more likely than not be realized on settlement. A liability is established for differences between positions taken in a tax return and amounts recognized in the consolidated statement of financial condition. As of December 2015, the firm recorded a liability of $25 million related to uncertainty in income taxes. In addition, the accrued liability for interest expense related to income tax matters was $18 million as of December 2015.

Regulatory Tax Examinations

The firm is subject to examination by the U.S. Internal Revenue Service (IRS) and other taxing authorities in jurisdictions where the firm has significant business operations, such as New York State and City. The tax years under examination vary by jurisdiction.

The U.S. Federal examinations of fiscal 2008 through calendar 2010 have been finalized, but the settlement is subject to review by the Joint Committee of Taxation. The examinations of 2011 and 2012 began in 2013.

Group Inc. has been accepted into the Compliance Assurance Process program by the IRS for the 2013, 2014, 2015 and 2016 tax years. This program allows Group Inc. to work with the IRS to identify and resolve potential U.S. federal tax issues before the filing of tax returns. The 2013 tax year is the first year that was examined under the program, and 2013 and 2014 remain subject to post-filing review.

New York State and City examinations of fiscal 2007 through 2010 began in 2013.

All years including and subsequent to 2007 for New York State and City and for all other significant states remain open to examination by the taxing authorities. The firm believes that the liability for unrecognized tax benefits it has established is adequate in relation to the potential for additional assessments.

Note 19.

Credit Concentrations

Credit concentrations may arise from market making, client facilitation, investing, underwriting, lending and collateralized transactions and may be impacted by changes in economic, industry or political factors. The firm seeks to mitigate credit risk by actively monitoring exposures and obtaining collateral from counterparties as deemed appropriate.

While the firm's activities expose it to many different industries and counterparties, the firm routinely executes a high volume of transactions with asset managers, investment funds, commercial banks, brokers and dealers, clearing houses and exchanges, which results in significant credit concentrations.

In the ordinary course of business, the firm may also be subject to a concentration of credit risk to a particular counterparty, borrower or issuer, including sovereign issuers, or to a particular clearing house or exchange.

The table below presents the credit concentrations in cash instruments held by the firm.

$ in millions	As of December 2015
U.S. government and federal agency obligations [1]	**$52,363**
% of total assets	**11.5%**

1. Included in "Financial instruments owned, at fair value" and "Cash and securities segregated for regulatory and other purposes."

As of December 2015, the firm did not have credit exposure to any other counterparty that exceeded 2% of total assets.

To reduce credit exposures, the firm may enter into agreements with counterparties that permit the firm to offset receivables and payables with such counterparties and/or enable the firm to obtain collateral on an upfront or contingent basis. Collateral obtained by the firm related to derivative assets is principally cash and is held by the firm or a third-party custodian. Collateral obtained by the firm related to resale agreements and securities borrowed transactions is primarily U.S. government and federal agency obligations and non-U.S. government and agency obligations. See Note 9 for further information about collateralized agreements and financings.

The table below presents U.S. government and federal agency obligations, and non-U.S. government and agency obligations, that collateralize resale agreements and securities borrowed transactions (including those in "Cash and securities segregated for regulatory and other purposes"). Because the firm's primary credit exposure on such transactions is to the counterparty to the transaction, the firm would be exposed to the collateral issuer only in the event of counterparty default.

$ in millions	As of December 2015
U.S. government and federal agency obligations	**$132,364**
Non-U.S. government and agency obligations [1]	**14,515**

1. Principally consists of securities issued by the governments of Japan and Germany.

Note 20.

Legal Proceedings

The firm is involved in a number of judicial, regulatory and arbitration proceedings concerning matters arising in connection with the conduct of the firm's businesses. Many of these proceedings are in early stages, and many of these cases seek an indeterminate amount of damages.

Under ASC 450, an event is "reasonably possible" if "the chance of the future event or events occurring is more than remote but less than likely" and an event is "remote" if "the chance of the future event or events occurring is slight." Thus, references to the upper end of the range of reasonably possible loss for cases in which the firm is able to estimate a range of reasonably possible loss mean the upper end of the range of loss for cases for which the firm believes the risk of loss is more than slight.

These proceedings include, but are not limited to, the firm's role in certain underwriting activities, research matters, treasury matters, mutual fund and securities-related actions.

With respect to matters for which management has been able to estimate a range of reasonably possible loss where (i) actual or potential plaintiffs have claimed an amount of money damages, (ii) the firm is being, or threatened to be, sued by purchasers in an underwriting and is not being indemnified by a party that the firm believes will pay any judgment, or (iii) the purchasers are demanding that the firm repurchase securities, management has estimated the upper end of the range of reasonably possible loss as being equal to (a) in the case of (i), the amount of money damages claimed, (b) in the case of (ii), the difference between the initial sales price of the securities that the firm sold in such underwriting and the estimated lowest subsequent price of such securities and (c) in the case of (iii), the price that purchasers paid for the securities less the estimated value, if any, as of December 2015 of the relevant securities, in each of cases (i), (ii) and (iii), taking into account any factors believed to be relevant to the particular matter or matters of that type. As of the date hereof, the firm has estimated the upper end of the range of reasonably possible aggregate loss for such matters where management has been able to estimate a range of reasonably possible aggregate loss to be approximately $1.7 billion in excess of the aggregate reserves for such matters. Because more than one Group Inc. subsidiary may be named in a particular proceeding and Group Inc. has attributed the upper end of the range of reasonably possible loss to each named Group Inc. subsidiary for such proceeding, the sum of the upper end of the range of reasonably possible loss amounts for all Group Inc. subsidiaries exceeds the upper end of the range of the consolidated reasonably possible loss reported by Group Inc. in its financial statements. Although each named subsidiary is attributed the upper end of the range of reasonably possible loss for a proceeding, Group Inc. generally attributes reserves for a particular proceeding to only one subsidiary based on Group Inc.'s evaluation of the proceeding.

Management is generally unable to estimate a range of reasonably possible loss for matters other than those included in the estimate above, including where (i) actual or potential plaintiffs have not claimed an amount of money damages, except in those instances where management can otherwise determine an appropriate amount, (ii) matters are in early stages, (iii) matters relate to regulatory investigations or reviews, except in those instances where management can otherwise determine an appropriate amount, (iv) there is uncertainty as to the likelihood of a class being certified or the ultimate size of the class, (v) there is uncertainty as to the outcome of pending appeals or motions, (vi) there are significant factual issues to be resolved, and/or (vii) there are novel legal issues presented. For example, the firm's potential liabilities with respect to future mortgage-related "put-back" claims may ultimately result in an increase in the firm's liabilities, but are not included in management's estimate of reasonably possible loss. As another example, the firm's potential liabilities with respect to regulatory investigations and reviews also generally are not included in management's estimate of reasonably possible loss. However, management does not believe, based on currently available information, that the outcomes of such other matters will have a material adverse effect on the firm's financial condition, though the outcomes could be material to the firm's operating results for any particular period, depending, in part, upon the operating results for such period.

On January 14, 2016, Group Inc. announced an agreement in principle, subject to definitive documentation, to resolve the ongoing investigation of the Residential Mortgage-Backed Securities Working Group of the U.S. Financial Fraud Enforcement Task Force. The agreement in principle will resolve actual and potential civil claims by the U.S. Department of Justice, the New York and Illinois Attorneys General, the National Credit Union Administration (as conservator for several failed credit unions) and the Federal Home Loan Banks of Chicago and Seattle, relating to the firm's securitization, underwriting and sale of residential mortgage-backed securities from 2005 to 2007. Under the terms of the agreement in principle, the firm will pay a $2.39 billion civil monetary penalty, make $875 million in cash payments and provide $1.80 billion in consumer relief. The consumer relief will be in the form of principal forgiveness for underwater homeowners and distressed borrowers; financing for construction, rehabilitation and preservation of affordable housing; and support for debt restructuring, foreclosure prevention and housing quality improvement programs, as well as land banks. The firm has established a reserve for its estimated obligations under the agreement in principle. The firm has also received, and continues to receive, requests for information and/or subpoenas from, and is engaged in discussions with, federal, state and local regulators and law enforcement authorities as part of inquiries or investigations relating to the mortgage-related securitization process, subprime mortgages, CDOs, synthetic mortgage-related products, sales communications and particular transactions involving these products, and servicing and foreclosure activities, which may subject the firm to actions, including litigation, penalties and fines.

Note 21.

Employee Benefit Plans

The firm's employees participate in various Group Inc. sponsored pension plans and certain other postretirement benefit plans, primarily healthcare and life insurance. Group Inc. also provides certain benefits to former or inactive employees prior to retirement. The cost of these plans are allocated to the firm by Group Inc.

Defined Benefit Pension Plans and Postretirement Plans

Group Inc. also maintains a defined benefit pension plan for substantially all U.S. employees hired prior to November 1, 2003. As of November 2004, this plan was closed to new participants and frozen for existing participants. In addition, the firm maintains unfunded postretirement benefit plans that provide medical and life insurance for eligible retirees and their dependents covered under these programs. These plans do not have a material impact on the firm.

Defined Contribution Plans

The firm contributes to Group Inc.'s employer-sponsored U.S. defined contribution plan.

Note 22.

Employee Incentive Plans

The cost of employee services received in exchange for a share-based award is generally measured based on the grant-date fair value of the award. Share-based awards that do not require future service (i.e., vested awards, including awards granted to retirement-eligible employees) are expensed immediately. Share-based awards that require future service are amortized over the relevant service period. Expected forfeitures are included in determining share-based employee compensation expense. GS&Co. pays cash dividend equivalents on outstanding restricted stock units (RSUs).

Stock Incentive Plan

Group Inc. sponsors a stock incentive plan, The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (2015 SIP), which provides for grants of RSUs, restricted stock, dividend equivalent rights, incentive stock options, nonqualified stock options, stock appreciation rights, and other share-based awards, each of which may be subject to performance conditions. On May 21, 2015, shareholders approved the 2015 SIP. The 2015 SIP replaced the Goldman Sachs Amended and Restated Stock Incentive Plan (2013) (2013 SIP) previously in effect, and applies to awards granted on or after the date of approval. The 2015 SIP is scheduled to terminate on the date of Group Inc.'s annual meeting of shareholders that occurs in 2019.

Restricted Stock Units

Group Inc. grants RSUs to employees under the 2015 SIP, which are valued based on the closing price of the underlying shares on the date of grant after taking into account a liquidity discount for any applicable post-vesting and delivery transfer restrictions. RSUs generally vest and underlying shares of common stock deliver as outlined in the applicable award agreements. Employee award agreements generally provide that vesting is accelerated in certain circumstances, such as on retirement, death, disability and conflicted employment.

The subsequent amortization of the cost of these RSUs is allocated to the firm by Group Inc. Delivery of the underlying shares of common stock is conditioned on the grantees satisfying certain vesting and other requirements outlined in the award agreements.

The table below presents the activity related to RSUs.

	Restricted Stock Units Outstanding		Weighted Average Grant-Date Fair Value of Restricted Stock Units Outstanding	
	Future Service Required	No Future Service Required	Future Service Required	No Future Service Required
Outstanding, December 2014	3,212,147	10,628,954	$ 144.48	$ 130.03
Granted [1 2]	**2,263,496**	**5,073,147**	**164.95**	**157.08**
Forfeited	**(375,996)**	**(86,691)**	**153.85**	**143.38**
Delivered [3]	**–**	**(6,379,903)**	**–**	**122.52**
Vested [2]	**(2,146,995)**	**2,146,995**	**141.26**	**141.26**
Transfers	**(7,655)**	**2,234**	**171.92**	**131.73**
Outstanding, December 2015	**2,944,997**	**11,384,736**	**161.46**	**148.31**

1. The weighted average grant-date fair value of RSUs granted during 2015 was $159.51. The fair value of the RSUs granted during 2015 includes a liquidity discount of 9.7% to reflect post-vesting and delivery transfer restrictions of up to 4 years.
2. The aggregate fair value of awards that vested during 2015 was $1.15 billion.
3. Includes RSUs that were cash settled.

Stock Options

Stock options generally vest as outlined in the applicable stock option agreement. In general, options expire on the tenth anniversary of the grant date, although they may be subject to earlier termination or cancellation under certain circumstances in accordance with the terms of the applicable stock option agreement and the SIP in effect at the time of grant.

The table below presents the activity related to outstanding stock options, all of which were granted in 2005 through 2008.

	Options Outstanding	Weighted Average Exercise Price	Aggregate Intrinsic Value *(in millions)*	Weighted Average Remaining Life *(years)*
Outstanding, December 2014	5,580,120	$ 80.00	$ 635	3.96
Exercised	**(1,255,341)**	**81.48**		
Outstanding, December 2015	**4,324,779**	**79.57**	**436**	**2.99**
Exercisable, December 2015	**4,324,779**	**79.57**	**436**	**2.99**

The total intrinsic value of options exercised during 2015 was $150 million.

The table below presents options outstanding.

Exercise Price	**Options Outstanding**	**Weighted Average Exercise Price**	**Weighted Average Remaining Life *(years)***
$ 75.00 - $ 89.99	**4,297,540**	**$ 78.78**	**3.00**
90.00 - 194.99	**–**	**–**	**–**
195.00 - 209.99	**27,239**	**203.52**	**1.77**
Outstanding, December 2015	**4,324,779**	**79.57**	**2.99**

As of December 2015, there was $234 million of total unrecognized compensation cost related to non-vested share-based compensation arrangements. This cost is expected to be recognized over a weighted average period of 1.61 years.

Note 23.

Net Capital Requirements

GS&Co. is a registered U.S. broker-dealer and futures commission merchant, and is subject to regulatory capital requirements, including those imposed by the SEC, the U.S. Commodity Futures Trading Commission (CFTC), the Chicago Mercantile Exchange, the Financial Industry Regulatory Authority, Inc. (FINRA) and the National Futures Association. Rule 15c3-1 of the SEC and Rule 1.17 of the CFTC specify uniform minimum net capital requirements, as defined, for their registrants, and also effectively require that a significant part of the registrants' assets be kept in relatively liquid form. GS&Co. has elected to calculate its minimum capital requirements in accordance with the "Alternative Net Capital Requirement" as permitted by Rule 15c3-1.

As of December 2015, GS&Co. has regulatory net capital, as defined by Rule 15c3-1, of $14.75 billion, which exceeded the amount required by $12.37 billion.

In addition to its alternative minimum net capital requirements, GS&Co. is also required to hold tentative net capital in excess of $1 billion and net capital in excess of $500 million in accordance with the market and credit risk standards of Appendix E of Rule 15c3-1. GS&Co. is also required to notify the SEC in the event that its tentative net capital is less than $5 billion. As of December 2015, GS&Co. had tentative net capital and net capital in excess of both the minimum and the notification requirements.

The U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions that require the registration of all swap dealers, major swap participants, security-based swap dealers and major security-based swap participants. GS&Co. is registered as a "swap dealer" under the CFTC rules and will be subject to regulatory capital requirements once the rules are finalized by the CFTC.

Certain other subsidiaries of GS&Co. are also subject to capital adequacy requirements promulgated by authorities of the countries in which they operate. As of December 2015, these subsidiaries were in compliance with their local capital adequacy requirements.

Note 24.

Subsequent Events

Management has evaluated whether any events or transactions occurred subsequent to the date of the statement of financial condition and through February 22, 2016, and determined that there were no material events or transactions other than the agreement in principle with the RMBS Working Group disclosed in Note 20 that would require recognition or disclosure in this consolidated statement of financial condition.

Supplemental Financial Information Pursuant to Regulation 1.10

STATEMENT OF SEGREGATION REQUIREMENTS AND FUNDS IN SEGREGATION FOR CUSTOMERS TRADING ON U.S. COMMODITY EXCHANGES

As of December 31, 2015

(in millions)

SEGREGATION REQUIREMENTS (Section 4d(2) of the CEAct)

1. Net ledger balance		
A. Cash		**$ 14,640**
B. Securities (at market)		**11,402**
2. Net unrealized profit (loss) in open futures contracts traded on a contract market		**(3,185)**
3. Exchange traded options		
A. Add market value of open option contracts purchased on a contract market		**1,075**
B. Deduct market value of open option contracts granted (sold) on a contract market		**(1,266)**
4. Net equity (deficit) (add lines 1, 2 and 3)		**$ 22,666**
5. Accounts liquidating to a deficit and accounts with debit balances – gross amount	**1,262**	
Less: amount offset by customer owned securities	**(1,250)**	**12**
6. Amount required to be segregated (add lines 4 and 5)		**$ 22,678**

FUNDS IN SEGREGATED ACCOUNTS

7. Deposited in segregated funds bank accounts	
A. Cash	**1,412**
B. Securities representing investments of customers' funds (at market)	**–**
C. Securities held for particular customers or option customers in lieu of cash (at market)	**3,120**
8. Margins on deposit with derivatives clearing organizations of contract markets	
A. Cash	**231**
B. Securities representing investments of customers' funds (at market)	**10,403**
C. Securities held for particular customers or option customers in lieu of cash (at market)	**8,282**

Supplemental Financial Information Pursuant to Regulation 1.10

STATEMENT OF SEGREGATION REQUIREMENTS AND FUNDS IN SEGREGATION FOR CUSTOMERS TRADING ON U.S. COMMODITY EXCHANGES (Continued)

As of December 31, 2015

(in millions)

FUNDS IN SEGREGATED ACCOUNTS (continued)

9. Net settlement from (to) derivatives clearing organizations of contract markets	**(3)**
10. Exchange traded options	
A. Value of open long option contracts	**1,075**
B. Value of open short option contracts	**(1,266)**
11. Net equities with other FCMs	
A. Net liquidating equity	**2**
B. Securities representing investments of customers' funds (at market)	**–**
C. Securities held for particular customers or option customers in lieu of cash (at market)	**–**
12. Segregated funds on hand	**–**
13. Total amount in segregation (add lines 7 through 12)	**23,256**
14. Excess (deficiency) funds in segregation (subtract line 6 from line 13)	**$ 578**
15. Management Target Amount For Excess funds in segregation	**$ 475**
16. Excess (deficiency) funds in segregation over (under) Management Target Amount Excess	**$ 103**

There are no material differences between the computations shown in the supplemental schedules as presented in this report and the corresponding computations prepared by GS&Co. in its December 31, 2015, unaudited Part II FOCUS Report, as filed on January 27, 2016.

Supplemental Financial Information Pursuant to Regulation 1.10

STATEMENT OF SEGREGATION REQUIREMENTS AND FUNDS IN SEGREGATION FOR CUSTOMERS' DEALER OPTIONS ACCOUNTS

STATEMENT IS NOT APPLICABLE

Supplemental Financial Information Pursuant to Regulation 1.10

STATEMENT OF SECURED AMOUNTS AND FUNDS HELD IN SEPARATE ACCOUNTS PURSUANT TO COMMISSION REGULATION 30.7

As of December 31, 2015

(in millions)

FOREIGN FUTURES AND FOREIGN OPTIONS SECURED AMOUNTS

Amount required to be set aside pursuant to law, rule or regulation of a foreign government or a rule of a self-regulatory organization authorized thereunder		**$ –**
1. Net ledger balance – Foreign Futures and Foreign Option Trading – All Customers		
A. Cash		**$ 4,192**
B. Securities (at market)		**6,833**
2. Net unrealized profit (loss) in open futures contracts traded on a foreign board of trade		**182**
3. Exchange traded options		
A. Market value of open option contracts purchased on a foreign board of trade		**10**
B. Market value of open contracts granted (sold) on a foreign board of trade		**(6)**
4. Net equity (deficit) (add lines 1, 2 and 3)		**$ 11,211**
5. Accounts liquidating to a deficit and accounts with debit balances – gross amount	**$ 383**	
Less: amount offset by customer owned securities	**(380)**	**3**
6. Amount required to be set aside as the secured amount – Net Liquidating Equity Method (add lines 4 and 5)		**$ 11,214**
7. Greater of amount required to be set aside pursuant to foreign jurisdiction (above) or line 6		**$ 11,214**

There are no material differences between the computations shown in the supplemental schedules as presented in this report and the corresponding computations prepared by GS&Co. in its December 31, 2015, unaudited Part II FOCUS Report, as filed on January 27, 2016.

Supplemental Financial Information Pursuant to Regulation 1.10

STATEMENT OF SECURED AMOUNTS AND FUNDS HELD IN SEPARATE ACCOUNTS PURSUANT TO COMMISSION REGULATION 30.7

As of December 31, 2015

(in millions)

FUNDS DEPOSITED IN SEPARATE REGULATION 30.7 ACCOUNTS		
1. Cash in banks		
A. Banks located in the United States	**$ 758**	
B. Other banks qualified under Regulation 30.7	**910**	**$ 1,668**
2. Securities		
A. In safekeeping with banks located in the United States	**$ 3,442**	
B. In safekeeping with other banks qualified under Regulation 30.7	**–**	**3,442**
3. Equities with registered futures commission merchants		
A. Cash	**$ –**	
B. Securities	**–**	
C. Unrealized gain (loss) on open futures contracts	**–**	
D. Value of long option contracts	**–**	
E. Value of short option contracts	**–**	**–**
4. Amounts held by clearing organizations of foreign boards of trade		
A. Cash	**$ 30**	
B. Securities	**–**	
C. Amount due to (from) clearing organizations - daily variation	**(5)**	
D. Value of long option contracts	**–**	
E. Value of short option contracts	**–**	**25**
5. Amounts held by members of foreign boards of trade		
A. Cash	**$ 2,995**	
B. Securities	**3,391**	
C. Unrealized gain (loss) on open futures contracts	**260**	
D. Value of long option contracts	**10**	
E. Value of short option contracts	**(6)**	**6,650**

Supplemental Financial Information Pursuant to Regulation 1.10

STATEMENT OF SECURED AMOUNTS AND FUNDS HELD IN SEPARATE ACCOUNTS PURSUANT TO COMMISSION REGULATION 30.7 (Continued)

As of December 31, 2015

(in millions)

FUNDS DEPOSITED IN SEPARATE REGULATION 30.7 ACCOUNTS (continued)

6.	Amounts with other depositories designated by a foreign board of trade	–
7.	Segregated funds on hand	–
8.	Total funds in separate section 30.7 accounts	**$ 11,785**
9.	Excess (deficiency) set Aside Funds for Secured Amount (subtract Line 7 Secured Statement from Line 8)	**$ 571**
10.	Management Target Amount for Excess funds in separate section 30.7 accounts	**$ 475**
11.	Excess (deficiency) funds in separate 30.7 accounts over (under) Management Target	**$ 96**

There are no material differences between the computations shown in the supplemental schedules as presented in this report and the corresponding computations prepared by GS&Co. in its December 31, 2015, unaudited Part II FOCUS Report, as filed on January 27, 2016.

Supplemental Financial Information Pursuant to Regulation 1.10

STATEMENT OF CLEARED SWAPS CUSTOMER SEGREGATION REQUIREMENTS AND FUNDS IN CLEARED SWAPS CUSTOMER ACCOUNTS UNDER 4D(F) OF THE CEA

As of December 31, 2015

(in millions)

CLEARED SWAPS CUSTOMER REQUIREMENTS		
1. Net ledger balance		
A. Cash		**$ 1,358**
B. Securities (at market)		**1,650**
2. Net unrealized profit (loss) in open cleared swaps		**356**
3. Cleared swaps options		
A. Market value of open cleared swaps option contracts purchased		**–**
B. Market value of open cleared swaps option contracts granted (sold)		**–**
4. Net equity (deficit) (add lines 1, 2 and 3)		**$ 3,364**
5. Accounts liquidating to a deficit and accounts with debit balances – gross amount	**$ 25**	
Less: amount offset by customer owned securities	**(25)**	**–**
6. Amount required to be segregated for cleared swaps customers (add lines 4 and 5)		**$ 3,364**

FUNDS IN CLEARED SWAPS CUSTOMER SEGREGATED ACCOUNTS	
7. Deposited in cleared swaps customer segregated accounts at banks	
A. Cash	**$ 320**
B. Securities representing investments of cleared swaps customers' funds (at market)	**–**
C. Securities held for particular cleared swaps customers in lieu of cash (at market)	**209**
8. Margins on deposit with derivatives clearing organizations in cleared swaps customer segregated accounts	
A. Cash	**67**
B. Securities representing investments of cleared swaps customers' funds (at market)	**1,776**
C. Securities held for particular cleared swaps customers in lieu of cash (at market)	**1,442**

Supplemental Financial Information Pursuant to Regulation 1.10

STATEMENT OF CLEARED SWAPS CUSTOMER SEGREGATION REQUIREMENTS AND FUNDS IN CLEARED SWAPS CUSTOMER ACCOUNTS UNDER 4D(F) OF THE CEA (Continued)

As of December 31, 2015

(in millions)

FUNDS IN CLEARED SWAPS CUSTOMER SEGREGATED ACCOUNTS (continued)	
9. Net settlement from (to) derivatives clearing organizations	**(25)**
10. Cleared swaps options	
A. Value of open cleared swaps long option contracts	**–**
B. Value of open cleared swaps short option contracts	**–**
11. Net equities with other FCMs	
A. Net liquidating equity	**–**
B. Securities representing investments of cleared swaps customers' funds (at market)	**–**
C. Securities held for particular cleared swaps customers in lieu of cash (at market)	**–**
12. Cleared swaps customer funds on hand	**–**
13. Total amount in cleared swaps customer segregation (add lines 7 through 12)	**$ 3,789**
14. Excess (deficiency) funds in cleared swaps customer segregation (subtract line 6 from line 13)	**$ 425**
15. Management Target Amount for Excess funds in cleared swaps segregated accounts	**$ 350**
16. Excess (deficiency) funds in cleared swaps customer segregated accounts over (under) Management Target Excess	**$ 75**

There are no material differences between the computations shown in the supplemental schedules as presented in this report and the corresponding computations prepared by GS&Co. in its December 31, 2015, unaudited Part II FOCUS Report, as filed on January 27, 2016.

Appendix C. Non-Discrimination Certificate

City of Austin, Texas
Section 0800
EQUAL EMPLOYMENT/FAIR HOUSING OFFICE
NON-DISCRIMINATION CERTIFICATION

City of Austin, Texas
Human Rights Commission

To: City of Austin, Texas, ("OWNER")

I hereby certify that our firm conforms to the Code of the City of Austin, Section 5-4-2 as reiterated below:

Chapter 5-4. Discrimination in Employment by City Contractors.

Sec. 4-2 Discriminatory Employment Practices Prohibited. As an Equal Employment Opportunity (EEO) employer, the Contractor will conduct its personnel activities in accordance with established federal, state and local EEO laws and regulations and agrees:

(B) (1) Not to engage in any discriminatory employment practice defined in this chapter.

(2) To take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without discrimination being practiced against them as defined in this chapter. Such affirmative action shall include, but not be limited to: all aspects of employment, including hiring, placement, upgrading, transfer, demotion, recruitment, recruitment advertising; selection for training and apprenticeship, rates of pay or other form of compensation, and layoff or termination.

(3) To post in conspicuous places, available to employees and applicants for employment, notices to be provided by OWNER setting forth the provisions of this chapter.

(4) To state in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, creed, color, religion, national origin, sexual orientation, gender identity, disability, veteran status, sex or age.

(5) To obtain a written statement from any labor union or labor organization furnishing labor or service to Contractors in which said union or organization has agreed not to engage in any discriminatory employment practices as defined in this chapter and to take affirmative action to implement policies and provisions of this chapter.

(6) To cooperate fully with OWNER's Human Rights Commission in connection with any investigation or conciliation effort of said Human Rights Commission to ensure that the purpose of the provisions against discriminatory employment practices are being carried out.

(7) To require compliance with provisions of this chapter by all subcontractors having fifteen or more employees who hold any subcontract providing for the expenditure of $2,000 or more in connection with any contract with OWNER subject to the terms of this chapter.

For the purposes of this Offer and any resulting Contract, Contractor adopts the provisions of the City's Minimum Standard Nondiscrimination Policy set forth below.

City of Austin
Minimum Standard Non-Discrimination in Employment Policy:

As an Equal Employment Opportunity (EEO) employer, the Contractor will conduct its personnel activities in accordance with established federal, state and local EEO laws and regulations.

The Contractor will not discriminate against any applicant or employee based on race, creed, color, national origin, sex, age, religion, veteran status, gender identity, disability, or sexual orientation. This policy covers all aspects of employment, including hiring, placement, upgrading, transfer, demotion,

recruitment, recruitment advertising, selection for training and apprenticeship, rates of pay or other forms of compensation, and layoff or termination.

Further, employees who experience discrimination, sexual harassment, or another form of harassment should immediately report it to their supervisor. If this is not a suitable avenue for addressing their complaint, employees are advised to contact another member of management or their human resources representative. No employee shall be discriminated against, harassed, intimidated, nor suffer any reprisal as a result of reporting a violation of this policy. Furthermore, any employee, supervisor, or manager who becomes aware of any such discrimination or harassment should immediately report it to executive management or the human resources office to ensure that such conduct does not continue.

Contractor agrees that to the extent of any inconsistency, omission, or conflict with its current non-discrimination employment policy, the Contractor has expressly adopted the provisions of the City's Minimum Non-Discrimination Policy contained in Section 5-4-2 of the City Code and set forth above, as the Contractor's Non-Discrimination Policy or as an amendment to such Policy and such provisions are intended to not only supplement the Contractor's policy, but will also supersede the Contractor's policy to the extent of any conflict.

UPON CONTRACT AWARD, THE CONTRACTOR SHALL PROVIDE A COPY TO THE CITY OF THE CONTRACTOR'S NON-DISCRIMINATION POLICY ON COMPANY LETTERHEAD, WHICH CONFORMS IN FORM, SCOPE, AND CONTENT TO THE CITY'S MINIMUM NON-DISCRIMINATION POLICY, AS SET FORTH HEREIN, **OR** THIS NON-DISCRIMINATION POLICY, WHICH HAS BEEN ADOPTED BY THE CONTRACTOR FOR ALL PURPOSES (THE FORM OF WHICH HAS BEEN APPROVED BY THE CITY'S EQUAL EMPLOYMENT/FAIR HOUSING OFFICE), WILL BE CONSIDERED THE CONTRACTOR'S NON-DISCRIMINATION POLICY WITHOUT THE REQUIREMENT OF A SEPARATE SUBMITTAL.

Sanctions:

Our firm understands that non-compliance with Chapter 5-4 may result in sanctions, including termination of the contract and suspension or debarment from participation in future City contracts until deemed compliant with the requirements of Chapter 5-4.

Term:
The Contractor agrees that this Section 0800 Non-Discrimination Certificate or the Contractor's separate conforming policy, which the Contractor has executed and filed with the Owner, will remain in force and effect for one year from the date of filing. The Contractor further agrees that, in consideration of the receipt of continued Contract payments, the Contractor's Non-Discrimination Policy will automatically renew from year-to-year for the term of the underlying Contract.

Appendix D. Additional Disclosures

PROPOSAL ACCEPTANCE

As noted herein, nothing in Goldman Sachs' Proposal is a commitment to act in any role in connection with the services contemplated by the RFP. Any such commitment to perform services contemplated by the RFP shall only be set forth in a separate agreement appropriate for the type of transaction involved. If selected by the City to perform the services set forth in our Proposal, Goldman Sachs reserves the right to negotiate the terms of the resulting agreement, which would contain customary terms and conditions mutually agreed upon by Goldman Sachs and the City. Notwithstanding the foregoing, the proposed fees for the services set forth in our Proposal shall remain for a period of 180 calendar days from the date of our Proposal.

CITY OF AUSTIN
PURCHASING OFFICE
SUPPLEMENTAL PURCHASE PROVISIONS
SOLICITAION NO. RFQS TVN0103REBID

The following Supplemental Purchasing Provisions apply to this solicitation:

1. **EXPLANATIONS OR CLARIFICATIONS:** (reference paragraph 5 in Section 0200)

   All requests for explanations or clarifications must be submitted in writing to the Purchasing Office no later than seven (7) calendar days prior to closing. Submissions may be made via email to Terry.Nicholson@austintexas.gov, or via fax at (512)974-2388.

2. **INSURANCE:** Insurance is required for this solicitation.

   A. **General Requirements:** See Section 0300, Standard Purchase Terms and Conditions, paragraph 32, entitled Insurance, for general insurance requirements.

      i. The Contractor shall provide a Certificate of Insurance as verification of coverages required below to the City at the below address prior to contract execution and within 14 calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award.

      ii. The Contractor shall not commence work until the required insurance is obtained and until such insurance has been reviewed by the City. Approval of insurance by the City shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.

      iii. The Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or holdover period is exercised, as verification of continuing coverage.

      iv. The Certificate of Insurance, and updates, shall be mailed to the following address:

      City of Austin Purchasing Office
      P. O. Box 1088
      Austin, Texas 78767

   B. **Specific Coverage Requirements:** The Contractor shall at a minimum carry insurance in the types and amounts indicated below for the duration of the Contract, including extension options and hold over periods, and during any warranty period. These insurance coverages are required minimums and are not intended to limit the responsibility or liability of the Contractor.

      i. **Worker's Compensation and Employers' Liability Insurance:** Coverage shall be consistent with statutory benefits outlined in the Texas Worker's Compensation Act (Section 401). The minimum policy limits for Employer's Liability are $100,000 bodily injury each accident, $500,000 bodily injury by disease policy limit and $100,000 bodily injury by disease each employee.

         (1) The Contractor's policy shall apply to the State of Texas and include these endorsements in favor of the City of Austin:

            (a) Waiver of Subrogation, Form WC420304, or equivalent coverage

            (b) Thirty (30) days Notice of Cancellation, Form WC420601, or equivalent coverage

      ii. **Commercial General Liability Insurance:** The minimum bodily injury and property damage per occurrence are $500,000 for coverages A (Bodily Injury and Property Damage) and B (Personal and Advertising Injury).

         (1) The policy shall contain the following provisions:

            (a) Contractual liability coverage for liability assumed under the Contract and all other Contracts related to the project.

(b) Contractor/Subcontracted Work.

(c) Products/Completed Operations Liability for the duration of the warranty period.

(d) If the project involves digging or drilling provisions must be included that provide Explosion, Collapse, and/or Underground Coverage.

(2) The policy shall also include these endorsements in favor of the City of Austin:

(a) Waiver of Subrogation, Endorsement CG 2404, or equivalent coverage

(b) Thirty (30) days Notice of Cancellation, Endorsement CG 0205, or equivalent coverage

(c) The City of Austin listed as an additional insured, Endorsement CG 2010, or equivalent coverage

iii. **Business Automobile Liability Insurance:** The Contractor shall provide coverage for all owned, non-owned and hired vehicles with a minimum combined single limit of $500,000 per occurrence for bodily injury and property damage. Alternate acceptable limits are $250,000 bodily injury per person, $500,000 bodily injury per occurrence and at least $100,000 property damage liability per accident.

(1) The policy shall include these endorsements in favor of the City of Austin:

(a) Waiver of Subrogation, Endorsement CA0444, or equivalent coverage

(b) Thirty (30) days Notice of Cancellation, Endorsement CA0244, or equivalent coverage

(c) The City of Austin listed as an additional insured, Endorsement CA2048, or equivalent coverage.

iv. **Professional Liability Insurance**: The Contractor shall provide coverage, at a minimum limit of $1,000,000 per claim, to pay on behalf of the assured all sums which the assured shall become legally obligated to pay as damages by reason of any negligent act, error, or omission arising out of the performance of professional services under this Agreement.

If coverage is written on a claims-made basis, the retroactive date shall be prior to or coincident with the date of the Contract and the certificate of insurance shall state that the coverage is claims-made and indicate the retroactive date. This coverage shall be continuous and will be provided for 24 months following the completion of the contract.

C. **Endorsements:** The specific insurance coverage endorsements specified above, or their equivalents must be provided. In the event that endorsements, which are the equivalent of the required coverage, are proposed to be substituted for the required coverage, copies of the equivalent endorsements must be provided for the City's review and approval.

3. **TERM OF CONTRACT**

A. The Contract shall be in effect for an initial term of 36 months and may be extended thereafter for up to 2 additional 12 month periods, subject to the approval of the Contractor and the City Purchasing Officer or his designee.

B. Upon expiration of the initial term or period of extension, the Contractor agrees to hold over under the terms and conditions of this agreement for such a period of time as is reasonably necessary to re-solicit and/or complete the project (not to exceed 120 days unless mutually agreed on in writing).

C. Upon written notice to the Contractor from the City's Purchasing Officer or his designee and acceptance of the Contractor, the term of this contract shall be extended on the same terms and conditions for an additional period as indicated in paragraph A above. A price increase, subject to the provisions of this Contract, may be requested by the Contractor (for each period of extension) for approval by the City's Purchasing Officer or his designee.

THIS IS A 36 MONTH CONTRACT

4. **NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING:**

A. On November 10, 2011, the Austin City Council adopted Ordinance No. 20111110-052 amending Chapter 2.7, Article 6 of the City Code relating to Anti-Lobbying and Procurement. The policy defined in this Code applies to Solicitations for goods and/or services requiring City Council approval under City Charter Article VII, Section 15 (Purchase Procedures). During the No-Contact Period, Offerors or potential Offerors are prohibited from making a representation to anyone other than the Authorized Contact Person in the Solicitation as the contact for questions and comments regarding the Solicitation.

B. If during the No-Contact Period an Offeror makes a representation to anyone other than the Authorized Contact Person for the Solicitation, the Offeror's Offer is disqualified from further consideration except as permitted in the Ordinance.

C. If an Offeror has been disqualified under this article more than two times in a sixty (60) month period, the Purchasing Officer shall debar the Offeror from doing business with the City for a period not to exceed three (3) years, provided the Offeror is given written notice and a hearing in advance of the debarment.

D. The City requires Offerors submitting Offers on this Solicitation to certify that the Offeror has not in any way directly or indirectly made representations to anyone other than the Authorized Contact Person during the No-Contact Period as defined in the Ordinance. The text of the City Ordinance is posted on the Internet at: http://www.ci.austin.tx.us/edims/document.cfm?id=161145

5. **INTERLOCAL PURCHASING AGREEMENTS:** (applicable to competitively procured goods/services contracts).

A. The City has entered into Interlocal Purchasing Agreements with other governmental entities, pursuant to the Interlocal Cooperation Act, Chapter 791 of the Texas Government Code. The Contractor agrees to offer the same prices and terms and conditions to other eligible governmental agencies that have an interlocal agreement with the City.

B. The City does not accept any responsibility or liability for the purchases by other governmental agencies through an interlocal cooperative agreement.

We cannot agree to this. We don't believe it is applicable to the type of services contemplated by the RFP, and the fees for our services are negotiated on a case by case basis.

6. **CONTRACT MANAGER:** The following person is designated as Contract Manager, and will act as the contact point between the City and the Contractor during the term of the Contract:

Georgia Sanchez

Phone: 512-974-7886

Email: Georgia.Sanchez@austintexas.gov

*Note: The above listed Contract Manager is not the authorized Contact Person for purposes of the **NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING Provision** of this Section; and therefore, contact with the Contract Manager is prohibited during the no contact period.

CITY OF AUSTIN
PURCHASING OFFICE
REQUEST FOR QUALIFICATIONS NO. RFQS TVN0103REBID
UNDERWRITING SERVICES

Scope of Work

A. PURPOSE

The City of Austin, Texas, hereinafter referred to as the "City," through the Financial and Administrative Services Department is requesting statements of qualifications from municipal bond underwriters to assist the City in marketing future refunding, new money, and/or other financing transactions.

Please note that joint responses will not be considered.

B. BACKGROUND

Currently, Public Financial Management, Inc. (Dennis Waley in Austin) serves as Financial Advisor to the City. Public Financial Management and the City Treasurer's Office will assume responsibility for obtaining bond ratings, preparing the offering documents, performing quantitative analysis and structuring future bond issues.

The City intends to contract with no more than fifteen (15) firms in total, spanning the three following categories:

1. "National" - typically bulge bracket investment banks that represent the largest of multinational firms.
2. "Regional" - firms with a national presence who typically focus on middle markets and mid-range deals.
3. "Other" - firms who are minority or women owned, or Texas headquartered, or firms who do not necessarily meet the national or regional descriptions above due to their market focus.

Respondents are required to identify the category for which they would like to be considered. All responses will be evaluated along with other Respondents in the same category based upon the evaluation criteria detailed in Section 0600 (Proposal Preparation Instructions and Evaluation Criteria) of this solicitation.

The selected firms must be in compliance with applicable City ordinances and satisfactorily complete all related forms and certificates as described herein.

C. CONTRACTOR REQUIREMENTS

The responsibilities of the Contractor will include, but not be limited to the following:

1. Preparation of marketing plans, bond market condition assessment, and strategies for local, regional and national markets. This information will include identification of tasks to be completed and the individuals responsible, as well as critical events and deadlines.

2. Assist with the preparation of preliminary and final official statements as applicable to fully comply with all disclosure rules and requirements.

3. Assist City staff, its financial advisor and bond counsel in evaluation and preparation of the bond indenture and other agreements and in presentations before debt rating agencies, bond insurers, or as otherwise needed to secure optimum market advantage.

4. Management of co-managing underwriters to include maintenance of records of the account, negotiation of sale of bonds, preliminary and final pricing, taking orders and other services associated with book-running senior managing underwriters.

5. Coordinate the final allotment of bonds with the City of Austin. The City of Austin is committed to the equitable treatment of all members of its underwriting team.

6. Preparation by the Senior Manager of pricing information prior to sale of bonds to include spread components, estimated price scale for the City's bonds, current and expected market conditions, details of recent sales, proposed bond allocations (subject to approval by City) to co-managing underwriters and distribution of underwriting fees.

7. Preparation by the Senior Manager of a "Post-Sale Analysis" Report that includes the following:

   i. a debt schedule for the issue that includes principal and interest requirements, as well as the true interest cost;

   ii. a comparison of orders and allotments by year and by firm;

   iii. a comparison of the coupon rates and reoffering yields with issues of similar term and credit quality marketed at or about the same time;

   iv. a written discussion of any circumstances relating to the market or the City's offering that may have impacted the sale results.

8. Coordinate closing arrangements with the City of Austin staff, bond counsel, financial advisor, trustee bank, and other appropriate officials.

D. CONTRACTOR ASSIGNMENTS

Contractors will be assigned transactions on modified rotational basis. Typical the assignments will include a team (Team) of five firms made up of a mix of the three categories identified in Section 2 above (Contractor Pool), and will include one senior manager and four co-managers. While the City will make every effort to assign transactions in an equitable manner, other factors including those listed below may ultimately determine the Team membership.

1. Formal presentation of financing ideas by firms.
2. Complexity and size of transaction (which could result in more or fewer firms being assigned).
3. Type of industry or sector specific expertise required.
4. Previous performance on city transactions and financial advisor's feedback.

Detailed assignment records will be maintained throughout the contract period to aid in the assignment process to ensure transactions are distributed fairly across the Contractor Pool.

CITY OF AUSTIN
PURCHASING OFFICE
PROPOSAL PREPARATION INSTRUCTIONS AND EVALUATION FACTORS
SOLICITATION NUMBER: RFQS TVN0103REBID

1. QUALIFICATION STATEMENT RESPONSE FORMAT

Prefacing the response, the Respondent shall provide an Executive Summary of three (3) pages or less, which gives in brief, concise terms, a summation of the response. **This information shall include the category under which the firm is submitting: "National", "Regional" or "Other".** These categories are defined as follows:

- "National" - typically bulge bracket investment banks that represent the largest of multinational firms.
- "Regional" - firms with a national presence who typically focus on middle markets and mid-range deals.
- "Other" - firms who are minority or women owned, or Texas headquartered, or firms who do not necessarily meet the national or regional descriptions above due to their market focus.

The response itself shall be organized in the following format and informational sequence and shall not exceed ten (10) pages, excluding Executive Summary, Audit Report, and other required Forms:

A. **Part I - Business Organization**: State full name and address of your organization and identify parent company if you are a subsidiary. Specify the branch office or other subordinate element which will perform, or assist in performing, work herein. Indicate whether you operate as a partnership, corporation, or individual. Include the State in which incorporated or licensed to operate. This section should include at a minimum the following:

   i. Management/Ownership: Provide any recent or proposed changes in the firm's management or ownership.

   ii. Confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response.

   iii. Confirm an understanding that the firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.

   iv. Municipal sales offices in the United States.

   v. Account Executives employed selling municipal bonds in the United States.

   vi. Texas offices and locations, if any, along with the number Account Executives selling municipal bonds in each Texas office identified.

B. **Part II – Authorized Negotiator**: Include name, address, and telephone number of person in your organization authorized to negotiate Contract terms and render binding decisions on Contract matters.

C. **Part III – Background and Prior Experience**: Describe only relevant corporate experience and individual experience for personnel who will be actively engaged in the contract. Do not include corporate experience unless personnel assigned to this project actively participated. Do not include experience prior to 2000. Supply the project title, year, and reference name, title, present address, and phone number of principal person for whom prior projects were accomplished. This section should include at a minimum the following:

   i. Provide the year the firm was founded.

   ii. Provide a brief history of the firm.

   iii. Provide the location of the firm's headquarters and municipal trading desk(s).

D. **Part IV - Personnel**: Include names, titles, and qualifications of key professional personnel who will be assigned to this contract. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

E. **Part V – Innovative Financing Techniques**: Provide two innovative financing techniques, suggestions or ideas which would be relevant, or of interest to, the City of Austin. This can also include derivatives, debt restructuring, and self-liquidity ideas. If the idea(s) was(were) used in actual transaction(s),this section should include the following:

i. Indicate the individuals referenced in Part IV above who were involved in the transaction.

ii. Provide the name, title, organization, address and telephone number of the issuer.

F. **Part VI – Financial Viability**: Provide the most recent audited annual Audit Report and most recent interim financial report as an attachment or appendix item. Hard copies must be included in the original submittal.

i. Provide the current equity capital positions (total equity capital, net equity capital and excess net equity capital) in accordance with GAAP, or corresponding equity information if a bank. **Do not refer to the annual audit as a response to this question.**

G. **Part VII – Austin Bond Experience**: In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

H. **Part VIII – References**: Provide exactly three (3) government client references, at least two of which are covered by individuals listed in Part IV above. For each reference, provide a name, title, and organization, address and telephone number. In addition to the list provided, the City may independently solicit other references.

I. **Part X - Non-Collusion, Non-Conflict of Interest, and Anti-Lobbying**:

i. On November 10, 2011, the Austin City Council adopted Ordinance No. 20111110-052 amending Chapter 2-7, Article 6 of the City Code relating to Anti-Lobbying and Procurement. The policy defined in this Code applies to Solicitations for goods and/or services requiring City Council approval under City Charter Article VII, Section 15 (Purchase Procedures). During the No-Contact Period, Offerors or potential Offerors are prohibited from making a representation to anyone other than the Authorized Contact Person in the Solicitation as the contact for questions and comments regarding the Solicitation.

ii. If during the No-Contact Period an Offeror makes a representation to anyone other than the Authorized Contact Person for the Solicitation, the Offeror's Offer is disqualified from further consideration except as permitted in the Ordinance.

iii. If a Respondent has been disqualified under this article more than two times in a sixty (60) month period, the Purchasing Officer shall debar the Offeror from doing business with the City for a period not to exceed three (3) years, provided the Respondent is given written notice and a hearing in advance of the debarment.

iv. The City requires Offerors submitting Offers on this Solicitation to provide a signed Section 0810, Non-Collusion, Non-Conflict of Interest, and Anti-Lobbying Affidavit certifying that the Offeror has not in any way directly or indirectly made representations to anyone other than the Authorized Contact Person during the No-Contact Period as defined in the Ordinance The text of the City Ordinance is posted on the Internet at: http://www.ci.austin.tx.us/edims/document.cfm?id=161145

J. **Part XI - Proposal Acceptance Period**: All proposals are valid for a period of one hundred and twenty (180) calendar days subsequent to the solicitation closing date unless a longer acceptance period is offered in the response.

As noted herein, nothing in Goldman Sachs' Proposal is a commitment to act in any role in connection with the services contemplated by the RFP. Any such commitment to perform services contemplated by the RFP shall only be set forth in a separate agreement appropriate for the type of transaction involved. If selected by the City to perform the services set forth in our Proposal, Goldman Sachs reserves the right to negotiate the terms of the resulting agreement, which would contain customary terms and conditions mutually agreed upon by Goldman Sachs and the City. Notwithstanding the foregoing, the proposed fees for the services set forth in our Proposal shall remain for a period of 180 calendar days from the date of our Proposal.

K. **Part XII - Proprietary Information**: All material submitted to the City becomes public property and is subject to the Texas Open Records Act upon receipt. If a Respondent does not desire proprietary information in the response to be disclosed, each page must be identified and marked proprietary at time of submittal. The City will, to the extent allowed by law, endeavor to protect such information from disclosure. The final decision as to what information must be disclosed, however, lies with the Texas Attorney General. Failure to identify proprietary information will result in all unmarked sections being deemed non-proprietary and available upon public request.

2. EXCEPTIONS:

Be advised that exceptions to any portion of the Solicitation may jeopardize acceptance of the Response.

3. PROPOSAL PREPARATION COSTS:

All costs directly or indirectly related to preparation of a response to the solicitation or any oral presentation required to supplement and/or clarify a proposal which may be required by the City shall be the sole responsibility of the Respondent.

4. **EVALUATION FACTORS AND AWARD**

A. **Competitive Selection**: This procurement will comply with applicable City Policy. The successful Proposers will be selected by the City on a rational basis. Evaluation factors outlined in Paragraph B below shall be applied to all eligible, responsive Proposers in comparing proposals and selecting the Best Proposer. Award of a Contract may be made without discussion with Proposers after proposals are received. Proposals should, therefore, be submitted on the most favorable terms.

NOTE: All responses will be scored according to the category submitted. Specifically, all "National" submittals will be rated against other "National" submittals, "Regional" submittals will be rated against other "Regional" submittals, and "Other" category submittals will be rated against "Other" category submittals.

B. **Evaluation Factors**:

i. 100 points.

(1) Innovation: Refer to Part V above.	25 POINTS
(2) Demonstrated Applicable Experience: Refer to Part III above.	20 POINTS
(3) Personnel Qualifications: Refer to Part IV above.	15 POINTS
(4) Financial viability/stability: Refer to Part VI above.	20 POINTS
(5) Austin Bond Experience: Refer to Part VII above.	10 POINTS
(6) References: Refer to Part VIII above.	10 POINTS

ii. Interviews, Optional. The City will score proposals on the basis of item 1-6 above. The City may select a "short list" of Proposers based on those scores. "Short-listed" Proposers may be invited for interviews with the City. The City reserves the right to re-score "short-listed" proposals as a result of the interviews and to make award recommendations on that basis.

CITY OF AUSTIN, TEXAS
SECTION 0810
NON-COLLUSION,
NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING CERTIFICATION

The term **"Offeror"**, as used in this document, includes the individual or business entity submitting the Offer. For the purpose of this Affidavit, an Offeror includes the directors, officers, partners, managers, members, principals, owners, agents, representatives, employees, other parties in interest of the Offeror, and any person or any entity acting for or on behalf of the Offeror, including a subcontractor in connection with this Offer.

1. **Anti-Collusion Statement.** The Offeror has not in any way directly or indirectly:

   a. colluded, conspired, or agreed with any other person, firm, corporation, Offeror or potential Offeror to the amount of this Offer or the terms or conditions of this Offer.

   b. paid or agreed to pay any other person, firm, corporation Offeror or potential Offeror any money or anything of value in return for assistance in procuring or attempting to procure a contract or in return for establishing the prices in the attached Offer or the Offer of any other Offeror.

2. **Preparation of Solicitation and Contract Documents**. The Offeror has not received any compensation or a promise of compensation for participating in the preparation or development of the underlying Solicitation or Contract documents. In addition, the Offeror has not otherwise participated in the preparation or development of the underlying Solicitation or Contract documents, except to the extent of any comments or questions and responses in the solicitation process, which are available to all Offerors, so as to have an unfair advantage over other Offerors, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

3. **Participation in Decision Making Process.** The Offeror has not participated in the evaluation of Offers or other decision making process for this Solicitation, and, if Offeror is awarded a Contract no individual, agent, representative, consultant, subcontractor, or sub-consultant associated with Offeror, who may have been involved in the evaluation or other decision making process for this Solicitation, will have any direct or indirect financial interest in the Contract, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

4, **Present Knowledge.** Offeror is not presently aware of any potential or actual conflicts of interest regarding this Solicitation, which either enabled Offeror to obtain an advantage over other Offerors or would prevent Offeror from advancing the best interests of the City in the course of the performance of the Contract.

5. **City Code.** As provided in Sections 2-7-61 through 2-7-65 of the City Code, no individual with a substantial interest in Offeror is a City official or employee or is related to any City official or employee within the first or second degree of consanguinity or affinity.

While we do not have the ability to comment on City officials or employees, as we do not have access to the names of such employees, no individual is disclosed in the firm's most recently filed proxy statement of April 10, 2015 as owning more than 5% of Common Stock of The Goldman Sachs Group, Inc., our parent. Goldman, Sachs & Co. is a New York Limited Partnership. Goldman, Sachs & Co.'s sole General Partner, The Goldman, Sachs & Co. L.L.C., holds 0.20% of Goldman, Sachs & Co. Goldman, Sachs & Co.'s sole Limited Partner, The Goldman Sachs Group, Inc., holds 99.80%.

6. **Chapter 176 Conflict of Interest Disclosure.** In accordance with Chapter 176 of the Texas Local Government Code, the Offeror:

   a. does not have an employment or other business relationship with any local government officer of the City or a family member of that officer that results in the officer or family member receiving taxable income;

   b. has not given a local government officer of the City one or more gifts, other than gifts of food, lodging, transportation, or entertainment accepted as a guest, that have an aggregate value of more than $100 in the twelve month period preceding the date the officer becomes aware of the execution of the Contract or that City is considering doing business with the Offeror. and

   c. does not have a family relationship with a local government officer of the City in the third degree of consanguinity or the second degree of affinity.

Re: 176.001(1-a) and 176.006(a)
We do not have the ability to definitively comment on all of the City of Austin's employees, given that we do not know the identities of such individuals and do not have access to the information necessary to determine whether there exists a financial relationship between the City of Austin's employees or Council members and Goldman, Sachs & Co. However, to the best of my knowledge, after due inquiry, no current City of Austin employee or Council members that has identified themselves to us as such has a financial relationship with Goldman, Sachs & Co. Please note that the foregoing is as of the date of this certificate based on The Austin City Council members identified on the official website of the City of Austin (https://www.austintexas.gov/government). Please note that because we do not have access to the identities of the officers or family members of the officers of the City of Austin, the foregoing certification does not address such persons.

Re: 176.006
Please be aware that Anti-Bribery Group ("ABG") personnel collected this information by searching the firm's Regulatory Employees Profile System ("REPS") system for records of gifts with an accumulative worth greater than $100, provided by firm personnel to The city of Austin over the past 12 months. Note that ABG personnel did not review individual expense reports, invoices, or firm corporate card transaction information to collect this data. Moreover, although REPS is the firm's official repository of gifts and entertainment information, it relies on manual data inputs. Accordingly, there is a possibility some information is incorrect or has been mistakenly omitted.

7. As required by Chapter 176 of the Texas Local Government Code, Offeror must file a Conflict of Interest Questionnaire with the Office of the City Clerk no later than 5:00 P.M. on the seventh (7th) business day after the commencement of contract discussions or negotiations with the City or the submission of an Offer, or other writing related to a potential Contract with the City. The questionnaire is available on line at the following website for the City Clerk:

   http://www.austintexas.gov/department/conflict-interest-questionnaire

   There are statutory penalties for failure to comply with Chapter 176.

   If the Offeror cannot affirmatively swear and subscribe to the forgoing statements, the Offeror shall provide a detailed written explanation with any solicitation responses on separate pages to be annexed hereto.

8. **Anti-Lobbying Ordinance.** As set forth in the Solicitation Instructions, Section 0200, paragraph 7N, between the date that the Solicitation was issued and the date of full execution of the Contract, Offeror has not made and will not make a representation to a City official or to a City employee, other than the Authorized Contact Person for the Solicitation, except as permitted by the Ordinance.

Collin Teague
Vice President

City of Austin, Texas
Section 0805
NON-SUSPENSION OR DEBARMENT CERTIFICATION

The City of Austin is prohibited from contracting with or making prime or sub-awards to parties that are suspended or debarred or whose principals are suspended or debarred from Federal, State, or City of Austin Contracts. Covered transactions include procurement contracts for goods or services equal to or in excess of $25,000.00 and all non-procurement transactions. This certification is required for all Vendors on all City of Austin Contracts to be awarded and all contract extensions with values equal to or in excess of $25,000.00 or more and all non-procurement transactions.

~~The Offeror hereby certifies that its firm and its principals are not currently suspended or debarred from bidding on any Federal, State, or City of Austin Contracts~~.

The Offeror hereby certifies to the best of its knowledge that its firm and its principals are not currently suspended or debarred from bidding on any Federal, State, or City of Austin Contracts.

CITY OF AUSTIN
PURCHASING OFFICE
STANDARD PURCHASE TERMS AND CONDITIONS

By submitting an Offer in response to the Solicitation, the Contractor agrees that the Contract shall be governed by the following terms and conditions. Unless otherwise specified in the Contract, Sections 3, 4, 5, 6, 7, 8, 20, 21, and 36 shall apply only to a Solicitation to purchase Goods, and Sections 9, 10, 11 and 22 shall apply only to a Solicitation to purchase Services to be performed principally at the City's premises or on public rights-of-way.

1. **CONTRACTOR'S OBLIGATIONS**. The Contractor shall fully and timely provide all Deliverables described in the Solicitation and in the Contractor's Offer in strict accordance with the terms, covenants, and conditions of the Contract and all applicable Federal, State, and local laws, rules, and regulations.

2. **EFFECTIVE DATE/TERM**. Unless otherwise specified in the Solicitation, this Contract shall be effective as of the date the contract is signed by the City, and shall continue in effect until all obligations are performed in accordance with the Contract.

3. **CONTRACTOR TO PACKAGE DELIVERABLES**: The Contractor will package Deliverables in accordance with good commercial practice and shall include a packing list showing the description of each item, the quantity and unit price Unless otherwise provided in the Specifications or Supplemental Terms and Conditions, each shipping container shall be clearly and permanently marked as follows: (a) The Contractor's name and address, (b) the City's name, address and purchase order or purchase release number and the price agreement number if applicable, (c) Container number and total number of containers, e.g. box 1 of 4 boxes, and (d) the number of the container bearing the packing list. The Contractor shall bear cost of packaging. Deliverables shall be suitably packed to secure lowest transportation costs and to conform with requirements of common carriers and any applicable specifications. The City's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

4. **SHIPMENT UNDER RESERVATION PROHIBITED**: The Contractor is not authorized to ship the Deliverables under reservation and no tender of a bill of lading will operate as a tender of Deliverables.

5. **TITLE & RISK OF LOSS**: Title to and risk of loss of the Deliverables shall pass to the City only when the City actually receives and accepts the Deliverables.

6. **DELIVERY TERMS AND TRANSPORTATION CHARGES**: Deliverables shall be shipped F.O.B. point of delivery unless otherwise specified in the Supplemental Terms and Conditions. Unless otherwise stated in the Offer, the Contractor's price shall be deemed to include all delivery and transportation charges. The City shall have the right to designate what method of transportation shall be used to ship the Deliverables. The place of delivery shall be that set forth in the block of the purchase order or purchase release entitled "Receiving Agency".

7. **RIGHT OF INSPECTION AND REJECTION**: The City expressly reserves all rights under law, including, but not limited to the Uniform Commercial Code, to inspect the Deliverables at delivery before accepting them, and to reject defective or non-conforming Deliverables. If the City has the right to inspect the Contractor's, or the Contractor's Subcontractor's, facilities, or the Deliverables at the Contractor's, or the Contractor's Subcontractor's, premises, the Contractor shall furnish, or cause to be furnished, without additional charge, all reasonable facilities and assistance to the City to facilitate such inspection.

8. **NO REPLACEMENT OF DEFECTIVE TENDER**: Every tender or delivery of Deliverables must fully comply with all provisions of the Contract as to time of delivery, quality, and quantity. Any non-complying tender shall constitute a breach and the Contractor shall not have the right to substitute a conforming tender; provided, where the time for performance has not yet expired, the Contractor may notify the City of the intention to cure and may then make a conforming tender within the time allotted in the contract.

9. **PLACE AND CONDITION OF WORK**: The City shall provide the Contractor access to the sites where the Contractor is to perform the services as required in order for the Contractor to perform the services in a timely and efficient manner, in accordance with and subject to the applicable security laws, rules, and regulations. The Contractor acknowledges that it has satisfied itself as to the nature of the City's service requirements and specifications, the location and essential characteristics of the work sites, the quality and quantity of materials, equipment, labor and facilities necessary to perform the services, and any other condition or state of fact which could in any way affect performance of the Contractor's obligations under the contract. The Contractor hereby releases and holds the City

harmless from and against any liability or claim for damages of any kind or nature if the actual site or service conditions differ from expected conditions.

10. **WORKFORCE**

A. The Contractor shall employ only orderly and competent workers, skilled in the performance of the services which they will perform under the Contract.

B. The Contractor, its employees, subcontractors, and subcontractor's employees may not while engaged in participating or responding to a solicitation or while in the course and scope of delivering goods or services under a City of Austin contract or on the City's property .

i. use or possess a firearm, including a concealed handgun that is licensed under state law, except as required by the terms of the contract; or
ii. use or possess alcoholic or other intoxicating beverages, illegal drugs or controlled substances, nor may such workers be intoxicated, or under the influence of alcohol or drugs, on the job.

C. If the City or the City's representative notifies the Contractor that any worker is incompetent, disorderly or disobedient, has knowingly or repeatedly violated safety regulations, has possessed any firearms, or has possessed or was under the influence of alcohol or drugs on the job, the Contractor shall immediately remove such worker from Contract services, and may not employ such worker again on Contract services without the City's prior written consent.

11. **COMPLIANCE WITH HEALTH, SAFETY, AND ENVIRONMENTAL REGULATIONS**: The Contractor, its Subcontractors, and their respective employees, shall comply fully with all applicable federal, state, and local health, safety, and environmental laws, ordinances, rules and regulations in the performance of the services, including but not limited to those promulgated by the City and by the Occupational Safety and Health Administration (OSHA). In case of conflict, the most stringent safety requirement shall govern. The Contractor shall indemnify and hold the City harmless from and against all claims, demands, suits, actions, judgments, fines, penalties and liability of every kind arising from the breach of the Contractor's obligations under this paragraph.

12. **INVOICES**:

A. The Contractor shall submit separate invoices in duplicate on each purchase order or purchase release after each delivery. If partial shipments or deliveries are authorized by the City, a separate invoice must be sent for each shipment or delivery made.

B. **Proper Invoices must include a unique invoice number, the purchase order or delivery order number and the master agreement number if applicable, the Department's Name, and the name of the point of contact for the Department**. Invoices shall be itemized and transportation charges, if any, shall be listed separately. A copy of the bill of lading and the freight waybill, when applicable, shall be attached to the invoice. The Contractor's name and, if applicable, the tax identification number on the invoice must exactly match the information in the Vendor's registration with the City. Unless otherwise instructed in writing, the City may rely on the remittance address specified on the Contractor's invoice.

C. Invoices for labor shall include a copy of all time-sheets with trade labor rate and Deliverables order number clearly identified. Invoices shall also include a tabulation of work-hours at the appropriate rates and grouped by work order number. Time billed for labor shall be limited to hours actually worked at the work site.

D. Unless otherwise expressly authorized in the Contract, the Contractor shall pass through all Subcontract and other authorized expenses at actual cost without markup.

E. Federal excise taxes, State taxes, or City sales taxes must not be included in the invoiced amount. The City will furnish a tax exemption certificate upon request.

13. **PAYMENT**:

A. All proper invoices received by the City will be paid within thirty (30) calendar days of the City's receipt of the Deliverables or of the invoice, whichever is later.

B. **If payment is not timely made, (per paragraph A), interest shall accrue on the unpaid balance at the lesser of the rate specified in Texas Government Code Section 2251.025 or the maximum lawful rate; except, if payment is not timely made for a reason for which the City may withhold payment hereunder, interest shall not accrue until ten (10) calendar days after the grounds for withholding payment have been resolved.**

C. If partial shipments or deliveries are authorized by the City, the Contractor will be paid for the partial shipment or delivery, as stated above, provided that the invoice matches the shipment or delivery.

D. The City may withhold or set off the entire payment or part of any payment otherwise due the Contractor to such extent as may be necessary on account of:

i. delivery of defective or non-conforming Deliverables by the Contractor;
ii. third party claims, which are not covered by the insurance which the Contractor is required to provide, are filed or reasonable evidence indicating probable filing of such claims;
iii. failure of the Contractor to pay Subcontractors, or for labor, materials or equipment;
iv. damage to the property of the City or the City's agents, employees or contractors, which is not covered by insurance required to be provided by the Contractor;
v. reasonable evidence that the Contractor's obligations will not be completed within the time specified in the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
vi. failure of the Contractor to submit proper invoices with all required attachments and supporting documentation; or
vii. failure of the Contractor to comply with any material provision of the Contract Documents.

E. Notice is hereby given of Article VIII, Section 1 of the Austin City Charter which prohibits the payment of any money to any person, firm or corporation who is in arrears to the City for taxes, and of §2-8-3 of the Austin City Code concerning the right of the City to offset indebtedness owed the City.

F. Payment will be made by check unless the parties mutually agree to payment by credit card or electronic transfer of funds. The Contractor agrees that there shall be no additional charges, surcharges, or penalties to the City for payments made by credit card or electronic funds transfer.

G. The awarding or continuation of this contract is dependent upon the availability of funding. The City's payment obligations are payable only and solely from funds Appropriated and available for this contract. The absence of Appropriated or other lawfully available funds shall render the Contract null and void to the extent funds are not Appropriated or available and any Deliverables delivered but unpaid shall be returned to the Contractor. The City shall provide the Contractor written notice of the failure of the City to make an adequate Appropriation for any fiscal year to pay the amounts due under the Contract, or the reduction of any Appropriation to an amount insufficient to permit the City to pay its obligations under the Contract. In the event of non or inadequate appropriation of funds, there will be no penalty nor removal fees charged to the City.

14. **TRAVEL EXPENSES**: All travel, lodging and per diem expenses in connection with the Contract for which reimbursement may be claimed by the Contractor under the terms of the Solicitation will be reviewed against the City's Travel Policy as published and maintained by the City's Controller's Office and the Current United States General Services Administration Domestic Per Diem Rates (the "Rates") as published and maintained on the Internet at:

http://www.gsa.gov/portal/category/21287

No amounts in excess of the Travel Policy or Rates shall be paid. All invoices must be accompanied by copies of detailed itemized receipts (e.g. hotel bills, airline tickets). No reimbursement will be made for expenses not actually incurred. Airline fares in excess of coach or economy will not be reimbursed. Mileage charges may not exceed the amount permitted as a deduction in any year under the Internal Revenue Code or Regulations.

15. **FINAL PAYMENT AND CLOSE-OUT**:

A. If an MBE/WBE Program Compliance Plan is required by the Solicitation, and the Contractor has identified Subcontractors, the Contractor is required to submit a Contract Close-Out MBE/WBE Compliance Report to the Project manager or Contract manager no later than the 15th calendar day after completion of all work under the contract. Final payment, retainage, or both may be withheld if the Contractor is not in compliance with the requirements of the Compliance Plan as accepted by the City.

B. The making and acceptance of final payment will constitute:

i. a waiver of all claims by the City against the Contractor, except claims (1) which have been previously asserted in writing and not yet settled, (2) arising from defective work appearing after final inspection, (3) arising from failure of the Contractor to comply with the Contract or the terms of any warranty specified herein, (4) arising from the Contractor's continuing obligations under the Contract, including but not limited to indemnity and warranty obligations, or (5) arising under the City's right to audit; and

ii. a waiver of all claims by the Contractor against the City other than those previously asserted in writing and not yet settled.

16. **SPECIAL TOOLS & TEST EQUIPMENT**: If the price stated on the Offer includes the cost of any special tooling or special test equipment fabricated or required by the Contractor for the purpose of filling this order, such special tooling equipment and any process sheets related thereto shall become the property of the City and shall be identified by the Contractor as such.

17. **RIGHT TO AUDIT**:

A. The Contractor agrees that the representatives of the Office of the City Auditor or other authorized representatives of the City shall have access to, and the right to audit, examine, or reproduce, any and all records of the Contractor related to the performance under this Contract. The Contractor shall retain all such records for a period of three (3) years after final payment on this Contract or until all audit and litigation matters that the City has brought to the attention of the Contractor are resolved, whichever is longer. The Contractor agrees to refund to the City any overpayments disclosed by any such audit.

B. The Contractor shall include section a. above in all subcontractor agreements entered into in connection with this Contract.

18. **SUBCONTRACTORS**:

A. If the Contractor identified Subcontractors in an MBE/WBE Program Compliance Plan or a No Goals Utilization Plan the Contractor shall comply with the provisions of Chapters 2-9A, 2-9B, 2-9C, and 2-9D, as applicable, of the Austin City Code and the terms of the Compliance Plan or Utilization Plan as approved by the City (the "Plan"). The Contractor shall not initially employ any Subcontractor except as provided in the Contractor's Plan. The Contractor shall not substitute any Subcontractor identified in the Plan, unless the substitute has been accepted by the City in writing in accordance with the provisions of Chapters 2-9A, 2-9B, 2-9C and 2-9D, as applicable. No acceptance by the City of any Subcontractor shall constitute a waiver of any rights or remedies of the City with respect to defective Deliverables provided by a Subcontractor. If a Plan has been approved, the Contractor is additionally required to submit a monthly Subcontract Awards and Expenditures Report to the Contract Manager and the Purchasing Office Contract Compliance Manager no later than the tenth calendar day of each month.

B. Work performed for the Contractor by a Subcontractor shall be pursuant to a written contract between the Contractor and Subcontractor. The terms of the subcontract may not conflict with the terms of the Contract, and shall contain provisions that:

i. require that all Deliverables to be provided by the Subcontractor be provided in strict accordance with the provisions, specifications and terms of the Contract;
ii. prohibit the Subcontractor from further subcontracting any portion of the Contract without the prior written consent of the City and the Contractor. The City may require, as a condition to such further subcontracting, that the Subcontractor post a payment bond in form, substance and amount acceptable to the City;
iii. require Subcontractors to submit all invoices and applications for payments, including any claims for additional payments, damages or otherwise, to the Contractor in sufficient time to enable the Contractor to include same with its invoice or application for payment to the City in accordance with the terms of the Contract;
iv. require that all Subcontractors obtain and maintain, throughout the term of their contract, insurance in the type and amounts specified for the Contractor, with the City being a named insured as its interest shall appear; and
v. require that the Subcontractor indemnify and hold the City harmless to the same extent as the Contractor is required to indemnify the City.

C. The Contractor shall be fully responsible to the City for all acts and omissions of the Subcontractors just as the Contractor is responsible for the Contractor's own acts and omissions. Nothing in the Contract shall create for the benefit of any such Subcontractor any contractual relationship between the City and any such Subcontractor, nor shall it create any obligation on the part of the City to pay or to see to the payment of any moneys due any such Subcontractor except as may otherwise be required by law.

D. The Contractor shall pay each Subcontractor its appropriate share of payments made to the Contractor not later than ten (10) calendar days after receipt of payment from the City.

19. **WARRANTY-PRICE**:

A. The Contractor warrants the prices quoted in the Offer are no higher than the Contractor's current prices on orders by others for like Deliverables under similar terms of purchase.

B. The Contractor certifies that the prices in the Offer have been arrived at independently without consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such fees with any other firm or with any competitor.

C. In addition to any other remedy available, the City may deduct from any amounts owed to the Contractor, or otherwise recover, any amounts paid for items in excess of the Contractor's current prices on orders by others for like Deliverables under similar terms of purchase.

20. **WARRANTY – TITLE**: The Contractor warrants that it has good and indefeasible title to all Deliverables furnished under the Contract, and that the Deliverables are free and clear of all liens, claims, security interests and encumbrances. The Contractor shall indemnify and hold the City harmless from and against all adverse title claims to the Deliverables.

21. **WARRANTY – DELIVERABLES**: The Contractor warrants and represents that all Deliverables sold the City under the Contract shall be free from defects in design, workmanship or manufacture, and conform in all material respects to the specifications, drawings, and descriptions in the Solicitation, to any samples furnished by the Contractor, to the terms, covenants and conditions of the Contract, and to all applicable State, Federal or local laws, rules, and regulations, and industry codes and standards. Unless otherwise stated in the Solicitation, the Deliverables shall be new or recycled merchandise, and not used or reconditioned.

A. Recycled Deliverables shall be clearly identified as such.

B. The Contractor may not limit, exclude or disclaim the foregoing warranty or any warranty implied by law; and any attempt to do so shall be without force or effect.

C. Unless otherwise specified in the Contract, the warranty period shall be at least one year from the date of acceptance of the Deliverables or from the date of acceptance of any replacement Deliverables. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand either repair the non-conforming Deliverables, or replace the non-conforming Deliverables with fully conforming Deliverables, at the City's option and at no additional cost to the City. All costs incidental to such repair or replacement, including but not limited to, any packaging and shipping costs, shall be borne exclusively by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach of warranty, but failure to give timely notice shall not impair the City's rights under this section.

D. If the Contractor is unable or unwilling to repair or replace defective or non-conforming Deliverables as required by the City, then in addition to any other available remedy, the City may reduce the quantity of Deliverables it may be required to purchase under the Contract from the Contractor, and purchase conforming Deliverables from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such Deliverables from another source.

E. If the Contractor is not the manufacturer, and the Deliverables are covered by a separate manufacturer's warranty, the Contractor shall transfer and assign such manufacturer's warranty to the City. If for any reason the manufacturer's warranty cannot be fully transferred to the City, the Contractor shall assist and cooperate with the City to the fullest extent to enforce such manufacturer's warranty for the benefit of the City.

22. **WARRANTY – SERVICES**: The Contractor warrants and represents that all services to be provided the City under the Contract will be fully and timely performed in a good and workmanlike manner in accordance with generally accepted industry standards and practices, the terms, conditions, and covenants of the Contract, and all applicable Federal, State and local laws, rules or regulations.

A. The Contractor may not limit, exclude or disclaim the foregoing warranty or any warranty implied by law, and any attempt to do so shall be without force or effect.

B. Unless otherwise specified in the Contract, the warranty period shall be at least one year from the Acceptance Date. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand perform the services again in accordance with above standard at no additional cost to the City. All costs incidental to such additional performance shall be borne by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within thirty (30) calendar days of discovery of the breach warranty, but failure to give timely notice shall not impair the City's rights under this section.

C. If the Contractor is unable or unwilling to perform its services in accordance with the above standard as required by the City, then in addition to any other available remedy, the City may reduce the amount of services it may be required to purchase under the Contract from the Contractor, and purchase conforming services from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such services from another source.

23. **ACCEPTANCE OF INCOMPLETE OR NON-CONFORMING DELIVERABLES**: If, instead of requiring immediate correction or removal and replacement of defective or non-conforming Deliverables, the City prefers to accept it, the City may do so. The Contractor shall pay all claims, costs, losses and damages attributable to the City's evaluation of and determination to accept such defective or non-conforming Deliverables. If any such acceptance occurs prior to final payment, the City may deduct such amounts as are necessary to compensate the City for the diminished value of the defective or non-conforming Deliverables. If the acceptance occurs after final payment, such amount will be refunded to the City by the Contractor.

24. **RIGHT TO ASSURANCE**: Whenever one party to the Contract in good faith has reason to question the other party's intent to perform, demand may be made to the other party for written assurance of the intent to perform. In the event

that no assurance is given within the time specified after demand is made, the demanding party may treat this failure as an anticipatory repudiation of the Contract.

25. **STOP WORK NOTICE**: The City may issue an immediate Stop Work Notice in the event the Contractor is observed performing in a manner that is in violation of Federal, State, or local guidelines, or in a manner that is determined by the City to be unsafe to either life or property. Upon notification, the Contractor will cease all work until notified by the City that the violation or unsafe condition has been corrected. The Contractor shall be liable for all costs incurred by the City as a result of the issuance of such Stop Work Notice.

26. **DEFAULT**: The Contractor shall be in default under the Contract if the Contractor (a) fails to fully, timely and faithfully perform any of its material obligations under the Contract, (b) fails to provide adequate assurance of performance under Paragraph 24, (c) becomes insolvent or seeks relief under the bankruptcy laws of the United States or (d) makes a material misrepresentation in Contractor's Offer, or in any report or deliverable required to be submitted by the Contractor to the City.

27. **TERMINATION FOR CAUSE:**. In the event of a default by the Contractor, the City shall have the right to terminate the Contract for cause, by written notice effective ten (10) calendar days, unless otherwise specified, after the date of such notice, unless the Contractor, within such ten (10) day period, cures such default, or provides evidence sufficient to prove to the City's reasonable satisfaction that such default does not, in fact, exist. The City may place Contractor on probation for a specified period of time within which the Contractor must correct any non-compliance issues. Probation shall not normally be for a period of more than nine (9) months, however, it may be for a longer period, not to exceed one (1) year depending on the circumstances. If the City determines the Contractor has failed to perform satisfactorily during the probation period, the City may proceed with suspension. In the event of a default by the Contractor, the City may suspend or debar the Contractor in accordance with the "City of Austin Purchasing Office Probation, Suspension and Debarment Rules for Vendors" and remove the Contractor from the City's vendor list for up to five (5) years and any Offer submitted by the Contractor may be disqualified for up to five (5) years. In addition to any other remedy available under law or in equity, the City shall be entitled to recover all actual damages, costs, losses and expenses, incurred by the City as a result of the Contractor's default, including, without limitation, cost of cover, reasonable attorneys' fees, court costs, and prejudgment and post-judgment interest at the maximum lawful rate. All rights and remedies under the Contract are cumulative and are not exclusive of any other right or remedy provided by law.

28. **TERMINATION WITHOUT CAUSE**: The City shall have the right to terminate the Contract, in whole or in part, without cause any time upon thirty (30) calendar days' prior written notice. Upon receipt of a notice of termination, the Contractor shall promptly cease all further work pursuant to the Contract, with such exceptions, if any, specified in the notice of termination. The City shall pay the Contractor, to the extent of funds Appropriated or otherwise legally available for such purposes, for all goods delivered and services performed and obligations incurred prior to the date of termination in accordance with the terms hereof.

29. **FRAUD**: Fraudulent statements by the Contractor on any Offer or in any report or deliverable required to be submitted by the Contractor to the City shall be grounds for the termination of the Contract for cause by the City and may result in legal action.

30. **DELAYS**:

    A. The City may delay scheduled delivery or other due dates by written notice to the Contractor if the City deems it is in its best interest. If such delay causes an increase in the cost of the work under the Contract, the City and the Contractor shall negotiate an equitable adjustment for costs incurred by the Contractor in the Contract price and execute an amendment to the Contract. The Contractor must assert its right to an adjustment within thirty (30) calendar days from the date of receipt of the notice of delay. Failure to agree on any adjusted price shall be handled under the Dispute Resolution process specified in paragraph 48. However, nothing in this provision shall excuse the Contractor from delaying the delivery as notified.

    B. Neither party shall be liable for any default or delay in the performance of its obligations under this Contract if, while and to the extent such default or delay is caused by acts of God, fire, riots, civil commotion, labor disruptions, sabotage, sovereign conduct, or any other cause beyond the reasonable control of such Party. In

the event of default or delay in contract performance due to any of the foregoing causes, then the time for completion of the services will be extended; provided, however, in such an event, a conference will be held within three (3) business days to establish a mutually agreeable period of time reasonably necessary to overcome the effect of such failure to perform.

31. **INDEMNITY**:

A. Definitions:

i. "Indemnified Claims" shall include any and all claims, demands, suits, causes of action, judgments and liability of every character, type or description, including all reasonable costs and expenses of litigation, mediation or other alternate dispute resolution mechanism, including attorney and other professional fees for:

(1) damage to or loss of the property of any person (including, but not limited to the City, the Contractor, their respective agents, officers, employees and subcontractors; the officers, agents, and employees of such subcontractors; and third parties); and/or

(2) death, bodily injury, illness, disease, worker's compensation, loss of services, or loss of income or wages to any person (including but not limited to the agents, officers and employees of the City, the Contractor, the Contractor's subcontractors, and third parties),

ii. "Fault" shall include the sale of defective or non-conforming Deliverables, negligence, willful misconduct, or a breach of any legally imposed strict liability standard.

B. **THE CONTRACTOR SHALL DEFEND (AT THE OPTION OF THE CITY), INDEMNIFY, AND HOLD THE CITY, ITS SUCCESSORS, ASSIGNS, OFFICERS, EMPLOYEES AND ELECTED OFFICIALS HARMLESS FROM AND AGAINST ALL INDEMNIFIED CLAIMS DIRECTLY ARISING OUT OF, INCIDENT TO, CONCERNING OR RESULTING FROM THE FAULT OF THE CONTRACTOR, OR THE CONTRACTOR'S AGENTS, EMPLOYEES OR SUBCONTRACTORS, IN THE PERFORMANCE OF THE CONTRACTOR'S OBLIGATIONS UNDER THE CONTRACT. NOTHING HEREIN SHALL BE DEEMED TO LIMIT THE RIGHTS OF THE CITY OR THE CONTRACTOR (INCLUDING, BUT NOT LIMITED TO, THE RIGHT TO SEEK CONTRIBUTION) AGAINST ANY THIRD PARTY WHO MAY BE LIABLE FOR AN INDEMNIFIED CLAIM.**

32. **INSURANCE**: (reference Section 0400 for specific coverage requirements). The following insurance requirement applies. (Revised March 2013).

A. General Requirements.

i. The Contractor shall at a minimum carry insurance in the types and amounts indicated in Section 0400, Supplemental Purchase Provisions, for the duration of the Contract, including extension options and hold over periods, and during any warranty period.

ii. The Contractor shall provide Certificates of Insurance with the coverages and endorsements required in Section 0400, Supplemental Purchase Provisions, to the City as verification of coverage prior to contract execution and within fourteen (14) calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award. The Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or hold over period is exercised, as verification of continuing coverage.

iii. The Contractor shall not commence work until the required insurance is obtained and until such insurance has been reviewed by the City. Approval of insurance by the City shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.

iv. The City may request that the Contractor submit certificates of insurance to the City for all subcontractors prior to the subcontractors commencing work on the project.

v. The Contractor's and all subcontractors' insurance coverage shall be written by companies licensed to do business in the State of Texas at the time the policies are issued and shall be written by companies with A.M. Best ratings of B+VII or better.

vi. The "other" insurance clause shall not apply to the City where the City is an additional insured shown on any policy. It is intended that policies required in the Contract, covering both the City and the Contractor, shall be considered primary coverage as applicable.

vii. If insurance policies are not written for amounts specified in Section 0400, Supplemental Purchase Provisions, the Contractor shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of the primary coverage.

viii. The City shall be entitled, upon request, at an agreed upon location, and without expense, to review certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.

ix. The City reserves the right to review the insurance requirements set forth during the effective period of the Contract and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by the City based upon changes in statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as the Contractor.

x. The Contractor shall not cause any insurance to be canceled nor permit any insurance to lapse during the term of the Contract or as required in the Contract.

xi. The Contractor shall be responsible for premiums, deductibles and self-insured retentions, if any, stated in policies. Self-insured retentions shall be disclosed on the Certificate of Insurance.

xii. The Contractor shall provide the City thirty (30) calendar days' written notice of erosion of the aggregate limits below occurrence limits for all applicable coverages indicated within the Contract.

xiii. The insurance coverages specified in Section 0400, Supplemental Purchase Provisions, are required minimums and are not intended to limit the responsibility or liability of the Contractor.

B. Specific Coverage Requirements: Specific insurance requirements are contained in Section 0400, Supplemental Purchase Provisions

33. **CLAIMS**: If any claim, demand, suit, or other action is asserted against the Contractor which arises under or concerns the Contract, or which could have a material adverse affect on the Contractor's ability to perform thereunder, the Contractor shall give written notice thereof to the City within ten (10) calendar days after receipt of notice by the Contractor. Such notice to the City shall state the date of notification of any such claim, demand, suit, or other action; the names and addresses of the claimant(s); the basis thereof; and the name of each person against whom such claim is being asserted. Such notice shall be delivered personally or by mail and shall be sent to the City and to the Austin City Attorney. Personal delivery to the City Attorney shall be to City Hall, 301 West 2nd Street, 4th Floor, Austin, Texas 78701, and mail delivery shall be to P.O. Box 1088, Austin, Texas 78767.

34. **NOTICES**: Unless otherwise specified, all notices, requests, or other communications required or appropriate to be given under the Contract shall be in writing and shall be deemed delivered three (3) business days after postmarked if sent by U.S. Postal Service Certified or Registered Mail, Return Receipt Requested. Notices delivered by other means shall be deemed delivered upon receipt by the addressee. Routine communications may be made by first class mail, telefax, or other commercially accepted means. Notices to the Contractor shall be sent to the address specified in the Contractor's Offer, or at such other address as a party may notify the other in writing. Notices to the

City shall be addressed to the City at P.O. Box 1088, Austin, Texas 78767 and marked to the attention of the Contract Administrator.

35. **RIGHTS TO BID, PROPOSAL AND CONTRACTUAL MATERIAL**: All material submitted by the Contractor to the City shall become property of the City upon receipt. Any portions of such material claimed by the Contractor to be proprietary must be clearly marked as such. Determination of the public nature of the material is subject to the Texas Public Information Act, Chapter 552, Texas Government Code.

36. **NO WARRANTY BY CITY AGAINST INFRINGEMENTS**: The Contractor represents and warrants to the City that: (i) the Contractor shall provide the City good and indefeasible title to the Deliverables and (ii) the Deliverables supplied by the Contractor in accordance with the specifications in the Contract will not infringe, directly or contributorily, any patent, trademark, copyright, trade secret, or any other intellectual property right of any kind of any third party; that no claims have been made by any person or entity with respect to the ownership or operation of the Deliverables and the Contractor does not know of any valid basis for any such claims. The Contractor shall, at its sole expense, defend, indemnify, and hold the City harmless from and against all liability, damages, and costs (including court costs and reasonable fees of attorneys and other professionals) arising out of or resulting from: (i) any claim that the City's exercise anywhere in the world of the rights associated with the City's' ownership, and if applicable, license rights, and its use of the Deliverables infringes the intellectual property rights of any third party; or (ii) the Contractor's breach of any of Contractor's representations or warranties stated in this Contract. In the event of any such claim, the City shall have the right to monitor such claim or at its option engage its own separate counsel to act as co-counsel on the City's behalf. Further, Contractor agrees that the City's specifications regarding the Deliverables shall in no way diminish Contractor's warranties or obligations under this paragraph and the City makes no warranty that the production, development, or delivery of such Deliverables will not impact such warranties of Contractor.

37. **CONFIDENTIALITY**: In order to provide the Deliverables to the City, Contractor may require access to certain of the City's and/or its licensors' confidential information (including inventions, employee information, trade secrets, confidential know-how, confidential business information, and other information which the City or its licensors consider confidential) (collectively, "Confidential Information"). Contractor acknowledges and agrees that the Confidential Information is the valuable property of the City and/or its licensors and any unauthorized use, disclosure, dissemination, or other release of the Confidential Information will substantially injure the City and/or its licensors. The Contractor (including its employees, subcontractors, agents, or representatives) agrees that it will maintain the Confidential Information in strict confidence and shall not disclose, disseminate, copy, divulge, recreate, or otherwise use the Confidential Information without the prior written consent of the City or in a manner not expressly permitted under this Agreement, unless the Confidential Information is required to be disclosed by law or an order of any court or other governmental authority with proper jurisdiction, provided the Contractor promptly notifies the City before disclosing such information so as to permit the City reasonable time to seek an appropriate protective order. The Contractor agrees to use protective measures no less stringent than the Contractor uses within its own business to protect its own most valuable information, which protective measures shall under all circumstances be at least reasonable measures to ensure the continued confidentiality of the Confidential Information.

38. **PUBLICATIONS**: All published material and written reports submitted under the Contract must be originally developed material unless otherwise specifically provided in the Contract. When material not originally developed is included in a report in any form, the source shall be identified.

39. **ADVERTISING**: The Contractor shall not advertise or publish, without the City's prior consent, the fact that the City has entered into the Contract, except to the extent required by law.

40. **NO CONTINGENT FEES**: The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure the Contract upon any agreement or understanding for commission, percentage, brokerage, or contingent fee, excepting bona fide employees of bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the City shall have the right, in addition to any other remedy available, to cancel the Contract without liability and to deduct from any amounts owed to the Contractor, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

41. **GRATUITIES**: The City may, by written notice to the Contractor, cancel the Contract without liability if it is determined by the City that gratuities were offered or given by the Contractor or any agent or representative of the Contractor to any officer or employee of the City of Austin with a view toward securing the Contract or securing favorable treatment with respect to the awarding or amending or the making of any determinations with respect to the performing of such contract. In the event the Contract is canceled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by the Contractor in providing such gratuities.

42. **PROHIBITION AGAINST PERSONAL INTEREST IN CONTRACTS**: No officer, employee, independent consultant, or elected official of the City who is involved in the development, evaluation, or decision-making process of the performance of any solicitation shall have a financial interest, direct or indirect, in the Contract resulting from that solicitation. Any willful violation of this section shall constitute impropriety in office, and any officer or employee guilty thereof shall be subject to disciplinary action up to and including dismissal. Any violation of this provision, with the knowledge, expressed or implied, of the Contractor shall render the Contract voidable by the City.

43. **INDEPENDENT CONTRACTOR**: The Contract shall not be construed as creating an employer/employee relationship, a partnership, or a joint venture. The Contractor's services shall be those of an independent contractor. The Contractor agrees and understands that the Contract does not grant any rights or privileges established for employees of the City.

44. **ASSIGNMENT-DELEGATION**: The Contract shall be binding upon and enure to the benefit of the City and the Contractor and their respective successors and assigns, provided however, that no right or interest in the Contract shall be assigned and no obligation shall be delegated by the Contractor without the prior written consent of the City. Any attempted assignment or delegation by the Contractor shall be void unless made in conformity with this paragraph. The Contract is not intended to confer rights or benefits on any person, firm or entity not a party hereto; it being the intention of the parties that there be no third party beneficiaries to the Contract.

45. **WAIVER**: No claim or right arising out of a breach of the Contract can be discharged in whole or in part by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party. No waiver by either the Contractor or the City of any one or more events of default by the other party shall operate as, or be construed to be, a permanent waiver of any rights or obligations under the Contract, or an express or implied acceptance of any other existing or future default or defaults, whether of a similar or different character.

46. **MODIFICATIONS**: The Contract can be modified or amended only by a writing signed by both parties. No pre-printed or similar terms on any the Contractor invoice, order or other document shall have any force or effect to change the terms, covenants, and conditions of the Contract.

47. **INTERPRETATION**: The Contract is intended by the parties as a final, complete and exclusive statement of the terms of their agreement. No course of prior dealing between the parties or course of performance or usage of the trade shall be relevant to supplement or explain any term used in the Contract. Although the Contract may have been substantially drafted by one party, it is the intent of the parties that all provisions be construed in a manner to be fair to both parties, reading no provisions more strictly against one party or the other. Whenever a term defined by the Uniform Commercial Code, as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

48. **DISPUTE RESOLUTION**:

    A. If a dispute arises out of or relates to the Contract, or the breach thereof, the parties agree to negotiate prior to prosecuting a suit for damages. However, this section does not prohibit the filing of a lawsuit to toll the running of a statute of limitations or to seek injunctive relief. Either party may make a written request for a meeting between representatives of each party within fourteen (14) calendar days after receipt of the request or such later period as agreed by the parties. Each party shall include, at a minimum, one (1) senior level individual with decision-making authority regarding the dispute. The purpose of this and any subsequent meeting is to attempt in good faith to negotiate a resolution of the dispute. If, within thirty (30) calendar days after such meeting, the parties have not succeeded in negotiating a resolution of the dispute, they will proceed directly to mediation as

described below. Negotiation may be waived by a written agreement signed by both parties, in which event the parties may proceed directly to mediation as described below.

B. If the efforts to resolve the dispute through negotiation fail, or the parties waive the negotiation process, the parties may select, within thirty (30) calendar days, a mediator trained in mediation skills to assist with resolution of the dispute. Should they choose this option, the City and the Contractor agree to act in good faith in the selection of the mediator and to give consideration to qualified individuals nominated to act as mediator. Nothing in the Contract prevents the parties from relying on the skills of a person who is trained in the subject matter of the dispute or a contract interpretation expert. If the parties fail to agree on a mediator within thirty (30) calendar days of initiation of the mediation process, the mediator shall be selected by the Travis County Dispute Resolution Center (DRC). The parties agree to participate in mediation in good faith for up to thirty (30) calendar days from the date of the first mediation session. The City and the Contractor will share the mediator's fees equally and the parties will bear their own costs of participation such as fees for any consultants or attorneys they may utilize to represent them or otherwise assist them in the mediation.

49. **JURISDICTION AND VENUE**: The Contract is made under and shall be governed by the laws of the State of Texas, including, when applicable, the Uniform Commercial Code as adopted in Texas, V.T.C.A., Bus. & Comm. Code, Chapter 1, excluding any rule or principle that would refer to and apply the substantive law of another state or jurisdiction. All issues arising from this Contract shall be resolved in the courts of Travis County, Texas and the parties agree to submit to the exclusive personal jurisdiction of such courts. The foregoing, however, shall not be construed or interpreted to limit or restrict the right or ability of the City to seek and secure injunctive relief from any competent authority as contemplated herein.

50. **INVALIDITY**: The invalidity, illegality, or unenforceability of any provision of the Contract shall in no way affect the validity or enforceability of any other portion or provision of the Contract. Any void provision shall be deemed severed from the Contract and the balance of the Contract shall be construed and enforced as if the Contract did not contain the particular portion or provision held to be void. The parties further agree to reform the Contract to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this section shall not prevent this entire Contract from being void should a provision which is the essence of the Contract be determined to be void.

51. **HOLIDAYS:** The following holidays are observed by the City:

Holiday	Date Observed
New Year's Day	January 1
Martin Luther King, Jr.'s Birthday	Third Monday in January
President's Day	Third Monday in February
Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	First Monday in September
Veteran's Day	November 11
Thanksgiving Day	Fourth Thursday in November
Friday after Thanksgiving	Friday after Thanksgiving
Christmas Eve	December 24
Christmas Day	December 25

If a Legal Holiday falls on Saturday, it will be observed on the preceding Friday. If a Legal Holiday falls on Sunday, it will be observed on the following Monday.

52. **SURVIVABILITY OF OBLIGATIONS:** All provisions of the Contract that impose continuing obligations on the parties, including but not limited to the warranty, indemnity, and confidentiality obligations of the parties, shall survive the expiration or termination of the Contract.

53. **NON-SUSPENSION OR DEBARMENT CERTIFICATION:**

The City of Austin is prohibited from contracting with or making prime or sub-awards to parties that are suspended or debarred or whose principals are suspended or debarred from Federal, State, or City of Austin Contracts. By accepting a Contract with the City, the Vendor certifies that its firm and its principals are not currently suspended or debarred from doing business with the Federal Government, as indicated by the General Services Administration List of Parties Excluded from Federal Procurement and Non-Procurement Programs, the State of Texas, or the City of Austin.

54. **EQUAL OPPORTUNITY**

A. **Equal Employment Opportunity:** No Offeror, or Offeror's agent, shall engage in any discriminatory employment practice as defined in Chapter 5-4 of the City Code. No Offer submitted to the City shall be considered, nor any Purchase Order issued, or any Contract awarded by the City unless the Offeror has executed and filed with the City Purchasing Office a current Non-Discrimination Certification. Non-compliance with Chapter 5-4 of the City Code may result in sanctions, including termination of the contract and the Contractor's suspension or debarment from participation on future City contracts until deemed compliant with Chapter 5-4.

B. **Americans with Disabilities Act (ADA) Compliance:** No Offeror, or Offeror's agent, shall engage in any discriminatory employment practice against individuals with disabilities as defined in the ADA.

55. **INTERESTED PARTIES DISCLOSURE**

As a condition to entering the Contract, the Business Entity constituting the Offeror must provide the following disclosure of Interested Parties to the City prior to the award of a contract with the City on Form 1295 "Certificate of Interested Parties" as prescribed by the Texas Ethics Commission for any contract award requiring council authorization. The Certificate of Interested Parties Form must be completed on the Texas Ethics Commission website, printed, and signed by the authorized agent of the Business Entity with acknowledgment that disclosure is made under oath and under penalty of perjury. The City will submit the "Certificate of Interested Parties" to the Texas Ethics Commission within 30 days of receipt from the successful Offeror. The Offeror is reminded that the provisions of Local Government Code 176, regarding conflicts of interest between the bidders and local officials remains in place. Link to Texas Ethics Commission Form 1295 process and procedures below:

https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

56. **BUY AMERICAN ACT-SUPPLIES (Applicable to certain Federally funded requirements)**

A. Definitions. As used in this paragraph –

i. "Component" means an article, material, or supply incorporated directly into an end product.

ii. "Cost of components" means -

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

iii. "Domestic end product" means-

(1) An unmanufactured end product mined or produced in the United States; or

(2) An end product manufactured in the United States, if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as those that the agency determines are not mined, produced, or manufactured in sufficient and reasonably available commercial quantities of a satisfactory quality are treated as domestic. Scrap generated, collected, and prepared for processing in the United States is considered domestic.

iv. "End product" means those articles, materials, and supplies to be acquired under the contract for public use.

v. "Foreign end product" means an end product other than a domestic end product.

vi. "United States" means the 50 States, the District of Columbia, and outlying areas.

B. The Buy American Act (41 U.S.C. 10a - 10d) provides a preference for domestic end products for supplies acquired for use in the United States.

C. The City does not maintain a list of foreign articles that will be treated as domestic for this Contract; but will consider for approval foreign articles as domestic for this product if the articles are on a list approved by another Governmental Agency. The Offeror shall submit documentation with their Offer demonstrating that the article is on an approved Governmental list.

D. The Contractor shall deliver only domestic end products except to the extent that it specified delivery of foreign end products in the provision of the Solicitation entitled "Buy American Act Certificate".

The Standard Purchasing Terms and Conditions to the RFP contain many provisions that are not customary for and/or applicable to the type of services contemplated by the RFP. By way of example, it is customary for Goldman Sachs to receive indemnification in connection with providing the type of services contemplated by the RFP, and Goldman Sachs does not (as a matter of firm policy) provide indemnification of the type found in Section 31 of the Standard Purchasing Terms and Conditions. Notwithstanding anything to the contrary contained in the RFP, the City acknowledges that nothing in Goldman Sachs' response is an agreement to include all of the Standard Purchasing Terms and Conditions (as drafted or otherwise) in a purchase agreement nor an expressed nor an implied commitment by Goldman Sachs to act in any capacity contemplated by the RFP. Any such commitment to perform the services contemplated by the RFP shall only be set forth in a separate agreement. If selected by the City to perform the services contemplated by the RFP, Goldman Sachs reserves the right to negotiate the terms of the purchase agreement (or other appropriate form of agreement appropriate for the type of transaction involved) which would contain customary terms and conditions mutually agreed upon by Goldman Sachs and the City.

Appendix E. Relevant Experience

Relevant Experience						
Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
4/3/2003	Long Island Power Authority	Series 2003 A & B	Electric Sys General Rev Bonds	$ 622.5	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
7/8/2003	Los Angeles Dept of Wtr & Power	Subseries A-1 & A-2	Power System Revenue Bonds	955.9	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
9/9/2003	Texas Public Finance Auth (TPFA)	Series 2003 C-1, D	Revenue Demand Rate Bonds	300.0	Terry Thornton, Collin Teague	John Hernandez Deputy Director, TPFA 300 W 15th St #411 Austin, TX 78701 john.hernandez@tpfa.state.tx.us (512) 463-3101
9/10/2003	Texas Public Finance Auth (TPFA)	Series 2003 A & B	Unemployment Comp Rev Bonds	776.7	Terry Thornton, Collin Teague	John Hernandez Deputy Director, TPFA 300 W 15th St #411 Austin, TX 78701 john.hernandez@tpfa.state.tx.us (512) 463-3101
5/19/2004	Houston City-Texas	Series 2004 A & B	Combined Utility Rev Ref Bonds	2,305.5	Terry Thornton, Collin Teague	Charisse Mosely Deputy City Controller Office of the Controller 901 Bagby, 10th Floor Houston, TX 77002 charisse.mosely@houstontx.gov (832) 393-3529
6/16/2004	Harris Co-Texas	Series 2004 A & B	Revenue Refunding Bonds	180.5	Terry Thornton, Collin Teague	Linnea Horn Debt Manager 1001 Preston Street, Suite 630 Houston, TX 77002 linnea.horn@bmd.hctx.net (713) 755-6574
6/16/2004	Anaheim Public Financing Auth	Series 2004	Distribution Sys Rev Bonds	131.3	Joseph Natoli	Brian Beelner Assistant Finance Director 201 S Anaheim Anaheim, CA 92805 bbeelner@anaheim.net

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
						(714) 765-4620
7/14/2004	Los Angeles Dept of Wtr & Power	2004 Series C	Water Sys Revenue Bonds	200.0	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
7/28/2004	Long Island Power Authority	Series 2004A	Electric Sys General Rev Bonds	200.0	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
11/4/2004	Univ of Texas Sys Bd of Regents	Series 2004C	Revenue Financing Sys Bonds	218.6	Terry Thornton	Terry Hull Associate Vice Chancellor for Finance 601 Colorado St. Austin, TX thull@utsystem.edu (512) 499-4494
8/4/2005	Brownsville City-Texas	Series 2005 A	Util Sys Rev Ref Imp Bonds	220.6	Terry Thornton, Collin Teague	Leandro G. Garcia, CPA Chief Financial Officer 1425 Robinhood Drive Brownsville, Texas 78521 lgarcia@brownsville-pub.com (956) 983-6173
12/14/2005	Los Angeles Dept of Wtr & Power	2005 Ser A Sub A-2	Power System Revenue Bonds	932.1	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
2/7/2006	Los Angeles Dept of Wtr & Power	2006 Subser A-1 & A-2	Water System Revenue Bonds	482.2	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
2/22/2006	Dallas & Fort Worth Cities-Texas	Series 2006 A	Joint Revenue Refunding Bonds	310.3	Terry Thornton, Collin Teague, Zach Effron	Mike Phemister Vice President 3200 E Airfield Dr. PO Box 619428 DFW Airport, TX 75261-9428 mphemister@dfwairport.com (972) 973-5447

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
3/10/2006	Long Island Power Authority	Series 2006 A & B	Electric Sys Revenue Bonds	950.0	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
7/12/2006	Tennessee Energy Acquisition Corp	Series 2006 A	Gas Project Revenue Bonds	1,994.5	Joseph Natoli	Mark McCutchen CEO 1808-A Ashland City Road Clarksville, TN 37043 mmccutchen@teac-gas.com (931) 920-3499
9/14/2006	Long Island Power Authority	Series 2006 E	Electric System General Rev Bonds	515.1	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
10/5/2006	Texas Transportation Commission	Series 2006-A	GO Mobility Fund Bonds	1,040.3	Terry Thornton, Collin Teague	Ben Asher Innovative Financing/Debt Management Officer 125 E. 11th Street. Austin, TX 78701 Benjamin.Asher@txdot.gov (512) 463-8611
11/30/2006	Univ of Texas Sys Bd of Regents	Series 2006 C & E	Rev Financing Sys Ref Bonds	231.1	Terry Thornton	Terry Hull Associate Vice Chancellor for Finance 601 Colorado St. Austin, TX thull@utsystem.edu (512) 499-4494
12/7/2006	Texas Transportation Commission	Series 2006 B	GO Mobility Fund Bonds	150.0	Terry Thornton, Collin Teague	Ben Asher Innovative Financing/Debt Management Officer 125 E. 11th Street. Austin, TX 78701 Benjamin.Asher@txdot.gov (512) 463-8611
12/8/2006	Long Island Power Authority	Series 2006 F	Electric System Gen Rev Bonds	518.1	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
12/14/2006	Tennessee Energy Acquisition Corp	Series 2006 C	Gas Project Revenue Bonds	1,060.2	Joseph Natoli	Mark McCutchen CEO 1808-A Ashland City Road Clarksville, TN 37043 mmccutchen@teac-gas.com

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
						(931) 920-3499
2/7/2007	Houston City-Texas	Series 2007 A	Pension Obligation Bonds	63.8	Terry Thornton, Collin Teague	Charisse Mosely Deputy City Controller Office of the Controller 901 Bagby, 10th Floor Houston, TX 77002 charisse.mosely@houstontx.gov (832) 393-3529
2/14/2007	Central Plains Energy Project	Series 2007 A & B	Gas Project Revenue Bonds	529.1	Joseph Natoli	Jim Knight CPEP Director 1723 Harney Street Omaha, NE 68102-1960 jim_knight@mudnebr.com (402) 504-7771
5/15/2007	Anaheim Public Financing Auth	2007 Series A-1 &B	Senior Lease Revenue Bonds	192.9	Joseph Natoli	Brian Beelner Assistant Finance Director 201 S Anaheim Anaheim, CA 92805 bbeelner@anaheim.net (714) 765-4620
6/14/2007	SA Energy Acquis Pub Fac Corp	Series 2007	Gas Supply Revenue Bonds	644.3	Terry Thornton, Collin Teague	Dana Boone Director of Cash & Debt Management 5900 W. Plano Parkway Plano, TX 75093 dgibsonboone@ntta.org (214) 461-2019
6/14/2007	Los Angeles Dept of Wtr & Power	2007 Ser A Sub A-1	Water System Revenue Bonds	98.4	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
6/14/2007	Los Angeles Dept of Wtr & Power	2007 Ser A Sub A-2	Water System Revenue Bonds	197.5	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
6/14/2007	SA Energy Acquis Pub Fac Corp	Series 2007	Gas Supply Revenue Bonds	644.3	Joseph Natoli	Dana Boone Director of Cash & Debt Management 5900 W. Plano Parkway Plano, TX 75093 dgibsonboone@ntta.org (214) 461-2019

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
7/13/2007	Harris Co-Texas	Series 2007 C	Toll Road & Sub Lien Rev Bonds	321.7	Terry Thornton, Collin Teague	Linnea Horn Debt Manager 1001 Preston Street, Suite 630 Houston, TX 77002 linnea.horn@bmd.hctx.net (713) 755-6574
9/11/2007	Williamson Co-Texas	Series 2007	Unlimited Tax Road Bonds	147.5	Terry Thornton, Collin Teague	Jerri Jones County Treasurer 710 South Main, Ste 105 Georgetown TX 78626 jljones@wilco.org (512) 943-1540
10/2/2007	Los Angeles Dept of Wtr & Power	2007 Ser A, Sub A-1 & A-2	Power System Revenue Bonds	528.8	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
5/6/2008	Brownsville City-Texas	Series 2008	Utilities System Rev Ref Bonds	77.8	Terry Thornton, Collin Teague	Leandro G. Garcia, CPA Chief Financial Officer 1425 Robinhood Drive Brownsville, Texas 78521 lgarcia@brownsville-pub.com (956) 983-6173
10/8/2008	Long Island Power Authority	Series 2008 A	Electric Sys Gen Revenue Bonds	605.1	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
10/27/2008	Long Island Power Authority	Series CP-2 & 3	Commercial Paper Notes	150.0	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
10/29/2008	Univ of Texas Sys Bd of Regents	Seires 2008 A	Permanent University Fund Bonds	200.5	Terry Thornton	Terry Hull Associate Vice Chancellor for Finance 601 Colorado St. Austin, TX thull@utsystem.edu (512) 499-4494
10/30/2008	Long Island Power Authority	Series 2008 B	Electric System General Rev Bonds	149.3	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
11/6/2008	Los Angeles Dept of Wtr & Power	2008 Series A & A-1	Power System Revenue Bonds	550.0	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
11/14/2008	Dallas City-Texas	Series 2008 A	Comb Tax & Rev Certs of Oblig	5.4	Terry Thornton, Collin Teague	Jeanne Chipperfield 1500 Marilla St., Dallas, TX 75201 jeanne.chipperfield@dallascityhall.com (214) 670-5631
11/14/2008	Dallas City-Texas	Series 2008	Equipment Acqn Contractual Bonds	33.8	Terry Thornton, Collin Teague	Jeanne Chipperfield 1500 Marilla St., Dallas, TX 75201 jeanne.chipperfield@dallascityhall.com (214) 670-5631
11/14/2008	Dallas City-Texas	Series 2008	General Obligation Bonds	209.8	Terry Thornton, Collin Teague	Jeanne Chipperfield 1500 Marilla St., Dallas, TX 75201 jeanne.chipperfield@dallascityhall.com (214) 670-5631
1/15/2009	Long Island Power Authority	Series 2009 A	Electric System Gen Revenue Bonds	435.8	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
1/27/2009	Los Angeles Dept of Wtr & Power	2009 Series A	Water System Revenue Bonds	150.0	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
2/10/2009	Los Angeles Dept of Wtr & Power	2009 Series A	Power System Revenue Bonds	123.1	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
5/6/2009	Los Angeles Dept of Wtr & Power	2009 Series B	Power System Revenue Bonds	172.1	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
5/28/2009	Harris Co Metro Trans Auth	Series 2009 B	Sales & Use Tax Contractual Oblig	219.9	Terry Thornton, Collin Teague	Debbie Sechler Vice President and CFO 1900 Main St. P.O. Box 61429

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
						Houston TX 77208 debbie.sechler@ridemetro.org (713) 739-4930
6/2/2009	CPS Energy (San Antonio)	Series 2009 C	Electric & Gas Sys Revenue Bonds	375.0	Terry Thornton, Collin Teague, Joseph Natoli	Dana Boone Director of Cash & Debt Management 5900 W. Plano Parkway Plano, TX 75093 dgibsonboone@ntta.org (214) 461-2019
6/17/2009	Lower Colorado River Authority (LCRA)	Series 2009	Transmission Contract Ref Rev Bns	118.6	Terry Thornton, Joseph Natoli	Jonathan Hurst Director of Innovative Finance Lower Colorado River Authority 3700 Lake Austin Blvd. Austin, TX 78703 Jonathan.Hurst@LCRA.ORG (512) 473–3200
6/17/2009	Lower Colorado River Authority (LCRA)	Series 2009	Refunding Revenue Bonds	171.5	Terry Thornton, Joseph Natoli	Jonathan Hurst Director of Innovative Finance Lower Colorado River Authority 3700 Lake Austin Blvd. Austin, TX 78703 Jonathan.Hurst@LCRA.ORG (512) 473–3200
8/6/2009	North Texas Tollway Auth (NTTA)	Series 2009 B	First Tier System Revenue Bonds	825.0	Terry Thornton, Collin Teague	Dana Boone Director of Cash & Debt Management 5900 W. Plano Parkway Plano, TX 75093 dgibsonboone@ntta.org (214) 461-2019
8/18/2009	Central Plains Energy Project	Series 2009	Gas Project Revenue Bonds	718.4	Joseph Natoli	Jim Knight CPEP Director 1723 Harney Street Omaha, NE 68102-1960 jim_knight@mudnebr.com (402) 504-7771
9/10/2009	Univ of Texas Sys Bd of Regents	Series 2009 A	Permanent University Fund Bonds	250.0	Terry Thornton	Terry Hull Associate Vice Chancellor for Finance 601 Colorado St. Austin, TX thull@utsystem.edu (512) 499-4494
11/19/2009	Los Angeles Dept of Wtr & Power	2009 Series C	Water System Revenue Bonds	346.1	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
						(213) 367-0690
12/9/2009	Harris Co-Texas	Series 2009 C	Toll Road Senior Lien Rev Bonds	250.0	Terry Thornton, Collin Teague	Linnea Horn Debt Manager 1001 Preston Street, Suite 630 Houston, TX 77002 linnea.horn@bmd.hctx.net (713) 755-6574
5/4/2010	Long Island Power Authority	Series 2010 A	Electric System General Rev Bonds	193.3	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
5/5/2010	Long Island Power Authority	Series 2010 B	Electric System Gen Revenue Bonds	210.0	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
5/20/2010	Lone Star College System	Series 2010 A & B	Limited Tax GO & Refunding Bonds	119.1	Terry Thornton, Collin Teague	Tammy Cortes Treasurer 5000 Research Forest Dr The Woodlands, TX 77381-4399 tammy.a.cortes@lonestar.edu (832) 813-6820
5/20/2010	Los Angeles Dept of Wtr & Power	2010 Series A	Power System Revenue Bonds	616.0	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
6/17/2010	Northern California Power Agency	2010 Series A & B	Lodi Energy Center Revenue Bonds	255.0	Joseph Natoli	Donna I. Stevener Asst General Manager for Administrative Services 180 Cirby Way Roseville, CA 95678 Donna.Stevener@ncpa.com (916) 781-4244
7/27/2010	Texas Transportation Commission	Series 2010 B	State Highway Fund Revenue Bonds	1,500.0	Terry Thornton, Collin Teague	Ben Asher Innovative Financing/Debt Management Officer 125 E. 11th Street. Austin, TX 78701 Benjamin.Asher@txdot.gov (512) 463-8611

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
8/31/2010	Harris Co Flood Control Dt	Series 2010 A	Contract Tax Bonds	181.9	Terry Thornton, Collin Teague	Linnea Horn Debt Manager 1001 Preston Street, Suite 630 Houston, TX 77002 linnea.horn@bmd.hctx.net (713) 755-6574
10/21/2010	Lower Colorado River Authority (LCRA)	Series 2010 A & B	Refunding Revenue Bonds	373.8	Terry Thornton, Joseph Natoli	Jonathan Hurst Director of Innovative Finance Lower Colorado River Authority 3700 Lake Austin Blvd. Austin, TX 78703 Jonathan.Hurst@LCRA.ORG (512) 473–3200
11/3/2010	Love Field Airport Modernization Corp	Series 2010	Special Facilities Rev Bonds	310.0	Terry Thornton, Collin Teague Zach Effron	Bob Montgomery Vice President of Airport Affairs at Southwest Airlines 2702 Love Field Drive Dallas, TX 75235-1611 Bob.montgomery@wnco.com (214) 792-4365
11/24/2010	Los Angeles Dept of Wtr & Power	2010 Series D	Power System Revenue Bonds	760.2	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
6/10/2011	Ctl Texas Reg Mobility Au (CTRMA)	Series 2011	Senior & Sub Lien Revenue Bonds	375.9	Terry Thornton, Collin Teague	Bill Chapman Chief Financial Officer 3300 N Interstate 35 Frontage Rd #300 Austin, TX 78705 wchapman@ctrma.org (512) 450-6284
6/15/2011	Los Angeles Dept of Wtr & Power	2011 Series A	Power System Revenue Bonds	694.1	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
6/28/2011	Houston City-Texas	Series 2011 B	Airport System Sub Lien Rev Ref	566.9	Terry Thornton, Collin Teague, Zach Effron	Charisse Mosely Deputy City Controller Office of the Controller 901 Bagby, 10th Floor Houston, TX 77002 charisse.mosely@houstontx.gov (832) 393-3529

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
9/9/2011	Harris Co Metro Trans Auth	Series 2011A & B	Sales & Use Tax Contractual Oblig	510.4	Terry Thornton, Collin Teague	Debbie Sechler Vice President and CFO 1900 Main St. P.O. Box 61429 Houston TX 77208 debbie.sechler@ridemetro.org (713) 739-4930
9/15/2011	Long Island Power Authority	Series 2011 A	Electric Sys Gen Revenue Bonds	250.0	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
4/26/2012	Central Plains Energy Project	Series 2012	Gas Project Revenue Bonds	608.7	Joseph Natoli	Jim Knight CPEP Director 1723 Harney Street Omaha, NE 68102-1960 jim_knight@mudnebr.com (402) 504-7771
5/31/2012	Love Field Airport Modernization Corp	Series 2012	Special Facilities Revenue Bonds	146.3	Terry Thornton, Collin Teague, Zach Effron	Bob Montgomery Vice President of Airport Affairs at Southwest Airlines 2702 Love Field Drive Dallas, TX 75235-1611 Bob.montgomery@wnco.com (214) 792-4365
6/27/2012	Long Island Power Authority	Series 2012 A & B	Electric Sys Gen Revenue Bonds	502.0	Joseph Natoli	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
10/11/2012	Los Angeles Dept of Wtr & Power	2012 Series B & C	Power System Revenue Bonds	650.0	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
5/22/2013	Los Angeles Dept of Wtr & Power	2013 Series C & B	Power System Revenue Bonds	480.0	Joseph Natoli	Mario Ignacio Director of Finance and Risk Control 111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
7/17/2013	Grand Parkway Transport Corp	Series 2013	Toll Revenue Bonds	2,920.0	Terry Thornton, Collin Teague, Zach Effron	Ben Asher Innovative Financing/Debt Management Officer 125 E. 11th Street.

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
						Austin, TX 78701 Benjamin.Asher@txdot.gov (512) 463-8611
8/22/2013	El Paso Downtown Dev Corp	Series 2013 B	Special Revenue Bonds	60.8	Terry Thornton, Collin Teague	Mark Sutter #2 Civic Center Plaza El Paso, TX 79901-1196 sutterm@elpasotexas.gov
9/25/2013	Lone Star College System	Series 2013	Revenue Financing System Bonds	58.1	Terry Thornton, Collin Teague	Tammy Cortes Treasurer 5000 Research Forest Dr The Woodlands, TX 77381-4399 tammy.a.cortes@lonestar.edu (832) 813-6820
12/17/2013	El Paso City-Texas	Series 2014	GO Refunding Bonds	110.6	Terry Thornton, Collin Teague	Mark Sutter #2 Civic Center Plaza El Paso, TX 79901-1196 sutterm@elpasotexas.gov
2/4/2014	Grand Parkway Transport Corp	Series 2014 A	Sub Tier Toll Revenue Ref BANs	733.5	Terry Thornton, Collin Teague, Zach Effron	Ben Asher Innovative Financing/Debt Management Officer 125 E. 11th Street. Austin, TX 78701 Benjamin.Asher@txdot.gov (512) 463-8611
2/20/2014	Univ of Texas Sys Bd of Regents	Series 2014 B	Permanent University Fund Bonds	221.6	Terry Thornton	Terry Hull Associate Vice Chancellor for Finance 601 Colorado St. Austin, TX thull@utsystem.edu (512) 499-4494
6/13/2014	Houston City-Texas	Series 2014 D	Comb Utility Sys 1st Ln Rev & Ref	548.0	Terry Thornton, Collin Teague	Charisse Mosely Deputy City Controller Office of the Controller 901 Bagby, 10th Floor Houston, TX 77002 charisse.mosely@houstontx.gov (832) 393-3529
8/13/2014	Harris Co-Texas	Series 2014 A	Unlimited Tax Road Ref Bonds	195.9	Terry Thornton, Collin Teague	Linnea Horn Debt Manager 1001 Preston Street, Suite 630 Houston, TX 77002 linnea.horn@bmd.hctx.net (713) 755-6574
11/6/2014	Los Angeles Dept of Wtr & Power	2014 Series A	Water System Revenue Bonds	271.0	Joseph Natoli, Yamini Kalidindi	Mario Ignacio Director of Finance and Risk Control

Sale Date	Issuer	Series	Issue Description	Par ($mm)	Personnel Assigned	Reference Contact Information
						111 North Hope Street, Rm 465 Los Angeles, CA 90012 mario.ignacio@ladwp.com (213) 367-0690
12/4/2014	Long Island Power Authority	Series 2014 A & B	Electric System General Rev Bonds	578.0	Joseph Natoli, Yamini Kalidindi	Kenneth Kane 333 Earle Ovington Blvd., Suite 403 Uniondale, NY 11553 kkane@lipower.org (516) 719-9880
7/15/2015	Brownsville City-Texas	Series 2015	Utilites System Revenue Ref Bonds	94.8	Terry Thornton, Collin Teague, Joseph Natoli, Yamini Kalidindi	Leandro G. Garcia, CPA Chief Financial Officer 1425 Robinhood Drive Brownsville, Texas 78521 lgarcia@brownsville-pub.com (956) 983-6173
7/15/2015	CPS Energy (San Antonio)	New Series 2015	Electric & Gas Sys Rev Ref Bonds	320.5	Terry Thornton, Collin Teague, Joseph Natoli, Yamini Kalidindi	Dana Boone Director of Cash & Debt Management 5900 W. Plano Parkway Plano, TX 75093 dgibsonboone@ntta.org (214) 461-2019
7/15/2015	Metropolitan Washington Airports Authority	Series 2015 B, C, and D	Airport System Revenue Refunding Bonds	97.8	Paul Bloom, Zach Effron	Valerie O'Hara Debt Manager 1 Aviation Circle Washington, DC 20001 valerie.ohara@mwaa.com (703) 417-8716
9/3/2015	City of Philadelphia, Pennsylvania	Series 2015 A	Airport Revenue Refunding Bonds	345.7	Paul Bloom, Zach Effron	Rochelle Cameron Chief Executive Officer 8500 Essington Avenue Philadelphia, Pennsylvania rochelle.cameron@phl.org (215) 937-5414
2/23/2016	Lower Alabama Gas Dt	Series 2016 A	Revenue Bonds	599.4	Joseph Natoli, Yamini Kalidindi	Al Bean Chief Operating Officer/Co-Gen Mgr 2003 College Avenue Jackson, AL 36545 abean@cmcgas.com (334) 303-7966

Appendix F. Maturity by Maturity Swap Termination Results ($000s)

	Candidate			Refunding Only		Swap Termination Costs & Net Savings				
	Maturity	Par Amount	Coupon[1]	PV Savings	PV Savings %	Swap Termination Cost	Swap Term % of Par	Net Savings	% Savings	Cumulative Net Savings
				A		B		C = A - B		D = Cml (C)
Airport Series 2005	11/15/2018	18,650	4.701%	$ 1,780	9.5%	$ 1,779	9.5%	$ 1	0.0%	$ 1
	11/15/2017	2,975	4.701%	183	6.1%	185	6.2%	(2)	(0.1%)	(1)
	11/15/2016	2,850	4.701%	59	2.1%	76	2.7%	(17)	(0.6%)	(18)
	11/15/2019	21,800	4.701%	2,694	12.4%	2,765	12.7%	(71)	(0.3%)	(89)
	11/15/2020	21,725	4.701%	3,178	14.6%	3,395	15.6%	(217)	(1.0%)	(305)
	11/15/2021	20,900	4.701%	3,426	16.4%	3,838	18.4%	(412)	(2.0%)	(717)
	11/15/2022	21,800	4.701%	3,855	17.7%	4,565	20.9%	(710)	(3.3%)	(1,428)
	11/15/2023	22,750	4.701%	4,184	18.4%	5,316	23.4%	(1,132)	(5.0%)	(2,560)
	11/15/2024	23,725	4.701%	4,452	18.8%	6,090	25.7%	(1,638)	(6.9%)	(4,197)
	11/15/2025	24,750	4.701%	4,651	18.8%	6,897	27.9%	(2,246)	(9.1%)	(6,443)
	Total	**$ 181,925**		**$ 28,463**	**15.6%**	**$ 34,906**	**19.2%**	**$(6,443)**	**(3.5%)**	

[1] Swap rate of 4.051% + assumed 60 bps liquidity cost + assumed 5 bps remarketing fee = 4.701

	Candidate			Refunding Only		Swap Termination Costs & Net Savings				
	Maturity	Par Amount	Coupon[1]	PV Savings	PV Savings %	Swap Termination Cost	Swap Term % of Par	Net Savings	% Savings	Cumulative Net Savings
				A		B		C = A - B		D = Cml (C)
WWW Series 2008	5/15/2027	$ 30	4.050%	$ 5	16.6%	$ 8	26.7%	$(3)	(10.1%)	$(3)
	11/15/2021	530	4.050%	80	15.2%	85	16.0%	(5)	(0.9%)	(8)
	11/15/2022	585	4.050%	96	16.4%	106	18.1%	(10)	(1.7%)	(18)
	11/15/2018	4,190	4.050%	350	8.4%	365	8.7%	(15)	(0.3%)	(32)
	11/15/2017	4,130	4.050%	222	5.4%	237	5.7%	(15)	(0.4%)	(47)
	11/15/2019	4,260	4.050%	469	11.0%	486	11.4%	(17)	(0.4%)	(64)
	11/15/2020	3,210	4.050%	427	13.3%	445	13.9%	(18)	(0.6%)	(82)
	11/15/2016	4,070	4.050%	73	1.8%	103	2.5%	(30)	(0.7%)	(112)
	5/15/2023	10,355	4.050%	1,651	15.9%	1,970	19.0%	(319)	(3.1%)	(431)
	5/15/2024	10,675	4.050%	1,756	16.5%	2,220	20.8%	(464)	(4.3%)	(895)
	5/15/2026	7,800	4.050%	1,304	16.7%	1,862	23.9%	(558)	(7.2%)	(1,453)
	5/15/2025	11,035	4.050%	1,835	16.6%	2,470	22.4%	(635)	(5.8%)	(2,088)
	5/15/2028	12,560	4.050%	2,064	16.4%	3,329	26.5%	(1,265)	(10.1%)	(3,352)
	5/15/2029	12,950	4.050%	2,122	16.4%	3,585	27.7%	(1,463)	(11.3%)	(4,815)
	5/15/2030	13,530	4.050%	2,221	16.4%	3,890	28.8%	(1,669)	(12.3%)	(6,484)
	5/15/2031	13,980	4.050%	2,278	16.3%	4,175	29.9%	(1,897)	(13.6%)	(8,382)
	Total	**$ 113,890**		**$ 16,954**		**$ 25,336**	**22.2%**	**$(8,382)**	**(7.4%)**	

[1] Swap rate of 3.60% + assumed 40 bps liquidity cost + 5 bps remarketing fee = 4.05

Appendix G. Cash Optimization Strategy – Defeasance Candidate Breakdown

	Defeasance Candidates ($000)				Savings Statistics ($000)			
	Maturity	Call Date	Par Amount	Coupon	PV Savings	PV Savings %	Negative Arbitrage	Optimization Efficiency[1]
EUS 2007	11/15/2020	11/15/2017	$ 5,800	5.000%	$ 557	9.6%	$ 44	92.7%
	11/15/2019	11/15/2017	8,210	5.000%	553	6.7%	38	93.6%
	11/15/2018	11/15/2017	8,000	5.000%	270	3.4%	14	95.1%
	Total		**$ 22,010**		**$ 1,380**	**6.3%**	**$ 96**	**93.5%**

	Maturity	Call Date	Par Amount	Coupon	PV Savings	PV Savings %	Negative Arbitrage	Optimization Efficiency[1]
EUS 2010A	11/15/2026	11/15/2020	$ 4,935	5.000%	$ 358	7.3%	$ 258	58.1%
	11/15/2025	11/15/2020	3,360	5.000%	221	6.6%	154	58.8%
	11/15/2027	11/15/2020	5,260	5.000%	313	5.9%	306	50.6%
	11/15/2024	11/15/2020	4,435	5.000%	262	5.9%	167	61.1%
	11/15/2023	11/15/2020	4,175	5.000%	205	4.9%	120	63.0%
	11/15/2022	11/15/2020	3,980	5.000%	147	3.7%	74	66.6%
	Total		**$ 26,145**		**$ 1,506**	**5.8%**	**$ 1,079**	**58.3%**
	Austin Energy Total		**$ 48,155**		**$ 2,886**	**6.0%**	**$ 1,175**	**71.1%**

	Maturity	Call Date	Par Amount	Coupon	PV Savings	PV Savings %	Negative Arbitrage	Optimization Efficiency[1]
Series 2008 PIBR	9/1/2021	9/1/2017	$ 3,220	5.000%	$ 420	13.0%	$ 25	94.5%
	9/1/2020	9/1/2017	4,315	5.000%	449	10.4%	22	95.4%
	9/1/2019	9/1/2017	2,915	5.000%	212	7.3%	8	96.5%
	9/1/2018	9/1/2017	9,435	5.000%	348	3.7%	3	99.2%
	Austin G.O. Total		**$ 19,885**		**$ 1,429**	**7.2%**	**$ 57**	**96.2%**
	Grand Total		**$ 68,040**		**$ 4,315**	**6.3%**	**$ 1,232**	**77.8%**

[1]Refunding Efficiency as defined by savings/(savings + negative arbitrage)

MINORITY- AND WOMEN-OWNED BUSINESS ENTERPRISE (MBE/WBE)
PROCUREMENT PROGRAM
NO GOALS FORM

SOLICITATION NUMBER: RFQS TVN0103REBID

PROJECT NAME: Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though no goals have been established for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract; using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No X **If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope.**

Yes_____ **If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, subconsultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though no goals have been established, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Goldman, Sachs & Co.
Company Name

Collin Teague, Vice President
Name and Title of Authorized Representative (Print or Type)

Signature **Date** 3/7/2016

CITY OF AUSTIN, TEXAS
LIVING WAGES EMPLOYEE CERTIFICATION

Contract Number: TVN0103REBID	Description of Services: Underwriter/Investment Banking Services
Contractor Name: Goldman, Sachs & Co.	

Pursuant to the Living Wages provision of the contract (reference Section 0400, Supplemental Purchase Provisions), the Contractor is required to pay to all employees directly assigned to this City contract a minimum Living Wage equal to or greater than $13.03 per hour. In addition, employees are required to certify that they are compensated in accordance with the Living Wage provision. Contractors are prohibited from retaliating against any employee claiming non-compliance with the Living Wage provision.

I hereby certify that I am directly assigned to this contract and that I am compensated at wage rates equal to or greater than $13.03 per hour.

Employee's Title: Vice President	
Signature of Employee	Date: 3/7/2016
Type or Print Name: Collin Teague	

(Witness Signature)

Irwin Tejeda
(Printed Name: Irwin Tejeda)

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2017-192357

Date Filed:
04/13/2017

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Goldman, Sachs & Co.
NEW YORK, NY United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

Contract PA160000048
SOLICITATION NO: TVN0103REBID - potential underwriter of securities (note - this Form 1295 will be amended prior to entering into any specific bond purchase agreement or other similar agreement)

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
ARMSTRONG, PHILIP	New York, NY United States	X	
POMPEY, ASAHI	New York, NY United States	X	
RECTOR, FELICIA	New York, NY United States	X	
SCHROEDER, JEFFREY	NEW YORK, NY United States	X	
LEE, BRIAN	New York, NY United States	X	
OCKENE, PAUL	NEW YORK, NY United States	X	
ASH, ILIANA	NEW YORK, NY United States	X	
MATTHIAS, THOMAS	NEW YORK, NY United States	X	
PALM, GREGORY	New York, NY United States	X	
Solomon , DAVID	NEW YORK, NY United States	X	
The Goldman Sachs Group, Inc.	NEW YORK, NY United States	X	

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2017-192357

Date Filed:
04/13/2017

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Goldman, Sachs & Co.
NEW YORK, NY United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

Contract PA160000048
SOLICITATION NO: TVN0103REBID - potential underwriter of securities (note - this Form 1295 will be amended prior to entering into any specific bond purchase agreement or other similar agreement)

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

SANDRA FLEMING
Notary Public, State of Texas
My Commission Expires
July 25, 2018

TERRY THORNTON
Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Terry Thornton, this the 17th day of April, 2017, to certify which, witness my hand and seal of office.

Signature of officer administering oath | Sandra Fleming Printed name of officer administering oath | Notary Title of officer administering oath

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
J.P. Morgan Securities LLC ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between J.P. Morgan Securities LLC having offices at 383 Madison Avenue, New York, NY 10179 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 J.P. Morgan Securities LLC Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence**: Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work**: There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract**: The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement**: The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

J.P. MORGAN SECURITIES LLC	**CITY OF AUSTIN**
Douglas R. Hartman	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
Executive Director	Senior Buyer Supervisor
Title:	Title:
6/24/16	6/24/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: J.P. Morgan Securities LLC

Company Address: 383 Madison Avenue

City, State, Zip: New York, NY 10179

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Rhett Bredy

Title: Vice President

Signature of Officer or Authorized Representative: Rhett M. Bredy

Date: March 7, 2016

Email Address: rhett.m.bredy@jpmorgan.com

Phone Number: (214) 965-4407

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. Questions:

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16
Terry V. Nicholson, Sr. Buyer Specialist — Date
Purchasing Office, 512-974-2995

ACKNOWLEDGED BY:

Rhett M. Brady — Rhett M. Brady — 3/7/2016
Name — Authorized Signature — Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: J.P. Morgan Securities LLC

Company Address: 383 Madison Avenue

City, State, Zip: New York, NY 10179

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Rhett Bredy

Title: Vice President

Signature of Officer or Authorized Representative: Rhett M. Bredy

Date: March 7, 2016

Email Address: rhett.m.bredy@jpmorgan.com

Phone Number: (214) 965-4407

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

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CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

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Q2: Within the total of 15 vendors selected, how many will be from each category?

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ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16
Terry V. Nicholson, Sr. Buyer Specialist — Date
Purchasing Office, 512-974-2995

ACKNOWLEDGED BY:

Rhett M. Brady — Rhett M. Brady — 3/7/2016
Name — Authorized Signature — Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

CITY OF AUSTIN
PURCHASING OFFICE
SUPPLEMENTAL PURCHASE PROVISIONS
SOLICITAION NO. RFQS TVN0103REBID

The following Supplemental Purchasing Provisions apply to this solicitation:

1. **EXPLANATIONS OR CLARIFICATIONS:** (reference paragraph 5 in Section 0200)

   All requests for explanations or clarifications must be submitted in writing to the Purchasing Office no later than seven (7) calendar days prior to closing. Submissions may be made via email to Terry.Nicholson@austintexas.gov, or via fax at (512)974-2388.

2. **INSURANCE:** Insurance is required for this solicitation.

   A. **General Requirements:** See Section 0300, Standard Purchase Terms and Conditions, paragraph 32, entitled Insurance, for general insurance requirements.

      i. The Contractor shall provide a Certificate of Insurance as verification of coverages required below to the City at the below address prior to contract execution and within 14 calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award.

      ii. The Contractor shall not commence work until the required insurance is obtained~~ and until such insurance has been reviewed by the City~~. ~~Approval of insurance by the City~~ Maintenance of insurance shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.

      iii. ~~T~~Upon request the Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or holdover period is exercised, as verification of continuing coverage.

      iv. The Certificate of Insurance, and updates, shall be mailed to the following address:

      City of Austin Purchasing Office
      P. O. Box 1088
      Austin, Texas 78767

   B. **Specific Coverage Requirements:** The Contractor shall at a minimum carry insurance in the types and amounts indicated below for the duration of the Contract, including extension options and hold over periods, and during any warranty period. These insurance coverages are required minimums and are not intended to limit the responsibility or liability of the Contractor.

      i. **Worker's Compensation and Employers' Liability Insurance :** Coverage shall be consistent with statutory benefits outlined in the Texas Worker's Compensation Act (Section 401). The minimum policy limits for Employer's Liability are $100,000 bodily injury each accident, $500,000 bodily injury by disease policy limit and $100,000 bodily injury by disease each employee and include a Blanket Waiver of Subrogation in favor of the City of Austin.

         ~~(1) The Contractor's policy shall apply to the State of Texas and include these endorsements in favor of the City of Austin:~~

         ~~(a) Waiver of Subrogation, Form WC420304, or equivalent coverage~~

         ~~(b) Thirty (30) days Notice of Cancellation, Form WC420601, or equivalent coverage~~

      ii. **Commercial General Liability Insurance:** The minimum bodily injury and property damage per occurrence are $500,000 for coverages A (Bodily Injury and Property Damage) and B (Personal and Advertising Injury).

         (1) The policy shall contain the following provisions:

            (a) Contractual liability coverage for liability assumed under the Contract~~ and all other Contracts related to the project~~.

(b) Contractor/Subcontracted Work.

~~(c) Products/Completed Operations Liability for the duration of the warranty period.~~

(d) If the project involves digging or drilling provisions must be included that provide Explosion, Collapse, and/or Underground Coverage.

(2) The policy shall include these blanket endorsements in favor of the City of Austin:

(a) Waiver of Subrogation~~, Endorsement CG 2404, or equivalent coverage~~

~~(b) Thirty (30) days Notice of Cancellation, Endorsement CG 0205, or equivalent coverage~~

(c) The City of Austin listed as an additional insured~~, Endorsement CG 2010, or equivalent coverage~~ as their interests may appear relative to claims of bodily injury or property damage which arise from Contractor's negligent acts or omissions in connection with the performance of this contract.

iii. **Business Automobile Liability Insurance:** The Contractor shall provide coverage for all owned, non-owned and hired vehicles with a minimum combined single limit of $500,000 per occurrence for bodily injury and property damage. Alternate acceptable limits are $250,000 bodily injury per person, $500,000 bodily injury per occurrence and at least $100,000 property damage liability per accident.

(1) The policy shall include these blanket endorsements in favor of the City of Austin:

(a) Waiver of Subrogation~~, Endorsement CA0444, or equivalent coverage~~

~~(b) Thirty (30) days Notice of Cancellation, Endorsement CA0244, or equivalent coverage~~

(c) The City of Austin listed as an additional insured~~, Endorsement CA2048, or equivalent coverage.~~ as their interests may appear relative to claims of bodily injury or property damage which arise from Contractor's negligent acts or omissions in connection with the performance of this contract.

iv. **Professional Liability Insurance**: The Contractor shall provide coverage, at a minimum limit of $1,000,000 per claim, to pay on behalf of the assured all sums which the assured shall become legally obligated to pay as damages by reason of any negligent act, error, or omission arising out of the performance of professional services under this Agreement.

If coverage is written on a claims-made basis, the retroactive date shall be prior to or coincident with the date of the Contract and the certificate of insurance shall state that the coverage is claims-made and indicate the retroactive date. This coverage shall be continuous and will be provided for 24 months following the completion of the contract.

~~C. **Endorsements:** The specific insurance coverage endorsements specified above, or their equivalents must be provided. In the event that endorsements, which are the equivalent of the required coverage, are proposed to be substituted for the required coverage, copies of the equivalent endorsements must be provided for the City's review and approval.~~

3. **TERM OF CONTRACT**

A. The Contract shall be in effect for an initial term of 36 months and may be extended thereafter for up to 2 additional 12 month periods, subject to the approval of the Contractor and the City Purchasing Officer or his designee.

B. Upon expiration of the initial term or period of extension, the Contractor agrees to hold over under the terms and conditions of this agreement for such a period of time as is reasonably necessary to re-solicit and/or complete the project (not to exceed 120 days unless mutually agreed on in writing).

the event of default or delay in contract performance due to any of the foregoing causes, then the time for completion of the services will be extended; provided, however, in such an event, a conference will be held within three (3) business days to establish a mutually agreeable period of time reasonably necessary to overcome the effect of such failure to perform.

31. **INDEMNITY**:

A. Definitions:

i. "Indemnified Claims" shall include any and all claims, demands, suits, causes of action, judgments and liability of every character, type or description, including all reasonable costs and expenses of litigation, mediation or other alternate dispute resolution mechanism, including attorney and other professional fees for:

(1) damage to or loss of the property of any person (including, but not limited to the City, the Contractor, their respective agents, officers, employees and subcontractors; the officers, agents, and employees of such subcontractors; and third parties); and/or

(2) death, bodily injury, illness, disease, worker's compensation, loss of services, or loss of income or wages to any person (including but not limited to the agents, officers and employees of the City, the Contractor, the Contractor's subcontractors, and third parties),

ii. "Fault" shall include the sale of defective or non-conforming Deliverables, negligence, willful misconduct, or a breach of any legally imposed strict liability standard.

B. **THE CONTRACTOR SHALL DEFEND (AT THE OPTION OF THE CITY), INDEMNIFY, AND HOLD THE CITY, ITS SUCCESSORS, ASSIGNS, OFFICERS, EMPLOYEES AND ELECTED OFFICIALS HARMLESS FROM AND AGAINST ALL INDEMNIFIED CLAIMS DIRECTLY ARISING OUT OF, INCIDENT TO, CONCERNING OR RESULTING FROM THE FAULT OF THE CONTRACTOR, OR THE CONTRACTOR'S AGENTS, EMPLOYEES OR SUBCONTRACTORS, IN THE PERFORMANCE OF THE CONTRACTOR'S OBLIGATIONS UNDER THE CONTRACT. NOTHING HEREIN SHALL BE DEEMED TO LIMIT THE RIGHTS OF THE CITY OR THE CONTRACTOR (INCLUDING, BUT NOT LIMITED TO, THE RIGHT TO SEEK CONTRIBUTION) AGAINST ANY THIRD PARTY WHO MAY BE LIABLE FOR AN INDEMNIFIED CLAIM.**

32. **INSURANCE**: (reference Section 0400 for specific coverage requirements). The following insurance requirement applies. (Revised March 2013).

A. General Requirements.

i. The Contractor shall at a minimum carry insurance in the types and amounts indicated in Section 0400, Supplemental Purchase Provisions, for the duration of the Contract, including extension options and hold over periods, and during any warranty period.

ii. The Contractor shall provide Certificates of Insurance with the coverages and blanket endorsements required in Section 0400, Supplemental Purchase Provisions, to the City as verification of coverage prior to contract execution and within fourteen (14) calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award. The Contractor must also forward a Certificate of Insurance to the City whenever a previously identified policy period has expired, or an extension option or hold over period is exercised, as verification of continuing coverage.

iii. The Contractor shall not commence work until the required insurance is obtained ~~and until such insurance has been reviewed by the City~~. ~~Approval of insurance by the City~~ Maintenance of insurance shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.

~~iv. The City may request that the Contractor submit certificates of insurance to the City for all subcontractors prior to the subcontractors commencing work on the project.~~

v. The Contractor's ~~and all subcontractors'~~ insurance coverage shall be written by companies licensed to do business in the State of Texas or an insurer permitted to insure risks in all states at the time the policies are issued and shall be written by companies with A.M. Best ratings of B+VII or better.

vi. The "other" insurance clause shall not apply to the City where the City is an additional insured shown on any policy. It is intended that policies required in the Contract, covering both the City and the Contractor, shall be considered primary coverage as applicable.

vii. If insurance policies are not written for amounts specified in Section 0400, Supplemental Purchase Provisions, the Contractor shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of the primary coverage.

~~viii. The City shall be entitled, upon request, at an agreed upon location, and without expense, to review certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.~~

~~ix. The City reserves the right to review the insurance requirements set forth during the effective period of the Contract and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by the City based upon changes in statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as the Contractor.~~

x. The Contractor shall not cause any insurance to be canceled nor permit any insurance to lapse during the term of the Contract or as required in the Contract.

xi. The Contractor shall be responsible for premiums, deductibles and self-insured retentions, if any, stated in policies. ~~Self-insured retentions shall be disclosed on the Certificate of Insurance.~~

~~xii. The Contractor shall provide the City thirty (30) calendar days' written notice of erosion of the aggregate limits below occurrence limits for all applicable coverages indicated within the Contract.~~

xiii. The insurance coverages specified in Section 0400, Supplemental Purchase Provisions, are required minimums and are not intended to limit the responsibility or liability of the Contractor.

B. Specific Coverage Requirements: Specific insurance requirements are contained in Section 0400, Supplemental Purchase Provisions

33. **CLAIMS**: If any claim, demand, suit, or other action is asserted against the Contractor which arises under or concerns the Contract, or which could have a material adverse affect on the Contractor's ability to perform thereunder, the Contractor shall give written notice thereof to the City within ten (10) calendar days after receipt of notice by the Contractor. Such notice to the City shall state the date of notification of any such claim, demand, suit, or other action; the names and addresses of the claimant(s); the basis thereof; and the name of each person against whom such claim is being asserted. Such notice shall be delivered personally or by mail and shall be sent to the City and to the Austin City Attorney. Personal delivery to the City Attorney shall be to City Hall, 301 West 2nd Street, 4th Floor, Austin, Texas 78701, and mail delivery shall be to P.O. Box 1088, Austin, Texas 78767.

34. **NOTICES**: Unless otherwise specified, all notices, requests, or other communications required or appropriate to be given under the Contract shall be in writing and shall be deemed delivered three (3) business days after postmarked if sent by U.S. Postal Service Certified or Registered Mail, Return Receipt Requested. Notices delivered by other means shall be deemed delivered upon receipt by the addressee. Routine communications may be made by first class mail, telefax, or other commercially accepted means. Notices to the Contractor shall be sent to the address specified in the Contractor's Offer, or at such other address as a party may notify the other in writing. Notices to the

Appendix B: Financial Reports

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

Annual report pursuant to Section 13 or 15(d) of
the Securities Exchange Act of 1934

For the fiscal year ended
December 31, 2015

Commission file
number 1-5805

JPMorgan Chase & Co.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	13-2624428 (I.R.S. employer identification no.)
270 Park Avenue, New York, New York (Address of principal executive offices)	10017 (Zip code)

Registrant's telephone number, including area code: (212) 270-6000
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock	The New York Stock Exchange
	The London Stock Exchange
Warrants, each to purchase one share of Common Stock	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 5.50% Non-Cumulative Preferred Stock, Series O	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 5.45% Non-Cumulative Preferred Stock, Series P	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.70% Non-Cumulative Preferred Stock, Series T	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.30% Non-Cumulative Preferred Stock, Series W	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.125% Non-Cumulative Preferred Stock, Series Y	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.10% Non-Cumulative Preferred Stock, Series AA	The New York Stock Exchange
Depositary Shares, each representing a one-four hundredth interest in a share of 6.15% Non-Cumulative Preferred Stock, Series BB	The New York Stock Exchange
Alerian MLP Index ETNs due May 24, 2024	NYSE Arca, Inc.

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. ☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). ☒ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

☒ Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer (Do not check if a smaller reporting company) ☐ Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ Yes ☒ No

The aggregate market value of JPMorgan Chase & Co. common stock held by non-affiliates as of June 30, 2015: $249,201,931,877

Number of shares of common stock outstanding as of January 31, 2016: 3,670,264,897

Documents incorporated by reference: Portions of the registrant's Proxy Statement for the annual meeting of stockholders to be held on May 17, 2016, are incorporated by reference in this Form 10-K in response to Items 10, 11, 12, 13 and 14 of Part III.

Form 10-K Index

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ITEM 1: BUSINESS

Overview

JPMorgan Chase & Co., ("JPMorgan Chase" or the "Firm") a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; the Firm had $2.4 trillion in assets and $247.6 billion in stockholders' equity as of December 31, 2015. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national banking association that is the Firm's credit card-issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the United Kingdom ("U.K.") is J.P. Morgan Securities plc, a subsidiary of JPMorgan Chase Bank, N.A.

The Firm's website is www.jpmorganchase.com. JPMorgan Chase makes available free of charge, through its website, annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after it electronically files such material with, or furnishes such material to, the U.S. Securities and Exchange Commission (the "SEC"). The Firm has adopted, and posted on its website, a Code of Conduct for all employees of the Firm and a Code of Ethics for its Chairman and Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer and all other professionals of the Firm worldwide serving in a finance, accounting, tax or investor relations role.

Business segments

JPMorgan Chase's activities are organized, for management reporting purposes, into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer & Community Banking ("CCB") segment. The Firm's wholesale business segments are Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset Management ("AM").

A description of the Firm's business segments and the products and services they provide to their respective client bases is provided in the "Business segment results" section of Management's discussion and analysis of financial condition and results of operations ("MD&A"), beginning on page 68 and in Note 33.

Competition

JPMorgan Chase and its subsidiaries and affiliates operate in a highly competitive environment. Competitors include other banks, brokerage firms, investment banking companies, merchant banks, hedge funds, commodity trading companies, private equity firms, insurance companies, mutual fund companies, investment managers, credit card companies, mortgage banking companies, trust companies, securities processing companies, automobile financing companies, leasing companies, e-commerce and other Internet-based companies, financial technology companies, and other companies engaged in providing similar products and services. The Firm's businesses generally compete on the basis of the quality and variety of the Firm's products and services, transaction execution, innovation, reputation and price. Competition also varies based on the types of clients, customers, industries and geographies served. With respect to some of its geographies and products, JPMorgan Chase competes globally; with respect to others, the Firm competes on a national or regional basis. The Firm's ability to compete also depends on its ability to attract and retain professional and other personnel, and on its reputation.

It is likely that competition in the financial services industry will become even more intense as the Firm's businesses continue to compete with other financial institutions that may have a stronger local presence in certain geographies or that operate under different rules and regulatory regimes than the Firm, or with companies that provide new or innovative products or services that the Firm is unable to provide.

Supervision and regulation

The Firm is subject to regulation under state and federal laws in the U.S., as well as the applicable laws of each of the various jurisdictions outside the U.S. in which the Firm does business.

As a result of regulatory reforms enacted and proposed in the U.S. and abroad, the Firm has been experiencing a period of significant change in regulation which has had and could continue to have significant consequences for how the Firm conducts business. The Firm continues to work diligently in assessing the regulatory changes it is facing, and is devoting substantial resources to comply with all the new regulations, while, at the same time, endeavoring to best meet the needs and expectations of its customers, clients and shareholders. These efforts include the implementation of new policies, procedures and controls, and appropriate adjustments to the Firm's business and operations, legal entity structure and capital and liquidity

management. The combined effect of numerous rule-makings by multiple governmental agencies and regulators, and the potential conflicts or inconsistencies among such rules, present challenges and risks to the Firm's business and operations. Given the current status of the regulatory developments, the Firm cannot currently quantify all of the possible effects on its business and operations of the significant changes that are underway. For more information, see Risk Factors on pages 8–18.

Financial holding company:
Consolidated supervision by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). As a bank holding company ("BHC") and a financial holding company, JPMorgan Chase is subject to comprehensive consolidated supervision, regulation and examination by the Federal Reserve. The Federal Reserve acts as an "umbrella regulator" and certain of JPMorgan Chase's subsidiaries are regulated directly by additional authorities based on the particular activities of those subsidiaries. For example, JPMorgan Chase's national bank subsidiaries, such as JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A., are subject to supervision and regulation by the Office of the Comptroller of the Currency ("OCC") and, with respect to certain matters, by the Federal Reserve and the Federal Deposit Insurance Corporation (the "FDIC"). Certain non-bank subsidiaries, such as the Firm's U.S. broker-dealers, are subject to supervision and regulation by the SEC, and subsidiaries of the Firm that engage in certain futures-related and swaps-related activities are subject to supervision and regulation by the Commodity Futures Trading Commission ("CFTC"). See Securities and broker-dealer regulation, Investment management regulation and Derivatives regulation below. In addition, the Firm's consumer activities are subject to supervision and regulation by the Consumer Financial Protection Bureau ("CFPB") and to regulation under various state statutes which are enforced by the respective state's Attorney General.

Scope of permissible business activities. The Bank Holding Company Act generally restricts BHCs from engaging in business activities other than the business of banking and certain closely related activities. Financial holding companies generally can engage in a broader range of financial activities than are otherwise permissible for BHCs, including underwriting, dealing and making markets in securities, and making merchant banking investments in non-financial companies. The Federal Reserve has the authority to limit a financial holding company's ability to conduct activities that would otherwise be permissible if the financial holding company or any of its depositary institution subsidiaries ceases to meet the applicable eligibility requirements (including requirements that the financial holding company and each of its U.S. depository institution subsidiaries maintain their status as "well-capitalized" and "well-managed"). The Federal Reserve may also impose corrective capital and/or managerial requirements on the financial holding company and may, for example, require divestiture of the holding company's depository institutions if the deficiencies persist. Federal regulations also provide that if any depository institution controlled by a financial holding company fails to maintain a satisfactory rating under the Community Reinvestment Act, the Federal Reserve must prohibit the financial holding company and its subsidiaries from engaging in any activities other than those permissible for bank holding companies. In addition, a financial holding company must obtain Federal Reserve approval before engaging in certain banking and other financial activities both in the U.S. and internationally, as further described under Regulation of acquisitions below.

Activities restrictions under the Volcker Rule. Section 619 of the Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") (the "Volcker Rule") prohibits banking entities, including the Firm, from engaging in certain "proprietary trading" activities, subject to exceptions for underwriting, market-making, risk-mitigating hedging and certain other activities. In addition, the Volcker Rule limits the sponsorship of, and investment in, "covered funds" (as defined by the Volcker Rule) and imposes limits on certain transactions between the Firm and its sponsored funds (see JPMorgan Chase's subsidiary banks — Restrictions on transactions with affiliates below). The Volcker Rule, which became effective in July 2015, requires banking entities to establish comprehensive compliance programs reasonably designed to help ensure and monitor compliance with the restrictions under the Volcker Rule, including, in order to distinguish permissible from impermissible risk-taking activities, the measurement, monitoring and reporting of certain key metrics. Given the uncertainty and complexity of the Volcker Rule's framework, the full impact of the Volcker Rule will ultimately depend on its ongoing interpretation by the five regulatory agencies responsible for its oversight.

Capital and liquidity requirements. The Federal Reserve establishes capital and leverage requirements for the Firm and evaluates its compliance with such requirements. The OCC establishes similar capital and leverage requirements for the Firm's national banking subsidiaries. For more information about the applicable requirements relating to risk-based capital and leverage in the U.S. under the most recent capital framework established by the Basel Committee on Banking Supervision (the "Basel Committee") ("Basel III"), see Capital Management on pages 149–158 and Note 28. Under Basel III, bank holding companies and banks are required to measure their liquidity against two specific liquidity tests: the liquidity coverage ratio ("LCR") and the net stable funding ratio ("NSFR"). The U.S. banking regulators have approved the final LCR rule ("U.S. LCR"), which became effective on January 1, 2015. A proposed U.S. rule for NSFR is expected. For additional information on these ratios, see Liquidity Risk Management on pages 159–164. It is likely that the banking supervisors will continue to refine and enhance the Basel III capital framework for financial institutions. The Basel Committee recently finalized revisions to market risk capital for trading books; other proposals being contemplated by the Basel Committee include revisions to, among others, standardized credit and operational risk capital frameworks and revisions

to the securitization framework. After a proposal is finalized by the Basel Committee, U.S. banking regulators would then need to propose requirements applicable to U.S. financial institutions.

Stress tests. The Federal Reserve has adopted supervisory stress tests for large bank holding companies, including JPMorgan Chase, which form part of the Federal Reserve's annual Comprehensive Capital Analysis and Review ("CCAR") framework. Under the framework, the Firm must conduct semi-annual company-run stress tests and, in addition, must submit an annual capital plan to the Federal Reserve, taking into account the results of separate stress tests designed by the Firm and the Federal Reserve. In reviewing the Firm's capital plan, the Federal Reserve considers both quantitative and qualitative factors. Qualitative assessments include (among other things) the comprehensiveness of the plan, the assumptions and analysis underlying the plan, and the extent to which the Firm has satisfied certain supervisory matters related to the Firm's processes and analyses, including the design and operational effectiveness of the controls governing such processes. Moreover, the Firm is required to receive a notice of non-objection from the Federal Reserve before taking capital actions, such as paying dividends, implementing common equity repurchase programs or redeeming or repurchasing capital instruments. The OCC requires JPMorgan Chase Bank, N.A. to perform separate, similar annual stress tests. The Firm publishes each year the results of its mid-cycle stress tests under the Firm's internally-developed "severely adverse" scenario and the results of its (and its two primary subsidiary banks') annual stress tests under the supervisory "severely adverse" scenarios provided by the Federal Reserve and the OCC. Commencing with the 2016 CCAR, the annual CCAR submission will be due on April 5. Results will be published by the Federal Reserve by June 30, with disclosures of results by BHCs, including the Firm, to follow within 15 days. Also commencing in 2016, the mid-cycle capital stress test submissions will be due on October 5 and BHCs, including the Firm, will publish results by November 4. The Federal Reserve has indicated that it is currently evaluating the inclusion of all or part of the global systemically important bank ("GSIB") surcharge into the 2017 CCAR test and the Firm is currently awaiting further guidance. For additional information on the Firm's CCAR, see Capital Management on pages 149–158.

Enhanced prudential standards. The Financial Stability Oversight Council ("FSOC"), among other things, recommends prudential standards and reporting and disclosure requirements to the Federal Reserve for systemically important financial institutions, such as JPMorgan Chase. The Federal Reserve has adopted several rules to implement the heightened prudential standards, including final rules relating to risk management and corporate governance of subject BHCs. BHCs with $50 billion or more in total consolidated assets are required to comply with enhanced liquidity and overall risk management standards, including a buffer of highly liquid assets based on projected funding needs for 30 days, and their board of directors is required to conduct appropriate oversight of their risk management activities. For information on liquidity measures, see Liquidity Risk Management on pages 159–164. Several additional proposed rules are still being considered, including rules relating to single-counterparty credit limits and an "early remediation" framework to address financial distress or material management weaknesses.

Risk reporting. In January 2013, the Basel Committee issued new regulations relating to risk aggregation and reporting. Under these regulations, the banking institution's risk governance framework must encompass risk-data aggregation and reporting, and data aggregation must be highly automated and allow for minimal manual intervention. The regulations also impose higher standards for the accuracy, comprehensiveness, granularity and timely distribution of data reporting, and call for regular supervisory review of the banking institution's risk aggregation and reporting. These new standards became effective for GSIBs, including the Firm, on January 1, 2016.

Orderly liquidation authority and resolution and recovery. As a BHC with assets of $50 billion or more, the Firm is required to submit annually to the Federal Reserve and the FDIC a plan for resolution under the Bankruptcy Code in the event of material distress or failure (a "resolution plan"). The FDIC also requires each insured depositary institution with $50 billion or more in assets, such as JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., to provide a resolution plan. For more information about the Firm's resolution plan, see Risk Factors on pages 8–18. In addition, certain financial companies, including JPMorgan Chase and certain of its subsidiaries, can be subjected to resolution under an "orderly liquidation authority." The U.S. Treasury Secretary, in consultation with the President of the United States, must first make certain extraordinary financial distress and systemic risk determinations, and action must be recommended by the FDIC and the Federal Reserve. Absent such actions, the Firm, as a BHC, would remain subject to resolution under the Bankruptcy Code. In December 2013, the FDIC issued a draft policy statement describing its "single point of entry" strategy for resolution of systemically important financial institutions under the orderly liquidation authority. This strategy seeks to keep operating subsidiaries of the BHC open and impose losses on shareholders and creditors of the holding company in receivership according to their statutory order of priority.

The Firm has a comprehensive recovery plan detailing the actions it would take to avoid failure by remaining well-capitalized and well-funded in the case of an adverse event. JPMorgan Chase has provided the Federal Reserve with comprehensive confidential supervisory information and analyses about the Firm's businesses, legal entities and corporate governance and about its crisis management governance, capabilities and available alternatives to raise liquidity and capital in severe market circumstances. The

OCC has published for comment proposed guidelines establishing standards for recovery planning by insured national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Regulators in the U.S. and abroad continue to be focused on developing measures designed to address the possibility or perception that large financial institutions, including the Firm, may be "too big to fail," and to provide safeguards so that, if a large financial institution does fail, it can be resolved without the use of public funds. Higher capital surcharges on GSIBs, requirements for certain large bank holding companies to maintain a minimum amount of long-term debt to facilitate orderly resolution of those firms, and the International Swaps and Derivatives Association ("ISDA") protocol relating to the "close-out" of derivatives transactions during the resolution of a large cross-border financial institution, are examples of initiatives to address "too big to fail." For further information on the potential impact of the GSIB framework and Total Loss Absorbing Capacity ("TLAC"), see Capital Management on pages 149–158 and Risk Factors on pages 8–18, and on the ISDA close-out protocol, see Derivatives regulation below.

Holding company as source of strength for bank subsidiaries. JPMorgan Chase & Co. is required to serve as a source of financial strength for its depository institution subsidiaries and to commit resources to support those subsidiaries. This support may be required by the Federal Reserve at times when the Firm might otherwise determine not to provide it.

Regulation of acquisitions. Acquisitions by bank holding companies and their banks are subject to multiple requirements by the Federal Reserve and the OCC. For example, financial holding companies and bank holding companies are required to obtain the approval of the Federal Reserve before they may acquire more than 5% of the voting shares of an unaffiliated bank. In addition, acquisitions by financial companies are prohibited if, as a result of the acquisition, the total liabilities of the financial company would exceed 10% of the total liabilities of all financial companies. In contrast, because the liabilities of non-U.S. financial companies are calculated differently under this rule, a non-U.S. financial company could hold significantly more than 10% of the U.S. market without exceeding the concentration limit. In addition, for certain acquisitions, the Firm must provide written notice to the Federal Reserve prior to acquiring direct or indirect ownership or control of any voting shares of any company with over $10 billion in assets that is engaged in activities that are "financial in nature".

JPMorgan Chase's subsidiary banks:
The Firm's two primary subsidiary banks, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., are FDIC-insured national banks regulated by the OCC. As national banks, the activities of JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. are limited to those specifically authorized under the National Bank Act and related interpretations by the OCC.

FDIC deposit insurance. The FDIC deposit insurance fund provides insurance coverage for certain deposits, which is funded through assessments on banks, such as JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. Changes in the methodology used to calculate such assessments, resulting from the enactment of the Dodd-Frank Act, significantly increased the assessments that the Firm's bank subsidiaries pay annually to the FDIC. In October 2015, the FDIC proposed a new assessment surcharge on insured depository institutions with total consolidated assets greater than $10 billion in order to raise the reserve ratio for the FDIC deposit insurance fund. Future FDIC rule-making could further increase such assessments.

FDIC powers upon a bank insolvency. Upon the insolvency of an insured depository institution, such as JPMorgan Chase Bank, N.A., the FDIC may be appointed as the conservator or receiver under the Federal Deposit Insurance Act ("FDIA"). In addition, where a systemically important financial institution, such as JPMorgan Chase & Co., is "in default" or "in danger of default", the FDIC may be appointed as receiver in order to conduct an orderly liquidation. In both cases, the FDIC has broad powers to transfer any assets and liabilities without the approval of the institution's creditors.

Cross-guarantee. An FDIC-insured depository institution can be held liable for any loss incurred or expected to be incurred by the FDIC if another FDIC-insured institution that is under common control with such institution is in default or is deemed to be "in danger of default" (commonly referred to as "cross-guarantee" liability). An FDIC cross-guarantee claim against a depository institution is generally superior in right of payment to claims of the holding company and its affiliates against such depository institution.

Prompt corrective action and early remediation. The Federal Deposit Insurance Corporation Improvement Act of 1991 requires the relevant federal banking regulator to take "prompt corrective action" with respect to a depository institution if that institution does not meet certain capital adequacy standards. While these regulations apply only to banks, such as JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., the Federal Reserve is authorized to take appropriate action against the parent BHC, such as JPMorgan Chase & Co., based on the undercapitalized status of any bank subsidiary. In certain instances, the BHC would be required to guarantee the performance of the capital restoration plan for its undercapitalized subsidiary.

OCC Heightened Standards. The OCC has issued final regulations and guidelines establishing heightened standards for large banks. The guidelines establish minimum standards for the design and implementation of a risk governance framework for banks. While the bank may use certain components of the parent company's risk governance framework, the framework must ensure that the bank's risk profile is easily distinguished and separate from the parent for risk management purposes. The bank's board or risk committee is responsible for approving the

bank's risk governance framework, providing active oversight of the bank's risk-taking activities and holding management accountable for adhering to the risk governance framework.

Restrictions on transactions with affiliates. The bank subsidiaries of JPMorgan Chase (including subsidiaries of those banks) are subject to certain restrictions imposed by federal law on extensions of credit to, investments in stock or securities of, and derivatives, securities lending and certain other transactions with, JPMorgan Chase & Co. and certain other affiliates. These restrictions prevent JPMorgan Chase & Co. and other affiliates from borrowing from such subsidiaries unless the loans are secured in specified amounts and comply with certain other requirements. For more information, see Note 27. In addition, the Volcker Rule imposes a prohibition on such transactions between any JPMorgan Chase entity and covered funds for which a JPMorgan Chase entity serves as the investment manager, investment advisor, commodity trading advisor or sponsor, as well as, subject to a limited exception, any covered fund controlled by such funds.

Dividend restrictions. Federal law imposes limitations on the payment of dividends by national banks, such as JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. See Note 27 for the amount of dividends that the Firm's principal bank subsidiaries could pay, at January 1, 2016, to their respective bank holding companies without the approval of their banking regulators.

In addition to the dividend restrictions described above, the OCC and the Federal Reserve have authority to prohibit or limit the payment of dividends of the bank subsidiaries they supervise, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the bank.

Depositor preference. Under federal law, the claims of a receiver of an insured depository institution for administrative expense and the claims of holders of U.S. deposit liabilities (including the FDIC) have priority over the claims of other unsecured creditors of the institution, including public noteholders and depositors in non-U.S. offices. As a result, such persons could receive substantially less than the depositors in U.S. offices of the depository institution. The U.K. Prudential Regulation Authority (the "PRA"), a subsidiary of the Bank of England which has responsibility for prudential regulation of banks and other systemically important institutions, has issued a proposal that may require the Firm to either obtain equal treatment for U.K. depositors or "subsidiarize" in the U.K. In September 2013, the FDIC issued a final rule which clarifies that foreign deposits are considered deposits under the FDIA if they are payable in the U.S. as well as in the foreign branch.

CFPB regulation and supervision, and other consumer regulations. JPMorgan Chase and its national bank subsidiaries, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., are subject to supervision and regulation by the CFPB with respect to federal consumer protection laws, including laws relating to fair lending and the prohibition of unfair, deceptive or abusive acts or practices in connection with the offer, sale or provision of consumer financial products and services. These laws include the Truth-in-Lending, Equal Credit Opportunity ("ECOA"), Fair Credit Reporting, Fair Debt Collection Practice, Electronic Funds Transfer, Credit Card Accountability, Responsibility and Disclosure ("CARD") and Home Mortgage Disclosure Acts. The CFPB also has authority to impose new disclosure requirements for any consumer financial product or service. The CFPB has issued informal guidance on a variety of topics (such as the collection of consumer debts and credit card marketing practices) and has taken enforcement actions against certain financial institutions. Much of the CFPB's initial rule-making efforts have addressed mortgage related topics, including ability to repay and qualified mortgage standards, mortgage servicing standards, loan originator compensation standards, high-cost mortgage requirements, Home Mortgage Disclosure Act requirements, appraisal and escrow standards and requirements for higher-priced mortgages. Other areas of recent focus include pre-authorized electronic funds transfers, "add-on" products, matters involving consumer populations considered vulnerable by the CFPB (such as students), credit reporting, and the furnishing of credit scores to individuals. The CFPB has been focused on automobile dealer discretionary interest rate markups, and on holding the Firm and other purchasers of such contracts ("indirect lenders") responsible under the ECOA for statistical disparities in markups charged by the dealers to borrowers of different races or ethnicities. For information regarding a current investigation relating to indirect lending to automobile dealers, see Note 31.

Securities and broker-dealer regulation:
The Firm conducts securities underwriting, dealing and brokerage activities in the U.S. through J.P. Morgan Securities LLC and other broker-dealer subsidiaries, all of which are subject to regulations of the SEC, the Financial Industry Regulatory Authority and the New York Stock Exchange, among others. The Firm conducts similar securities activities outside the U.S. subject to local regulatory requirements. In the U.K., those activities are conducted by J.P. Morgan Securities plc, which is regulated by the PRA and by the Financial Conduct Authority ("FCA"), which regulates prudential matters for firms that are not so regulated by the PRA and conduct matters for all market participants. Broker-dealers are subject to laws and regulations covering all aspects of the securities business, including sales and trading practices, securities offerings, publication of research reports, use of customer's funds, the financing of clients' purchases, capital structure, record-keeping and retention, and the conduct of their directors, officers and employees. For information on the net capital of J.P. Morgan Securities LLC and J.P. Morgan Clearing Corp., and the applicable requirements relating to risk-based capital for J.P. Morgan Securities plc, see Broker-dealer regulatory capital on page 158. Future rule-making under

the Dodd-Frank Act and rules proposed by the Department of Labor may impose (among other things) a new standard of care applicable to broker-dealers when dealing with customers.

Investment management regulation:
The Firm's investment management business is subject to significant regulation in numerous jurisdictions around the world relating to, among other things, the safeguarding of client assets, offerings of funds, marketing activities, transactions among affiliates and management of client funds. Certain of the Firm's subsidiaries are registered with, and subject to oversight by, the SEC as investment advisers. As such, the Firm's registered investment advisers are subject to the fiduciary and other obligations imposed under the Investment Advisers Act of 1940 and the rules and regulations promulgated thereunder, as well as various state securities laws. For information regarding investigations and litigation in connection with disclosures to clients related to proprietary products, see Note 31.

The Firm's asset management business continues to be affected by ongoing rule-making. In July 2013, the SEC adopted amendments to rules that govern money-market funds, requiring a floating net asset value for institutional prime money-market funds, effective October 14, 2016. As noted above, the Department of Labor has also proposed a rule that would significantly expand the universe of persons viewed as investment fiduciaries to retirement plans and IRAs. In addition, the SEC has issued proposed rules regarding enhanced liquidity risk management for open-end mutual funds and exchange-traded funds ("ETFs"); restrictions on the use of derivatives by mutual funds, ETFs and closed-end funds; and enhanced reporting for funds and advisors.

Derivatives regulation:
The Firm is subject to comprehensive regulation of its derivatives businesses. The regulations impose capital and margin requirements, require central clearing of standardized over-the-counter derivatives, require that certain standardized over-the-counter swaps be traded on regulated trading venues, and provide for reporting of certain mandated information. In addition, the Dodd-Frank Act requires the registration of "swap dealers" and "major swap participants" with the CFTC and of "security-based swap dealers" and "major security-based swap participants" with the SEC. JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC, J.P. Morgan Securities plc and J.P. Morgan Ventures Energy Corporation have registered with the CFTC as swap dealers, and JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC and J.P. Morgan Securities plc will likely be required to register with the SEC as security-based swap dealers. As a result of their registration as swap dealers or security-based swap dealers, these entities will be subject to a new, comprehensive regulatory framework applicable to their swap or security-based swap activities, which includes capital requirements, rules regulating their swap activities, rules requiring the collateralization of uncleared swaps, rules regarding segregation of counterparty collateral, business conduct and documentation standards, record-keeping and reporting obligations, and anti-fraud and anti-manipulation requirements. Further, some of the rules for derivatives apply extraterritorially to U.S. firms doing business with clients outside of the U.S., as well as to the overseas activities of non-U.S. subsidiaries of the Firm that either deal with U.S. persons or that are guaranteed by U.S. subsidiaries of the Firm; however, the full scope of the extra-territorial impact of the U.S. swaps regulation has not been finalized and therefore remains unclear. The effect of these rules may require banking entities, such as the Firm, to modify the structure of their derivatives businesses and face increased operational and regulatory costs. In the European Union (the "EU"), the implementation of the European Market Infrastructure Regulation ("EMIR") and the revision of the Markets in Financial Instruments Directive ("MiFID II") will result in comparable, but not identical, changes to the European regulatory regime for derivatives. The combined effect of the U.S. and EU requirements, and the potential conflicts and inconsistencies between them, present challenges and risks to the structure and operating model of the Firm's derivatives businesses.

In November 2015, the Firm and other financial institutions agreed to adhere to an updated Resolution Stay Protocol developed by ISDA in response to regulator concerns that the close-out of derivatives transactions during the resolution of a large cross-border financial institution could impede resolution efforts and potentially destabilize markets. The Resolution Stay Protocol provides for the contractual recognition of cross-border stays under various statutory resolution regimes and a contractual stay on certain cross-default rights.
In the U.S., two subsidiaries of the Firm are registered as futures commission merchants, and other subsidiaries are either registered with the CFTC as commodity pool operators and commodity trading advisors or exempt from such registration. These CFTC-registered subsidiaries are also members of the National Futures Association.

Data regulation:
The Firm and its subsidiaries are subject to federal, state and international laws and regulations concerning the use and protection of certain customer, employee and other personal and confidential information, including those imposed by the Gramm-Leach-Bliley Act and the Fair Credit Reporting Act, as well as the EU Data Protection Directive.

In addition, there are numerous proposals pending before U.S. and non-U.S. legislative and regulatory bodies regarding privacy and data protection. For example, the European Parliament and the European Council have reached agreement on certain data protection reforms proposed by the European Commission which includes numerous operational requirements, adds a requirement to notify individuals of data breaches and establishes enhanced sanctions for non-compliance, including increased fines.

The Bank Secrecy Act and Economic Sanctions:
The Bank Secrecy Act ("BSA") requires all financial institutions, including banks and securities broker-dealers, to, among other things, establish a risk-based system of internal controls reasonably designed to prevent money laundering and the financing of terrorism. The BSA includes a variety of record-keeping and reporting requirements (such as cash transaction and suspicious activity reporting), as well as due diligence/know your customer documentation requirements. In January 2013, the Firm entered into Consent Orders with its banking regulators relating to the Firm's Bank Secrecy Act/Anti-Money Laundering policies, procedures and controls; the Firm has taken significant steps to modify and enhance its processes and controls with respect to its Anti-Money Laundering procedures and to remediate the issues identified in the Consent Order. The Firm is also subject to the regulations and economic sanctions programs administered by the U.S. Treasury's Office of Foreign Assets Control ("OFAC").

Anti-Corruption:
The Firm is subject to laws and regulations relating to corrupt and illegal payments to government officials and others in the jurisdictions in which it operates, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. For more information on a current investigation relating to, among other things, the Firm's hiring of persons referred by government officials and clients, see Note 31.

Compensation practices:
The Firm's compensation practices are subject to oversight by the Federal Reserve, as well as other agencies. The Federal Reserve has issued guidance jointly with the FDIC and the OCC that is designed to ensure that incentive compensation paid by banking organizations does not encourage imprudent risk-taking that threatens the organizations' safety and soundness. In addition, under the Dodd-Frank Act, federal regulators, including the Federal Reserve, must issue regulations or guidelines requiring covered financial institutions, including the Firm, to report the structure of all of their incentive-based compensation arrangements and prohibit incentive-based payment arrangements that encourage inappropriate risks by providing compensation that is excessive or that could lead to material financial loss to the institution. The Federal Reserve has conducted a review of the incentive compensation policies and practices of a number of large banking institutions, including the Firm. In addition to the Federal Reserve, the Financial Stability Board has established standards covering compensation principles for banks. In Europe, the Fourth Capital Requirements Directive (CRD IV) includes compensation provisions. In the U.K., compensation standards are governed by the Remuneration Code of the PRA and the FCA. The implementation of the Federal Reserve's and other banking regulators' guidelines regarding compensation are expected to evolve over the next several years, and may affect the manner in which the Firm structures its compensation programs and practices.

Significant international regulatory initiatives:
The EU operates a European Systemic Risk Board which monitors financial stability, together with European Supervisory Agencies which set detailed regulatory rules and encourage supervisory convergence across the 28 Member States. The EU has also created a Single Supervisory Mechanism for the euro-zone, under which the regulation of all banks in that zone will be under the auspices of the European Central Bank, together with a Single Resolution Mechanism and Single Resolution Board, having jurisdiction over bank resolution in the zone. At both global and EU levels, various proposals are under consideration to address risks associated with global financial institutions. Some of the initiatives adopted include increased capital requirements for certain trading instruments or exposures and compensation limits on certain employees located in affected countries.

In the EU, there is an extensive and complex program of final and proposed regulatory enhancement which reflects, in part, the EU's commitments to policies of the Group of Twenty Finance Ministers and Central Bank Governors ("G-20") together with other plans specific to the EU. This program includes EMIR, which requires, among other things, the central clearing of standardized derivatives; and MiFID II, which gives effect to the G-20 commitment to trading of derivatives through central clearing houses and exchanges and also includes significantly enhanced requirements for pre- and post-trade transparency and a significant reconfiguration of the regulatory supervision of execution venues.

The EU is also currently considering or implementing significant revisions to laws covering: depositary activities; credit rating activities; resolution of banks, investment firms and market infrastructures; anti-money-laundering controls; data security and privacy; corporate governance in financial firms; and implementation in the EU of the Basel III capital and liquidity standards.

Following the issuance of the Report of the High Level Expert Group on Reforming the Structure of the EU Banking Sector (the "Liikanen Group"), the EU has proposed legislation providing for a proprietary trading ban and mandatory separation of other trading activities within certain banks, while various EU Member States have separately enacted similar measures. In the U.K., legislation was adopted that mandates the separation (or "ring-fencing") of deposit-taking activities from securities trading and other analogous activities within banks, subject to certain exemptions. The legislation includes the supplemental recommendation of the Parliamentary Commission on Banking Standards (the "Tyrie Commission") that such ring-fences should be "electrified" by the imposition of mandatory forced separation on banking institutions that are deemed to test the limits of the safeguards. Parallel but distinct provisions have been enacted by the French, Belgian and German governments. These measures may separately or taken together have significant implications for the Firm's organizational

structure in Europe, as well as its permitted activities and capital deployment in the EU.

U.K. regulators are introducing a range of policy measures that make significant changes to the regulatory environment in the U.K. Alongside broader recommendations made by the Fair and Effective Markets Review which focused on fixed income currencies and commodities markets, there is a focus by U.K. regulators on raising standards and accountability of individuals, and promoting forward-looking conduct risk identification and mitigation, including by introducing the new Senior Managers and Certification Regimes.

Item 1A: RISK FACTORS

The following discussion sets forth the material risk factors that could affect JPMorgan Chase's financial condition and operations. Readers should not consider any descriptions of such factors to be a complete set of all potential risks that could affect the Firm.

Regulatory Risk

JPMorgan Chase operates within a highly regulated industry, and the Firm's businesses and results are significantly affected by the laws and regulations to which the Firm is subject.

As a global financial services firm, JPMorgan Chase is subject to extensive and comprehensive regulation under federal and state laws in the U.S. and the laws of the various jurisdictions outside the U.S. in which the Firm does business. The financial services industry has experienced and continues to experience an unprecedented increase in regulations and supervision, both in the U.S. and globally, and the cumulative effect of all of the new and proposed legislation and regulations on the Firm's business, operations and profitability remains uncertain.

The recent legislative and regulatory developments, as well as future legislative or regulatory actions in the U.S. and in the other countries in which the Firm operates, and any required changes to the Firm's business or operations resulting from such developments and actions, could result in a significant loss of revenue for the Firm, impose additional compliance and other costs on the Firm or otherwise reduce the Firm's profitability, limit the products and services that the Firm offers or its ability to pursue business opportunities in which it might otherwise consider engaging, require the Firm to dispose of or curtail certain businesses, affect the value of assets that the Firm holds, require the Firm to increase its prices and therefore reduce demand for its products, or otherwise adversely affect the Firm's businesses. In addition, to the extent that legislative or regulatory initiatives are imposed on a limited subset of financial institutions (based on size, activities, geography or other criteria), the requirements to which the Firm may be subject under such laws and regulations could require the Firm to restructure its businesses, or re-price or curtail the products or services that it offers to customers, which could result in the Firm not being able to compete effectively with other institutions that are not impacted in the same way.

In addition, there can be significant differences in the ways that similar regulatory initiatives affecting the financial services industry are implemented in the U.S. and in different countries and regions in which JPMorgan Chase does business. For example, recent legislative and regulatory initiatives within the EU, including those relating to the resolution of financial institutions, the separation of trading activities from core banking services, mandatory on-exchange trading, position limits and reporting rules for derivatives, conduct of business requirements, restrictions on compensation and governance and accountability regimes, could require the Firm to make significant modifications to its non-U.S. business, operations and legal entity structure in order to comply with these requirements. These differences in implemented or proposed non-U.S. regulations and initiatives may be inconsistent or may conflict with current or proposed regulations in the U.S., which could subject the Firm to increased compliance and legal costs, as well as higher operational, capital and liquidity costs, all of which could have an adverse effect on the Firm's business, results of operations and profitability.

Expanded regulatory and governmental oversight of JPMorgan Chase's businesses may continue to increase the Firm's costs and risks.

The Firm's businesses and operations are increasingly subject to heightened governmental and regulatory oversight and scrutiny. The Firm has paid significant fines (or has provided significant monetary and other relief) to resolve a number of investigations or enforcement actions by governmental agencies. The Firm continues to devote substantial resources to satisfying the requirements of regulatory consent orders and other settlements to which it is subject, which increases the Firm's operational and compliance costs.

Certain regulators have taken measures in connection with specific enforcement actions against financial institutions (including the Firm) that require admissions of wrongdoing and compliance with other conditions in connection with settling such matters. Such admissions and conditions can lead to, among other things, greater exposure in civil litigation, harm to reputation, disqualification from providing business to certain clients and in certain jurisdictions, and other direct and indirect adverse effects.

In addition, U.S. government officials have indicated and demonstrated a willingness to bring criminal actions against financial institutions, including the Firm, and have increasingly sought, and obtained, resolutions that include criminal pleas from those institutions, such as the Firm's agreement in May 2015 to plead guilty to a single violation of federal antitrust law in connection with its settlements with certain government authorities relating to its foreign exchange sales and trading activities and controls related to those activities. Such resolutions, whether with U.S. or non-U.S. authorities, could have significant collateral consequences for a subject financial institution, including loss of customers and business, or the inability to offer certain products or services, or losing permission to operate certain businesses, for a period of time (absent the

forbearance of, or the granting of waivers by, applicable regulators).

The Firm expects that it and the financial services industry as a whole will continue to be subject to heightened regulatory scrutiny and governmental investigations and enforcement actions and that violations of law will more frequently be met with formal and punitive enforcement action, including the imposition of significant monetary and other sanctions, rather than with informal supervisory action.

In addition, if the Firm fails to meet the requirements of the various governmental settlements to which it is subject, or more generally, to maintain risk and control procedures and processes that meet the heightened standards established by its regulators and other government agencies, it could be required to enter into further orders and settlements, pay additional fines, penalties or judgments, or accept material regulatory restrictions on its businesses. The extent of the Firm's exposure to legal and regulatory matters may be unpredictable and could, in some cases, substantially exceed the amount of reserves that the Firm has established for such matters.

Requirements for the orderly resolution of the Firm could require JPMorgan Chase to restructure or reorganize its businesses, and holders of JPMorgan Chase's debt and equity securities would be at risk of absorbing losses if the Firm were to enter into a resolution.

Under Title I of the Dodd-Frank Act ("Title I") and Federal Reserve and FDIC rules, the Firm is required to prepare and submit periodically to the Federal Reserve and the FDIC a detailed plan for the orderly resolution of JPMorgan Chase & Co. and certain of its subsidiaries under the U.S. Bankruptcy Code and other applicable insolvency laws in the event of future material financial distress or failure. In August 2014, the Federal Reserve and the FDIC announced the completion of their reviews of the second round of Title I resolution plans submitted by eleven large, complex banking organizations in 2013, including the Firm. The agencies jointly identified specific shortcomings with the 2013 resolution plans, including the Firm's 2013 plan. The FDIC's board of directors determined under Title I that the 2013 resolution plans, including the Firm's 2013 plan, were not credible and did not facilitate an orderly resolution under the U.S. Bankruptcy Code. The Federal Reserve Board determined that the eleven banking organizations must take immediate actions to improve their resolvability and reflect those improvements in their 2015 plans. The Firm has devoted significant resources to its resolution planning efforts, and believes that in its most recent Title I resolution plan submitted to the Federal Reserve and FDIC in July 2015, it has addressed, or has made substantial progress in addressing, each of the shortcomings previously identified by the agencies.

However, if the Federal Reserve and the FDIC were to jointly determine that the Firm's 2015 plan, or any future update of that plan, is not credible, and the Firm is unable to remedy the identified deficiencies in a timely manner, the regulators may jointly impose more stringent capital, leverage or liquidity requirements on the Firm or restrictions on growth, activities or operations of the Firm, and could, if such deficiencies are not remedied within two years after such a determination, require the Firm to restructure, reorganize or divest businesses, legal entities, operational systems and/or intercompany transactions in ways that could materially and adversely affect the Firm's operations and strategy. In addition, in order to develop a Title I resolution plan that the Federal Reserve and FDIC determine is credible, the Firm may need to make certain changes to its legal entity structure and to certain intercompany and external activities, which could result in increased funding or operational costs.

In addition to the Firm's plan for orderly resolution, the Firm's resolution plan also recommends to the Federal Reserve and the FDIC its proposed optimal strategy to resolve the Firm under the special resolution procedure provided in Title II of the Dodd-Frank Act ("Title II"). The Firm's recommendation involves a "single point of entry" recapitalization model in which the FDIC would use its power to create a "bridge entity" for JPMorgan Chase; transfer the systemically important and viable parts of the Firm's business, principally the stock of JPMorgan Chase & Co.'s main operating subsidiaries and any intercompany claims against such subsidiaries, to the bridge entity; recapitalize those subsidiaries by, among other things, converting some or all of such intercompany claims to capital; and exchange external debt claims against JPMorgan Chase & Co. for equity in the bridge entity. As discussed below, the Federal Reserve has also proposed rules regarding the minimum levels of unsecured external long-term debt and other loss-absorbing capacity that bank holding companies would be required to have issued and outstanding, as well as guidelines defining the terms of qualifying debt instruments, to ensure that adequate levels of debt are maintained at the holding company level for purposes of recapitalization of the bridge entity and operating subsidiaries ("eligible LTD"). If JPMorgan Chase & Co. were to enter into a resolution, either in a proceeding under the U.S. Bankruptcy Code or in a receivership administered by the FDIC under Title II of the Dodd-Frank Act, holders of eligible LTD and other debt and equity securities of the Firm would be at risk of absorbing the losses of JPMorgan Chase & Co. and its affiliates. If JPMorgan Chase & Co. commenced proceedings under the U.S. Bankruptcy Code, creditors and shareholders of JPMorgan Chase & Co. would realize value only to the extent available to JPMorgan Chase & Co. as a shareholder of JPMorgan Chase Bank, N.A. and its other subsidiaries, after the payment to the creditors of such subsidiaries. In addition, even under the Firm's preferred resolution strategy under Title II of the Dodd-Frank Act, the value of the stock of the bridge entity that would be redistributed to holders of the Firm's eligible LTD and other debt securities may not be sufficient to repay all or part of the principal amount and interest on such debt. It is also possible that the application of the Firm's recommended Title II strategy could result in greater losses to security holders of JPMorgan Chase & Co. than the losses that would result from a different resolution strategy for the Firm.

Market Risk

JPMorgan Chase's results of operations have been, and may continue to be, adversely affected by U.S. and global financial market and economic conditions.

JPMorgan Chase's businesses are materially affected by economic and market conditions, including the liquidity of the global financial markets; the level and volatility of debt and equity prices, interest rates, currency and commodities prices (including oil prices) and other market indices; investor, consumer and business sentiment; events that reduce confidence in the financial markets; inflation and unemployment; the availability and cost of capital and credit; the economic effects of natural disasters, health emergencies or pandemics, severe weather conditions, outbreaks of hostilities, terrorism or other geopolitical instabilities; monetary policies and actions taken by the Federal Reserve and other central banks; and the health of the U.S. and global economies. These conditions can affect the Firm's businesses both directly and through their impact on the businesses and activities of the Firm's clients and customers.

In the Firm's underwriting and advisory businesses, the above-mentioned factors can affect the volume of transactions that the Firm executes for its clients and customers and, therefore, the revenue that the Firm receives, as well as the willingness of other financial institutions and investors to participate in loan syndications or underwritings managed by the Firm.

The Firm generally maintains market-making positions in the fixed income, currency, commodities, credit and equity markets to facilitate client demand and provide liquidity to clients. The revenue derived from these positions is affected by many factors, including the Firm's success in effectively hedging its market and other risks; volatility in interest rates and equity, debt and commodities markets; interest rate and credit spreads; and the availability of liquidity in the capital markets, all of which are affected by global economic and market conditions. Certain of the Firm's market-making positions could be adversely affected by the lack of liquidity, which will be influenced by many of these factors, and which could affect the Firm's ability to realize returns from such activities and adversely affect the Firm's earnings.

The Firm may be adversely affected by declining asset values. This is particularly true for businesses that earn fees for managing third-party assets or receive or post collateral. For example, a higher level of U.S. or non-U.S. interest rates or a downturn in financial markets could affect the valuations of the client assets that the Firm manages or holds in custody, which, in turn, could affect the Firm's revenue. Macroeconomic or market concerns may also prompt outflows from the Firm's funds or accounts or cause clients to invest funds in products that generate lower revenue.

Changes in interest rates will affect the level of assets and liabilities held on the Firm's balance sheet and the revenue that the Firm earns from net interest income. A low interest rate environment may compress net interest margins, reducing the amounts that the Firm earns on its investment securities portfolio, or reducing the value of its mortgage servicing rights ("MSR") asset, thereby reducing the Firm's net interest income and other revenues. Conversely, increasing or high interest rates may result in increased funding costs, lower levels of commercial and residential loan originations and diminished returns on the investment securities portfolio (to the extent that the Firm is unable to reinvest contemporaneously in higher-yielding assets), thereby adversely affecting the Firm's revenues and capital levels.

The Firm's consumer businesses are particularly affected by U.S. domestic economic conditions, including U.S. interest rates, the rate of unemployment, housing prices, the level of consumer confidence, changes in consumer spending and the number of personal bankruptcies. If the recent positive trends in the U.S. economy are not sustained, this could diminish demand for the products and services of the Firm's consumer businesses, or increase the cost to provide such products and services. In addition, adverse economic conditions, such as declines in home prices or persistent high levels of unemployment due to economic dislocations in certain geographies or industries caused by falling oil and gas prices or other market or economic factors, could lead to an increase in mortgage, credit card, auto, student and other loan delinquencies and higher net charge-offs, which can reduce the Firm's earnings.

Widening of credit spreads makes it more expensive for the Firm to borrow on both a secured and unsecured basis, and may adversely affect the credit markets and the Firm's businesses. Credit spreads widen or narrow not only in response to Firm-specific events and circumstances, but also as a result of general economic and geopolitical events and conditions. Changes in the Firm's credit spreads will impact, positively or negatively, the Firm's earnings on certain liabilities that are recorded at fair value.

Sudden and significant volatility in the prices of securities and other assets (including loans and derivatives) may curtail the trading markets for such securities and assets, make it difficult to sell or hedge such securities and assets, adversely affect the Firm's profitability, capital or liquidity, or increase the Firm's funding costs. Sustained volatility in the financial markets may also negatively affect consumer or investor confidence, which could lead to lower client activity and decreased revenue for the Firm.

Credit Risk

The financial condition of JPMorgan Chase's customers, clients and counterparties, particularly other financial institutions, could adversely affect the Firm.

The Firm routinely executes transactions with counterparties in the financial services industry, including brokers and dealers, commercial banks, investment banks, mutual and hedge funds, investment managers and other institutional clients. Many of these transactions expose the Firm to credit risk and, in some cases, disputes and litigation in the event of a default by the counterparty or client. The failure of a significant market participant, or concerns about a default by such an institution, could also

lead to significant liquidity problems for, or losses or defaults by, other institutions, which in turn could adversely affect the Firm. In addition, in recent years the perceived interrelationship among financial institutions has also led to claims by other market participants and regulators that the Firm and other financial institutions have allegedly violated anti-trust or anti-competition laws by colluding to manipulate markets, prices or indices, and there is no assurance that such allegations will not arise in the same or similar contexts in the future.

As part of providing clearing services, the Firm is a member of a number of central counterparties ("CCPs"), and may be required to pay a portion of the losses incurred by such organizations as a result of the default of other members. As a clearing member, the Firm is also exposed to the risk of non-performance by its clients, which it seeks to mitigate through the maintenance of adequate collateral. In addition, the Firm can be exposed to intra-day credit risk of its clients in connection with providing cash management, clearing, custodial and other transaction services to such clients. If a client for which the Firm provides such services becomes bankrupt or insolvent, the Firm may suffer losses, become involved in disputes and litigation with various parties, including one or more CCPs, or the client's bankruptcy estate and other creditors, or involved in regulatory investigations. All of such events can increase the Firm's operational and litigation costs and may result in losses if any collateral received by the Firm is insufficient to cover such losses.

During periods of market stress or illiquidity, the Firm's credit risk also may be further increased when the Firm cannot realize the fair value of the collateral held by it or when collateral is liquidated at prices that are not sufficient to recover the full amount of the loan, derivative or other exposure due to the Firm. Further, disputes with obligors as to the valuation of collateral could increase in times of significant market stress, volatility or illiquidity, and the Firm could suffer losses during such periods if it is unable to realize the fair value of collateral or manage declines in the value of collateral.

Concentration of credit and market risk could increase the potential for significant losses.

JPMorgan Chase has exposure to increased levels of risk when customers or counterparties are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions. For example, a significant deterioration in the credit quality of one of the Firm's borrowers or counterparties could lead to concerns about the credit quality of other borrowers or counterparties in similar, related or dependent industries and thereby could exacerbate the Firm's credit risk exposure and potentially increase its losses, including mark-to-market losses in its trading businesses. Similarly, challenging economic conditions affecting a particular industry or geographic area could lead to concerns about the credit quality of the Firm's borrowers or counterparties, not only in that particular industry or geography but in related or dependent industries, wherever located, or about the ability of customers of the Firm's consumer businesses living in such areas or working in such affected industries or related or dependent industries to meet their obligations to the Firm. As a result, the Firm regularly monitors various segments of its exposures to assess potential concentration or contagion risks. The Firm's efforts to diversify or hedge its exposures against concentration risks may not be successful.

In addition, disruptions in the liquidity or transparency of the financial markets may result in the Firm's inability to sell, syndicate or realize the value of its positions, thereby leading to increased concentrations. The inability to reduce the Firm's positions may not only increase the market and credit risks associated with such positions, but may also increase the level of risk-weighted assets on the Firm's balance sheet, thereby increasing its capital requirements and funding costs, all of which could adversely affect the operations and profitability of the Firm's businesses.

Liquidity Risk

If JPMorgan Chase does not effectively manage its liquidity, its business could suffer.

JPMorgan Chase's liquidity is critical to its ability to operate its businesses. Some potential conditions that could impair the Firm's liquidity include markets that become illiquid or are otherwise experiencing disruption, unforeseen cash or capital requirements (including, among others, commitments that may be triggered to special purpose entities ("SPEs") or other entities), difficulty in selling or inability to sell assets, default by a CCP or other counterparty, unforeseen outflows of cash or collateral, and lack of market or customer confidence in the Firm or financial markets in general. These conditions may be caused by events over which the Firm has little or no control. The widespread crisis in investor confidence and resulting liquidity crisis experienced in 2008 and into early 2009 increased the Firm's cost of funding and limited its access to some of its traditional sources of liquidity (such as securitized debt offerings backed by mortgages, credit card receivables and other assets) during that time, and there is no assurance that these severe conditions could not occur in the future.

If the Firm's access to stable and low cost sources of funding, such as bank deposits, is reduced, the Firm may need to raise alternative funding which may be more expensive or of limited availability. In addition, the Firm's cost of funding could be affected by actions that the Firm may take in order to satisfy applicable liquidity coverage ratio and net stable funding ratio requirements, to lower its GSIB systemic risk score or to satisfy the amount of eligible LTD that the Firm must have outstanding under the final TLAC rules.

As a holding company, JPMorgan Chase & Co. relies on the earnings of its subsidiaries for its cash flow and, consequently, its ability to pay dividends and satisfy its debt and other obligations. These payments by subsidiaries may take the form of dividends, loans or other payments. Several of JPMorgan Chase & Co.'s principal subsidiaries are

subject to dividend distribution, capital adequacy or liquidity coverage requirements or other regulatory restrictions on their ability to provide such payments. Limitations in the payments that JPMorgan Chase & Co. receives from its subsidiaries could reduce its ability to pay dividends and satisfy its debt and other obligations.

Proposed banking regulations relating to liquidity, including U.S. rules relating to total loss-absorbing capacity, could require JPMorgan Chase to issue a substantial amount of new debt, and thereby significantly increase its funding costs.

On October 30, 2015, the Federal Reserve issued proposed rules (the "proposed TLAC rules") that would require the top-tier holding companies of eight U.S. global systemically important bank holding companies ("U.S. GSIB BHCs"), including JPMorgan Chase & Co., among other things, to maintain minimum amounts of eligible LTD, commencing January 1, 2019. The proposed TLAC rules would disqualify from eligible LTD, among other instruments, senior debt securities that permit acceleration for reasons other than insolvency or payment default, as well as debt securities that are not governed by U.S. law and structured notes. The currently outstanding senior long-term debt of U.S. GSIB BHCs, including JPMorgan Chase & Co., includes structured notes as well as other debt that typically permits acceleration for reasons other than insolvency or payment default and, as a result, none of such outstanding senior long-term debt or any subsequently issued senior long-term debt with similar terms would qualify as eligible LTD under the proposed TLAC rules. The Federal Reserve has requested comment on whether certain currently outstanding instruments should be allowed to count as eligible LTD "despite containing features that would be prohibited under the proposal." The steps that the U.S. GSIB BHCs, including JPMorgan Chase & Co., may need to take to come into compliance with the final TLAC rules, including the amount and form of long-term debt that must be refinanced or issued, will depend in substantial part on the ultimate eligibility requirements for senior long-term debt and any grandfathering provisions. To the extent that outstanding senior long-term debt of JPMorgan Chase & Co. is not classified as eligible LTD under the TLAC rule as finally adopted by the Federal Reserve, the Firm could be required to issue a substantial amount of new senior long-term debt which could significantly increase the Firm's funding costs.

Authorities in some non-U.S. jurisdictions in which the Firm has operations have enacted legislation or regulations requiring that certain subsidiaries of the Firm operating in those countries maintain independent capital and liquidity. In addition, some non-U.S. regulators have proposed that large banks which conduct certain businesses in their jurisdictions operate through separate subsidiaries located in those countries. These requirements, and any future laws or regulations that seek to increase capital or liquidity requirements that would be applicable to non-U.S. subsidiaries of the Firm, could hinder the Firm's ability to efficiently manage its funding and liquidity in a centralized manner.

Reductions in JPMorgan Chase's credit ratings may adversely affect its liquidity and cost of funding, as well as the value of debt obligations issued by the Firm.

JPMorgan Chase & Co. and certain of its principal subsidiaries are currently rated by credit rating agencies. Rating agencies evaluate both general and firm- and industry-specific factors when determining their credit ratings for a particular financial institution, including economic and geopolitical trends, regulatory developments, future profitability, risk management practices, legal expenses, assumptions surrounding government support, and ratings differentials between bank holding companies and their bank and non-bank subsidiaries. Although the Firm closely monitors and manages, to the extent it is able, factors that could influence its credit ratings, there is no assurance that the Firm's credit ratings will not be lowered in the future, or that any such downgrade would not occur at times of broader market instability when the Firm's options for responding to events may be more limited and general investor confidence is low.

Furthermore, a reduction in the Firm's credit ratings could reduce the Firm's access to capital markets, materially increase the cost of issuing securities, trigger additional collateral or funding requirements, and decrease the number of investors and counterparties willing or permitted, contractually or otherwise, to do business with or lend to the Firm, thereby curtailing the Firm's business operations and reducing its profitability. In addition, any such reduction in credit ratings may increase the credit spreads charged by the market for taking credit risk on JPMorgan Chase & Co. and its subsidiaries and, as a result, could adversely affect the value of debt and other obligations that JPMorgan Chase & Co. and its subsidiaries have issued or may issue in the future.

Legal Risk

JPMorgan Chase faces significant legal risks, both from regulatory investigations and proceedings and from private actions brought against the Firm.

JPMorgan Chase is named as a defendant or is otherwise involved in various legal proceedings, including class actions and other litigation or disputes with third parties. Actions currently pending against the Firm may result in judgments, settlements, fines, penalties or other results adverse to the Firm, which could materially and adversely affect the Firm's business, financial condition or results of operations, or cause serious harm to the Firm's reputation. As a participant in the financial services industry, it is likely that the Firm will continue to experience a high level of litigation related to its businesses and operations.

In addition, and as noted above, the Firm's businesses and operations are also subject to heightened regulatory oversight and scrutiny, which may lead to additional regulatory investigations or enforcement actions. Regulators and other government agencies examine the operations of the Firm and its subsidiaries on both a routine- and targeted-exam basis, and there is no assurance that they will not pursue additional regulatory settlements or other enforcement actions against the Firm in the future.

A single event may give rise to numerous and overlapping investigations and proceedings, either by multiple federal and state agencies and officials in the U.S. or, in some instances, regulators and other governmental officials in non-U.S. jurisdictions. These and other initiatives from U.S. and non-U.S. governmental authorities and officials may subject the Firm to further judgments, settlements, fines or penalties, or cause the Firm to be required to restructure its operations and activities or to cease offering certain products or services, all of which could harm the Firm's reputation or lead to higher operational costs, thereby reducing the Firm's profitability, or result in collateral consequences as discussed above.

Other Business Risks

JPMorgan Chase's operations are subject to risk of loss from unfavorable economic, monetary and political developments in the U.S. and around the world.

JPMorgan Chase's businesses and earnings are affected by the fiscal and other policies that are adopted by various U.S. and non-U.S. regulatory authorities and agencies. The Federal Reserve regulates the supply of money and credit in the U.S. and its policies determine in large part the cost of funds for lending and investing in the U.S. and the return earned on those loans and investments. Changes in Federal Reserve policies (as well as the fiscal and monetary policies of non-U.S. central banks or regulatory authorities and agencies, such as "pegging" the exchange rate of their currency to the currencies of others) are beyond the Firm's control and may be difficult to predict, and consequently, unanticipated changes in these policies could have a negative impact on the Firm's activities and results of operations.

The Firm's businesses and revenue are also subject to risks inherent in investing and market-making in securities, loans and other obligations of companies worldwide. These risks include, among others, negative effects from slowing growth rates or recessionary economic conditions, or the risk of loss from unfavorable political, legal or other developments, including social or political instability, in the countries or regions in which such companies operate, as well as the other risks and considerations as described further below.

Several of the Firm's businesses engage in transactions with, or trade in obligations of, U.S. and non-U.S. governmental entities, including national, state, provincial, municipal and local authorities. These activities can expose the Firm to enhanced sovereign, credit-related, operational and reputation risks, including the risks that a governmental entity may default on or restructure its obligations or may claim that actions taken by government officials were beyond the legal authority of those officials, which could adversely affect the Firm's financial condition and results of operations.

Further, various countries or regions in which the Firm operates or invests, or in which the Firm may do so in the future, have in the past experienced severe economic disruptions particular to those countries or regions. Low or volatile oil prices, coupled with the slowdown in the macroeconomic prospects in China, and concerns about economic weaknesses in the Eurozone (including the permanent resolution of the Greek "bailout" program), could continue to undermine investor confidence and affect the operating environment in 2016. In some cases, concerns regarding the fiscal condition of one or more countries can cause a contraction of available credit and reduced activity among trading partners or create market volatility that could lead to "market contagion" affecting other countries in the same region or beyond the region. Accordingly, it is possible that economic disruptions in certain countries, even in countries in which the Firm does not conduct business or have operations or engages in only limited activities, may adversely affect the Firm.

JPMorgan Chase's operations in emerging markets may be hindered by local political, social and economic factors, and may be subject to additional compliance costs and risks.

Some of the countries in which JPMorgan Chase conducts its businesses have economies or markets that are less developed and more volatile, and may have legal and regulatory regimes that are less established or predictable, than the U.S. and other developed markets in which the Firm currently operates. Some of these countries have in the past experienced severe economic disruptions, including extreme currency fluctuations, high inflation, low or negative growth, or defaults or potential defaults on sovereign debt, among other negative conditions, or have imposed restrictive monetary policies such as currency exchange controls and other laws and restrictions that adversely affect the local and regional business environment. In addition, these countries, as well as certain more developed countries, have recently been more susceptible to unfavorable political, social or economic developments; these development have in the past resulted in, and may in the future lead to, social unrest, general strikes and demonstrations, crime and corruption, security and personal safety issues, outbreaks of hostilities, overthrow of incumbent governments, terrorist attacks or other forms of internal discord, all of which can adversely affect the Firm's operations or investments in such countries. Political, social or economic disruption or dislocation in certain countries or regions in which the Firm conducts its businesses can hinder the growth and profitability of those operations.

Less developed legal and regulatory systems in certain countries can also have adverse consequences on the Firm's operations in those countries, including, among others, the absence of a statutory or regulatory basis or guidance for engaging in specific types of business or transactions; the promulgation of conflicting or ambiguous laws and regulations or the inconsistent application or interpretation of existing laws and regulations; uncertainty as to the enforceability of contractual obligations; difficulty in competing in economies in which the government controls or protects all or a portion of the local economy or specific businesses, or where graft or corruption may be pervasive; and the threat of arbitrary regulatory investigations, civil litigations or criminal prosecutions.

Revenue from international operations and trading in non-U.S. securities and other obligations may be subject to negative fluctuations as a result of the above considerations, as well as due to governmental actions including monetary policies, expropriation, nationalization, confiscation of assets, price controls, capital controls, exchange controls, and changes in laws and regulations. The impact of these fluctuations could be accentuated as some trading markets are smaller, less liquid and more volatile than larger markets. Also, any of the above-mentioned events or circumstances in one country can affect, and in the past conditions of these types have affected, the Firm's operations and investments in another country or countries, including the Firm's operations in the U.S. As a result, any such unfavorable conditions or developments could have an adverse impact on the Firm's business and results of operations.

Conducting business in countries with less developed legal and regulatory regimes often requires the Firm to devote significant additional resources to understanding, and monitoring changes in, local laws and regulations, as well as structuring its operations to comply with local laws and regulations and implementing and administering related internal policies and procedures. There can be no assurance that the Firm will always be successful in its efforts to conduct its business in compliance with laws and regulations in countries with less predictable legal and regulatory systems or that the Firm will be able to develop effective working relationships with local regulators. In addition, the Firm can also incur higher costs, and face greater compliance risks, in structuring and operating its businesses outside the U.S. to comply with U.S. anti-corruption and anti-money laundering laws and regulations.

JPMorgan Chase relies on the effectiveness and integrity of its processes, operating systems and employees, and those of third parties, and certain failures of such processes or systems or misconduct by such employees could materially and adversely affect the Firm's operations.

JPMorgan Chase's businesses are dependent on the Firm's ability to process, record and monitor an increasingly large number of complex transactions and to do so on a faster and more frequent basis. The Firm's front- and back-office trading systems similarly rely on their access to, and on the functionality of, the operating systems maintained by third parties such as clearing and payment systems, central counterparties, securities exchanges and data processing and technology companies. If the Firm's financial, accounting, trading or other data processing systems, or the operating systems of third parties on which the Firm's businesses are dependent, are unable to meet these increasingly demanding standards, or if they fail or have other significant shortcomings, the Firm could be materially and adversely affected. Moreover, as the speed, frequency, volume and complexity of transactions (and the requirements to report such transactions on a real-time basis to clients, regulators and financial intermediaries) increases, the risk of human and/or systems error in connection with such transactions increases, and it becomes more challenging to maintain the Firm's operational systems and infrastructure. The Firm is similarly dependent on its employees. The Firm could be materially and adversely affected if one or more of its employees causes a significant operational breakdown or failure, either as a result of human error or where an individual purposefully sabotages or fraudulently manipulates the Firm's operations or systems. In addition, when the Firm changes processes or introduces new products and services or new connectivity solutions, the Firm may not fully appreciate or identify new operational risks that may arise from such changes. Any of these occurrences could diminish the Firm's ability to operate one or more of its businesses, or result in potential liability to clients and customers, increased operating expenses, higher litigation costs (including fines and sanctions), damage to reputation, impairment of liquidity, regulatory intervention or weaker competitive standing, any of which could materially and adversely affect the Firm.

Third parties with which the Firm does business, including retailers and other third parties with which the Firm's customers do business, can also be sources of operational risk to the Firm, particularly where activities of customers are beyond the Firm's security and control systems, such as through the use of the internet, personal smart phones and other mobile devices or services. As the Firm's interconnectivity with these third parties increases, the Firm increasingly faces the risk of operational failure with respect to their systems. Security breaches affecting the Firm's customers, or systems breakdowns or failures, security breaches or employee misconduct affecting such other third parties, may require the Firm to take steps to protect the integrity of its own operational systems or to safeguard confidential information of the Firm or its customers, thereby increasing the Firm's operational costs and potentially diminishing customer satisfaction. Furthermore, the interconnectivity of multiple financial institutions with central agents, exchanges and clearing houses, and the increased importance of these entities, increases the risk that an operational failure at one institution or entity may cause an industry-wide operational failure that could materially impact the Firm's ability to conduct business.

The Firm's businesses are subject to complex and evolving U.S. and non-U.S. laws and regulations governing the privacy and protection of personal information of individuals (including clients, client's clients, employees of the Firm and its suppliers and other third parties). Ensuring that the Firm's collection, use, transfer and storage of personal information complies with all applicable laws and regulations, including where the laws of different jurisdictions are in conflict, can increase the Firm's operating costs, impact the development of new products or services and require significant oversight by management, and may require the Firm to structure its businesses, operations and systems in less efficient ways. Furthermore, the Firm may not be able to ensure that all of its clients, suppliers, counterparties and other third parties have appropriate controls in place to protect the confidentiality of the information exchanged between them and the Firm, particularly where such information is transmitted by

electronic means. If personal, confidential or proprietary information of customers or clients or others were to be mishandled or misused (in situations where, for example, such information was erroneously provided to parties who are not permitted to have the information, or where such information was intercepted or otherwise compromised by third parties), the Firm could be exposed to litigation or regulatory sanctions. Concerns regarding the effectiveness of the Firm's measures to safeguard personal information, or even the perception that such measures are inadequate, could cause the Firm to lose customers or potential customers for its products and services and thereby reduce the Firm's revenues. Accordingly, any failure or perceived failure by the Firm to comply with applicable privacy or data protection laws and regulations may subject it to inquiries, examinations and investigations that could result in requirements to modify or cease certain operations or practices or in significant liabilities, fines or penalties, and could damage the Firm's reputation and otherwise adversely affect its businesses.

The Firm may be subject to disruptions of its operating systems arising from events that are wholly or partially beyond the Firm's control, which may include, for example, security breaches (as discussed further below); electrical or telecommunications outages; failures of computer servers or other damage to the Firm's property or assets; natural disasters or severe weather conditions; health emergencies or pandemics; or events arising from local or larger-scale political events, including outbreaks of hostilities or terrorist acts. JPMorgan Chase maintains a global resiliency and crisis management program that is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets, including staff, technology and facilities, in the event of a business interruption. While the Firm believes that its current resiliency plans are both sufficient and adequate, there can be no assurance that such plans will fully mitigate all potential business continuity risks to the Firm or its customers and clients. Any failures or disruptions of the Firm's systems or operations could give rise to losses in service to customers and clients, adversely affect the Firm's business and results of operations by subjecting the Firm to losses or liability, or require the Firm to expend significant resources to correct the failure or disruption, as well as by exposing the Firm to litigation, regulatory fines or penalties or losses not covered by insurance.

A breach in the security of JPMorgan Chase's systems, or those of other market participants, could disrupt the Firm's businesses, result in the disclosure of confidential information, damage its reputation and create significant financial and legal exposure for the Firm.

Although JPMorgan Chase devotes significant resources to maintain and regularly update its systems and processes that are designed to protect the security of the Firm's computer systems, software, networks and other technology assets, as well as the confidentiality, integrity and availability of information belonging to the Firm and its customers and clients, there is no assurance that all of the Firm's security measures will provide absolute security.

JPMorgan Chase and other companies have reported significant breaches in the security of their websites or other systems, some of which have involved sophisticated and targeted attacks intended to obtain unauthorized access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage, including through the introduction of computer viruses or malware, cyberattacks and other means. The Firm is regularly targeted by unauthorized parties using malicious code and viruses, and has experienced several significant distributed denial-of-service attacks from technically sophisticated and well-resourced third parties which were intended to disrupt online banking services.

Despite the Firm's efforts to ensure the integrity of its systems, it is possible that the Firm may not be able to anticipate, detect or recognize threats to its systems or to implement effective preventive measures against all security breaches of these types inside or outside the Firm, especially because the techniques used change frequently or are not recognized until launched, and because cyberattacks can originate from a wide variety of sources, including third parties outside the Firm such as persons who are associated with external service providers or who are or may be involved in organized crime or linked to terrorist organizations or hostile foreign governments. Those parties may also attempt to fraudulently induce employees, customers, third-party service providers or other users of the Firm's systems to disclose sensitive information in order to gain access to the Firm's data or that of its customers or clients. These risks may increase in the future as the Firm continues to increase its mobile-payment and other internet-based product offerings and expands its internal usage of web-based products and applications.

A successful penetration or circumvention of the security of the Firm's systems or the systems of another market participant could cause serious negative consequences for the Firm, including significant disruption of the Firm's operations, misappropriation of confidential information of the Firm or that of its customers, or damage to computers or systems of the Firm and those of its customers and counterparties, and could result in violations of applicable privacy and other laws, financial loss to the Firm or to its customers, loss of confidence in the Firm's security measures, customer dissatisfaction, significant litigation exposure and harm to the Firm's reputation, all of which could have a material adverse effect on the Firm.

Risk Management

JPMorgan Chase's framework for managing risks and its risk management procedures and practices may not be effective in identifying and mitigating every risk to the Firm, thereby resulting in losses.

JPMorgan Chase's risk management framework seeks to mitigate risk and loss to the Firm. The Firm has established processes and procedures intended to identify, measure, monitor, report and analyze the types of risk to which the Firm is subject. However, as with any risk management framework, there are inherent limitations to the Firm's risk management strategies because there may exist, or develop

in the future, risks that the Firm has not appropriately anticipated or identified. In addition, the Firm relies on data to aggregate and assess its various risk exposures, and any deficiencies in the quality or effectiveness of the Firm's data aggregation and validation procedures could result in ineffective risk management practices or inaccurate risk reporting. Any lapse in the Firm's risk management framework and governance structure or other inadequacies in the design or implementation of the Firm's risk management framework, governance, procedures, practices, models or risk reporting systems could, individually or in the aggregate, cause unexpected losses for the Firm, materially and adversely affect the Firm's financial condition and results of operations, require significant resources to remediate any risk management deficiency, attract heightened regulatory scrutiny, expose the Firm to regulatory investigations or legal proceedings, subject the Firm to fines, penalties or judgments, harm the Firm's reputation, or otherwise cause a decline in investor confidence.

The Firm's products, including loans, leases, lending commitments, derivatives and trading account assets, as well as the investment securities portfolio and cash management and clearing activities, expose the Firm to credit risk. The Firm has exposures arising from its many different products and counterparties, and the credit quality of the Firm's exposures can have a significant impact on its earnings. The Firm establishes allowances for probable credit losses inherent in its credit exposure, including unfunded lending-related commitments. The Firm also employs stress testing and other techniques to determine the capital and liquidity necessary to protect the Firm in the event of adverse economic or market events. These processes are critical to the Firm's financial results and condition, and require difficult, subjective and complex judgments, including forecasts of how economic conditions might impair the ability of the Firm's borrowers and counterparties to repay their loans or other obligations. As is the case with any such assessments, there is always the possibility that the Firm will fail to identify the proper factors or that the Firm will fail to accurately estimate the impact of factors that it identifies.

JPMorgan Chase's market-making businesses may expose the Firm to unexpected market, credit and operational risks that could cause the Firm to suffer unexpected losses. Severe declines in asset values, unanticipated credit events, or unforeseen circumstances that may cause previously uncorrelated factors to become correlated (and vice versa) may create losses resulting from risks not appropriately taken into account in the development, structuring or pricing of a financial instrument such as a derivative.

Certain of the Firm's trading transactions require the physical settlement by delivery of securities or other obligations that the Firm does not own; if the Firm is unable to obtain such securities or obligations within the required timeframe for delivery, this could cause the Firm to forfeit payments otherwise due to it and could result in settlement delays, which could damage the Firm's reputation and ability to transact future business. In addition, in situations where trades are not settled or confirmed on a timely basis, the Firm may be subject to heightened credit and operational risk, and in the event of a default, the Firm may be exposed to market and operational losses. In particular,

In addition, disputes with counterparties may arise regarding the terms or the settlement procedures of derivative contracts, including with respect to the value of underlying collateral, which could cause the Firm to incur unexpected costs, including transaction, operational, legal and litigation costs, or result in credit losses, all of which may impair the Firm's ability to manage effectively its risk exposure from these products.

In a difficult or less liquid market environment, the Firm's risk management strategies may not be effective because other market participants may be attempting to use the same or similar strategies to deal with the challenging market conditions. In such circumstances, it may be difficult for the Firm to reduce its risk positions due to the activity of such other market participants or widespread market dislocations.

Many of the Firm's risk management strategies or techniques have a basis in historical market behavior, and all such strategies and techniques are based to some degree on management's subjective judgment. For example, many models used by the Firm are based on assumptions regarding correlations among prices of various asset classes or other market indicators. In times of market stress, or in the event of other unforeseen circumstances, previously uncorrelated indicators may become correlated, or conversely, previously correlated indicators may make unrelated movements. These sudden market movements or unanticipated or unidentified market or economic movements have in some circumstances limited and could again limit the effectiveness of the Firm's risk management strategies, causing the Firm to incur losses.

Many of the models used by the Firm are subject to review not only by the Firm's Model Risk function but also by the Firm's regulators in order that the Firm may utilize such models in connection with the Firm's calculations of market risk risk-weighted assets ("RWA"), credit risk RWA and operational risk RWA under the Advanced Approach of Basel III. The Firm may be subject to higher capital charges, which could adversely affect its financial results or limit its ability to expand its businesses, if such models do not receive approval by its regulators.

In addition, the Firm must comply with enhanced standards for the assessment and management of risks associated with vendors and other third parties that provide services to the Firm. These requirements apply to the Firm both under general guidance issued by its banking regulators and, more specifically, under certain of the consent orders to which the Firm has been subject. The Firm has incurred and expects to incur additional costs and expenses in connection with its initiatives to address the risks associated with oversight of its third party relationships. Failure by the Firm to appropriately assess and manage third party relationships, especially those involving significant banking functions, shared services or other critical activities, could

result in potential liability to clients and customers, fines, penalties or judgments imposed by the Firm's regulators, increased operating expenses and harm to the Firm's reputation, any of which could materially and adversely affect the Firm.

Other Risks

The financial services industry is highly competitive, and JPMorgan Chase's inability to compete successfully may adversely affect its results of operations.

JPMorgan Chase operates in a highly competitive environment, and the Firm expects that competition in the U.S. and global financial services industry will continue to be intense. Competitors of the Firm include other banks and financial institutions, trading, advisory and investment management firms, finance companies and technology companies and other firms that are engaged in providing similar products and services. Technological advances and the growth of e-commerce have made it possible for non-depository institutions to offer products and services that traditionally were banking products, and for financial institutions and other companies to provide electronic and internet-based financial solutions, including electronic securities trading and payment processing. New technologies have required and could require the Firm to spend more to modify or adapt its products to attract and retain customers or to match products and services offered by its competitors, including technology companies.

Ongoing or increased competition, on the basis of the quality and variety of products and services offered, transaction execution, innovation, reputation, price or other factors, may put downward pressure on prices for the Firm's products and services or may cause the Firm to lose market share. In addition, the failure of any of the Firm's businesses to meet the expectations of clients and customers, whether due to general market conditions or underperformance (relative to competitors or to benchmarks), could impact the Firm's ability to retain clients and customers or attract new clients and customers, thereby reducing the Firm's revenues. Increased competition also may require the Firm to make additional capital investments in its businesses, or to extend more of its capital on behalf of its clients in order to remain competitive. The Firm cannot provide assurance that the significant competition in the financial services industry will not materially and adversely affect its future results of operations.

Competitors of the Firm's non-U.S. wholesale businesses are typically subject to different, and in some cases, less stringent, legislative and regulatory regimes. The more restrictive laws and regulations applicable to U.S. financial services institutions, such as JPMorgan Chase, can put the Firm at a competitive disadvantage to its non-U.S. competitors, including prohibiting the Firm from engaging in certain transactions, imposing higher capital and liquidity requirements on the Firm, making the Firm's pricing of certain transactions more expensive for clients or adversely affecting the Firm's cost structure for providing certain products, all of which can reduce the revenue and profitability of the Firm's wholesale businesses.

JPMorgan Chase's ability to attract and retain qualified employees is critical to its success.

JPMorgan Chase's employees are the Firm's most important resource, and in many areas of the financial services industry, competition for qualified personnel is intense. The Firm endeavors to attract talented and diverse new employees and retain and motivate its existing employees. The Firm also seeks to retain a pipeline of senior employees with superior talent, augmented from time to time by external hires, to provide continuity of succession for the Firm's Operating Committee, including the Chief Executive Officer position, and senior positions below the Operating Committee. The Firm regularly reviews candidates for senior management positions to assess whether they currently are ready for a next-level role. In addition, the Firm's Board of Directors is deeply involved in succession planning, including review of the succession plans for the Chief Executive Officer and the members of the Operating Committee. If for any reason the Firm were unable to continue to attract or retain qualified employees, including successors to the Chief Executive Officer or members of the Operating Committee, the Firm's performance, including its competitive position, could be materially and adversely affected.

JPMorgan Chase's financial statements are based in part on estimates and judgments which, if incorrect, could result in unexpected losses in the future.

Under accounting principles generally accepted in the U.S. ("U.S. GAAP"), JPMorgan Chase is required to use estimates and apply judgments in preparing its financial statements, including in determining allowances for credit losses and reserves related to litigation, among other items. Certain of the Firm's financial instruments, including trading assets and liabilities, instruments in the investment securities portfolio, certain loans, MSRs, structured notes and certain repurchase and resale agreements, among other items, require a determination of their fair value in order to prepare the Firm's financial statements. Where quoted market prices are not available, the Firm may make fair value determinations based on internally developed models or other means which ultimately rely to some degree on management estimates and judgment. In addition, sudden illiquidity in markets or declines in prices of certain loans and securities may make it more difficult to value certain balance sheet items, which may lead to the possibility that such valuations will be subject to further change or adjustment. If estimates or judgments underlying the Firm's financial statements are incorrect, the Firm may experience material losses.

Lapses in disclosure controls and procedures or internal control over financial reporting could materially and adversely affect the Firm's operations, profitability or reputation.

There can be no assurance that the Firm's disclosure controls and procedures will be effective in every circumstance or that a material weakness or significant deficiency in internal control over financial reporting will not occur. Any such lapses or deficiencies may materially

and adversely affect the Firm's business and results of operations or financial condition, restrict its ability to access the capital markets, require the Firm to expend significant resources to correct the lapses or deficiencies, expose the Firm to regulatory or legal proceedings, subject it to fines, penalties or judgments, harm the Firm's reputation, or otherwise cause a decline in investor confidence.

Damage to JPMorgan Chase's reputation could damage its businesses.

Maintaining trust in JPMorgan Chase is critical to the Firm's ability to attract and maintain customers, investors and employees. Damage to the Firm's reputation can therefore cause significant harm to the Firm's business and prospects. Harm to the Firm's reputation can arise from numerous sources, including, among others, employee misconduct, security breaches, compliance failures, litigation or regulatory outcomes or governmental investigations. The Firm's reputation could also be harmed by the failure or perceived failure of an affiliate, joint-venturer or merchant banking portfolio company, or a vendor or other third party with which the Firm does business, to comply with laws or regulations. In addition, a failure or perceived failure to deliver appropriate standards of service and quality, to treat customers and clients fairly, to provide fiduciary products or services in accordance with the appropriate standards, or to handle or use confidential information of customers or clients appropriately or in compliance with applicable data protection and privacy laws and regulations can result in customer dissatisfaction, litigation and heightened regulatory scrutiny, all of which can lead to lost revenue, higher operating costs and harm to the Firm's reputation. Adverse publicity or negative information posted on social media websites regarding the Firm, whether or not true, may result in harm to the Firm's prospects.

Management of potential conflicts of interests has become increasingly complex as the Firm continues to expand its business activities through more numerous transactions, obligations and interests with and among the Firm's clients. The failure or perceived failure to adequately address or appropriately disclose conflicts of interest has given rise to litigation and enforcement actions and may do so in the future and could affect the willingness of clients to deal with the Firm, as well as cause serious harm to the Firm's reputation.

Actions by the financial services industry generally or by certain members of or individuals in the industry can also affect the Firm's reputation. For example, the role played by financial services firms during the financial crisis, including concerns that consumers have been treated unfairly by financial institutions, has damaged the reputation of the industry as a whole. Should any of these or other events or factors that can undermine the Firm's reputation occur, there is no assurance that the additional costs and expenses that the Firm may need to incur to address the issues giving rise to the damage to its reputation could not adversely affect the Firm's earnings and results of operations, or that damage to the Firm's reputation will not impair the Firm's ability to retain its existing or attract new customers, investors and employees.

ITEM 1B: UNRESOLVED SEC STAFF COMMENTS

None.

ITEM 2: PROPERTIES

JPMorgan Chase's headquarters is located in New York City at 270 Park Avenue, a 50-story office building it owns.

The Firm owned or leased facilities in the following locations at December 31, 2015.

December 31, 2015 (in millions)	Approximate square footage
United States[(a)]	
New York City, New York	
270 Park Ave, New York, New York	1.3
All other New York City locations	9.0
Total New York City, New York	**10.3**
Other U.S. locations	
Columbus/Westerville, Ohio	3.7
Chicago, Illinois	3.4
Wilmington/Newark, Delaware	2.2
Houston, Texas	2.2
Dallas/Fort Worth, Texas	2.0
Phoenix/Tempe, Arizona	1.8
Jersey City, New Jersey	1.6
All other U.S. locations	37.1
Total United States	**64.3**
Europe, the Middle East and Africa ("EMEA")[(b)]	
25 Bank Street, London, U.K.	1.4
All other U.K. locations	3.2
All other EMEA locations	0.9
Total EMEA	**5.5**
Asia Pacific, Latin America and Canada	
India	2.3
All other locations	3.9
Total Asia Pacific, Latin America and Canada	**6.2**
Total	**76.0**

(a) At December 31, 2015, the Firm owned or leased 5,413 retail branches in 23 states.
(b) In 2008, JPMorgan Chase acquired a 999-year leasehold interest in land at London's Canary Wharf. JPMorgan Chase has a building agreement in place through October 30, 2016, to develop the Canary Wharf site for future use.

The properties occupied by JPMorgan Chase are used across all of the Firm's business segments and for corporate purposes. JPMorgan Chase continues to evaluate its current and projected space requirements and may determine from time to time that certain of its premises and facilities are no longer necessary for its operations. There is no assurance that the Firm will be able to dispose of any such excess premises or that it will not incur charges in connection with such dispositions. Such disposition costs may be material to the Firm's results of operations in a given period. For information on occupancy expense, see the Consolidated Results of Operations on pages 72–74.

ITEM 3: LEGAL PROCEEDINGS

For a description of the Firm's material legal proceedings, see Note 31.

ITEM 4: MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5: MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market for registrant's common equity

The outstanding shares of JPMorgan Chase common stock are listed and traded on the New York Stock Exchange and the London Stock Exchange. For the quarterly high and low prices of and cash dividends declared on JPMorgan Chase's common stock for the last two years, see the section entitled "Supplementary information – Selected quarterly financial data (unaudited)" on pages 309–310. For a comparison of the cumulative total return for JPMorgan Chase common stock with the comparable total return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index over the five-year period ended December 31, 2015, see "Five-year stock performance", on page 67.

For information on the common dividend payout ratio, see Capital actions in the Capital Management section of Management's discussion and analysis on page 157. For a discussion of restrictions on dividend payments, see Note 22 and Note 27. At January 31, 2016, there were 200,881 holders of record of JPMorgan Chase common stock. For information regarding securities authorized for issuance under the Firm's employee stock-based compensation plans, see Part III, Item 12 on page 23.

Repurchases under the common equity repurchase program

For information regarding repurchases under the Firm's common equity repurchase program, see Capital actions in the Capital Management section of Management's discussion and analysis on page 157.

Shares repurchased, on a settlement-date basis, pursuant to the common equity repurchase program during 2015 were as follows.

Year ended December 31, 2015	Total shares of common stock repurchased	Average price paid per share of common stock[b]	Aggregate repurchases of common equity (in millions)[b]	Dollar value of remaining authorized repurchase (in millions)[b]	
First quarter	32,531,294	$ 58.40	$ 1,900	$ 1,984	[a]
Second quarter[a]	19,129,714	65.32	1,249	5,180	
Third quarter	19,100,389	65.30	1,248	3,932	
October	9,247,060	61.42	567	3,365	
November	4,511,071	66.44	300	3,065	
December	5,321,146	66.12	352	2,713	
Fourth quarter	19,079,277	63.92	1,219	2,713	
Year-to-date	89,840,674	$ 62.51	$ 5,616	$ 2,713	[c]

(a) The unused portion under the prior Board authorization was canceled when the $6.4 billion program was authorized. Repurchases during the second quarter included $29 million under the prior program.
(b) Excludes commissions cost.
(c) Dollar value remaining under the $6.4 billion program.

ITEM 6: SELECTED FINANCIAL DATA

For five-year selected financial data, see "Five-year summary of consolidated financial highlights (unaudited)" on page 66.

ITEM 7: MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Management's discussion and analysis of financial condition and results of operations, entitled "Management's discussion and analysis," appears on pages 68–173. Such information should be read in conjunction with the Consolidated Financial Statements and Notes thereto, which appear on pages 176–308.

ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

For a discussion of the quantitative and qualitative disclosures about market risk, see the Market Risk Management section of Management's discussion and analysis on pages 133–139.

ITEM 8: FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements, together with the Notes thereto and the report thereon dated February 23, 2016, of PricewaterhouseCoopers LLP, the Firm's independent registered public accounting firm, appear on pages 175–308.

Supplementary financial data for each full quarter within the two years ended December 31, 2015, are included on pages 309–310 in the table entitled "Selected quarterly financial data (unaudited)." Also included is a "Glossary of terms" on pages 311–315.

ITEM 9: CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A: CONTROLS AND PROCEDURES

The internal control framework promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), "Internal Control — Integrated Framework" ("COSO 2013") provides guidance for designing, implementing and conducting internal control and assessing its effectiveness. The Firm used the COSO 2013 framework to assess the effectiveness of the Firm's internal control over financial reporting as of December 31, 2015. See "Management's report on internal control over financial reporting" on page 174.

As of the end of the period covered by this report, an evaluation was carried out under the supervision and with the participation of the Firm's management, including its Chairman and Chief Executive Officer and its Chief Financial Officer, of the effectiveness of its disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934). Based on that evaluation, the Chairman and Chief Executive Officer and the Chief Financial Officer concluded that these disclosure controls and procedures were effective. See Exhibits 31.1 and 31.2 for the Certification statements issued by the Chairman and Chief Executive Officer and Chief Financial Officer.

The Firm is committed to maintaining high standards of internal control over financial reporting. Nevertheless, because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, in a firm as large and complex as JPMorgan Chase, lapses or deficiencies in internal controls may occur from time to time, and there can be no assurance that any such deficiencies will not result in significant deficiencies or material weaknesses in internal control in the future. For further information, see "Management's report on internal control over financial reporting" on page 174. There was no change in the Firm's internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) that occurred during the three months ended December 31, 2015, that has materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

ITEM 9B: OTHER INFORMATION

Pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, which added Section 13(r) to the Securities Exchange Act of 1934, an issuer is required to disclose in its annual or quarterly reports, as applicable, whether it or any of its affiliates knowingly engaged in certain activities, transactions or dealings relating to Iran or with individuals or entities designated pursuant to certain Executive Orders. Disclosure is generally required even where the activities, transactions or dealings were conducted in compliance with applicable law. Except as set forth below, as of the date of this report, the Firm is not aware of any other activity, transaction or dealing by any of its affiliates during the year ended December 31, 2015 that requires disclosure under Section 219.

During 2015, JPMorgan Chase Bank, N.A. processed one payment from Iran Airtours on behalf of a U.S. client into such client's account at JPMorgan Chase Bank, N.A. Iran Airtours is a subsidiary of Iran Air, which, at the time of the payment, was designated pursuant to Executive Order 13382. This transaction was authorized by and conducted pursuant to a license from the Treasury Department's OFAC. JPMorgan Chase Bank, N.A. charged a fee of U.S. dollar $4.25 for this transaction. JPMorgan Chase Bank, N.A. may in the future engage in similar transactions for its clients to the extent permitted by U.S. law.

ITEM 10: DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Executive officers of the registrant

Name	Age (at December 31, 2015)	Positions and offices
James Dimon	59	Chairman of the Board, Chief Executive Officer and President.
Ashley Bacon	46	Chief Risk Officer since June 2013. He had been Deputy Chief Risk Officer since June 2012, prior to which he had been Global Head of Market Risk for the Investment Bank (now part of Corporate & Investment Bank).
Stephen M. Cutler[(a)]	54	Vice Chairman since January 1, 2016, prior to which he had been General Counsel.
John L. Donnelly	59	Head of Human Resources.
Mary Callahan Erdoes	48	Chief Executive Officer of Asset Management.
Stacey Friedman[(a)]	47	General Counsel since January 1, 2016, prior to which she was Deputy General Counsel since July 2015 and General Counsel for the Corporate & Investment Bank since August 2012. Prior to joining JPMorgan Chase in 2012, she was a partner at the law firm of Sullivan & Cromwell LLP.
Marianne Lake	46	Chief Financial Officer since January 1, 2013, prior to which she had been Chief Financial Officer of Consumer & Community Banking since 2009.
Douglas B. Petno	50	Chief Executive Officer of Commercial Banking since January 2012. He had been Chief Operating Officer of Commercial Banking since October 2010, prior to which he had been Global Head of Natural Resources in the Investment Bank (now part of Corporate & Investment Bank).
Daniel E. Pinto	53	Chief Executive Officer of the Corporate & Investment Bank since March 2014 and Chief Executive Officer of Europe, the Middle East and Africa since June 2011. He had been Co-Chief Executive Officer of the Corporate & Investment Bank from July 2012 until March 2014, prior to which he had been head or co-head of the Global Fixed Income business from November 2009 until July 2012.
Gordon A. Smith	57	Chief Executive Officer of Consumer & Community Banking since December 2012 prior to which he had been Co-Chief Executive Officer since July 2012. He had been Chief Executive Officer of Card Services since 2007 and of the Auto Finance and Student Lending businesses since 2011.
Matthew E. Zames	45	Chief Operating Officer since April 2013 and head of Mortgage Banking Capital Markets since January 2012. He had been Co-Chief Operating Officer from July 2012 until April 2013. He had been Chief Investment Officer from May until September 2012, co-head of the Global Fixed Income business from November 2009 until May 2012 and co-head of Mortgage Banking Capital Markets from July 2011 until January 2012, prior to which he had served in a number of senior Investment Banking Fixed Income management roles.

(a) On January 1, 2016, Ms. Friedman was named General Counsel and appointed to the Operating Committee. At that date, Mr. Cutler became Vice Chairman of JPMorgan Chase and retired from the Operating Committee; he is no longer an executive officer of the registrant.

Unless otherwise noted, during the five fiscal years ended December 31, 2015, all of JPMorgan Chase's above-named executive officers have continuously held senior-level positions with JPMorgan Chase. There are no family relationships among the foregoing executive officers. Information to be provided in Items 10, 11, 12, 13 and 14 of the Form 10-K and not otherwise included herein is incorporated by reference to the Firm's definitive proxy statement for its 2016 Annual Meeting of Stockholders to be held on May 17, 2016, which will be filed with the SEC within 120 days of the end of the Firm's fiscal year ended December 31, 2015.

ITEM 11: EXECUTIVE COMPENSATION

See Item 10.

ITEM 12: SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

For security ownership of certain beneficial owners and management, see Item 10.

The following table sets forth the total number of shares available for issuance under JPMorgan Chase's employee stock-based incentive plans (including shares available for issuance to nonemployee directors). The Firm is not authorized to grant stock-based incentive awards to nonemployees, other than to nonemployee directors.

December 31, 2015	Number of shares to be issued upon exercise of outstanding options/ stock appreciation rights	Weighted-average exercise price of outstanding options/stock appreciation rights	Number of shares remaining available for future issuance under stock compensation plans
Plan category			
Employee stock-based incentive plans approved by shareholders	43,466,314	$ 43.51	93,491,401 [(a)]
Total	43,466,314	$ 43.51	93,491,401

(a) Represents future shares available under the shareholder-approved Long-Term Incentive Plan, as amended and restated effective May 19, 2015.

All future shares will be issued under the shareholder-approved Long-Term Incentive Plan, as amended and restated effective May 19, 2015. For further discussion, see Note 10.

ITEM 13: CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

See Item 10.

ITEM 14: PRINCIPAL ACCOUNTING FEES AND SERVICES

See Item 10.

ITEM 15: EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Exhibits, financial statement schedules

1	Financial statements The Consolidated Financial Statements, the Notes thereto and the report of the Independent Registered Public Accounting Firm thereon listed in Item 8 are set forth commencing on page 176.
2	Financial statement schedules
3	Exhibits
3.1	Restated Certificate of Incorporation of JPMorgan Chase & Co., effective April 5, 2006 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed April 7, 2006).
3.2	Amendment to the Restated Certificate of Incorporation of JPMorgan Chase & Co., effective June 7, 2013 (incorporated by reference to Appendix F to the Proxy Statement on Schedule 14A of JPMorgan Chase & Co. (File No. 1-5805) filed April 10, 2013).
3.3	Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed April 24, 2008).
3.4	Certificate of Designations for 5.50% Non-Cumulative Preferred Stock, Series O (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed August 27, 2012).
3.5	Certificate of Designations for 5.45% Non-Cumulative Preferred Stock, Series P (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed February 5, 2013).
3.6	Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series Q (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed April 23, 2013).
3.7	Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series R (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed July 29, 2013).
3.8	Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series S (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed January 22, 2014).
3.9	Certificate of Designations for 6.70% Non-Cumulative Preferred Stock, Series T (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed January 30, 2014).
3.10	Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series U (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed on March 10, 2014).
3.11	Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series V (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed on June 9, 2014).
3.12	Certificate of Designations for 6.30% Non-Cumulative Preferred Stock, Series W (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed on June 23, 2014).
3.13	Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series X (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed on September 23, 2014).
3.14	Certificate of Designations for 6.125% Non-Cumulative Preferred Stock, Series Y (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed February 17, 2015).
3.15	Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series Z (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed April 21, 2015).
3.16	Certificate of Designations for 6.10% Non-Cumulative Preferred Stock, Series AA (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed June 4, 2015).
3.17	Certificate of Designations for 6.15% Non-Cumulative Preferred Stock, Series BB (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed July 29, 2015).

3.18 By-laws of JPMorgan Chase & Co., effective January 19, 2016 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed January 21, 2016).

4.1 Indenture, dated as of October 21, 2010, between JPMorgan Chase & Co. and Deutsche Bank Trust Company Americas, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No.1-5805) filed October 21, 2010).

4.2 Subordinated Indenture, dated as of March 14, 2014, between JPMorgan Chase & Co. and U.S. Bank Trust National Association, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No.1-5805) filed March 14, 2014).

4.3 Indenture, dated as of May 25, 2001, between JPMorgan Chase & Co. and Bankers Trust Company (succeeded by Deutsche Bank Trust Company Americas), as Trustee (incorporated by reference to Exhibit 4(a)(1) to the Registration Statement on Form S-3 of JPMorgan Chase & Co. (File No. 333-52826) filed June 13, 2001).

4.4 Form of Deposit Agreement (incorporated by reference to Exhibit 4.3 to the Registration Statement on Form S-3 of JPMorgan Chase & Co. (File No. 333-191692) filed October 11, 2013).

4.5 Form of Warrant to purchase common stock (incorporated by reference to Exhibit 4.2 to the Form 8-A of JPMorgan Chase & Co. (File No. 1-5805) filed December 11, 2009).

Other instruments defining the rights of holders of long-term debt securities of JPMorgan Chase & Co. and its subsidiaries are omitted pursuant to Section (b)(4)(iii)(A) of Item 601 of Regulation S-K. JPMorgan Chase & Co. agrees to furnish copies of these instruments to the SEC upon request.

10.1 Deferred Compensation Plan for Non-Employee Directors of JPMorgan Chase & Co., as amended and restated July 2001 and as of December 31, 2004 (incorporated by reference to Exhibit 10.1 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2007).[(a)]

10.2 2005 Deferred Compensation Plan for Non-Employee Directors of JPMorgan Chase & Co., effective as of January 1, 2005 (incorporated by reference to Exhibit 10.2 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2007).[(a)]

10.3 2005 Deferred Compensation Program of JPMorgan Chase & Co., restated effective as of December 31, 2008 (incorporated by reference to Exhibit 10.4 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).[(a)]

10.4 JPMorgan Chase & Co. Long-Term Incentive Plan as amended and restated effective May 19, 2015 (incorporated by reference to Appendix C of the Schedule 14A of JPMorgan Chase & Co. (File No. 1-5805) filed April 8, 2015).[(a)]

10.5 Key Executive Performance Plan of JPMorgan Chase & Co., as amended and restated effective January 1, 2014 (incorporated by reference to Appendix G of the Schedule 14A of JPMorgan Chase & Co. (File No. 1-5805) filed April 10, 2013).[(a)]

10.6 Excess Retirement Plan of JPMorgan Chase & Co., restated and amended as of December 31, 2008, as amended (incorporated by reference to Exhibit 10.7 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2009).[(a)]

10.7 1995 Stock Incentive Plan of J.P. Morgan & Co. Incorporated and Affiliated Companies, as amended, dated December 11, 1996 (incorporated by reference to Exhibit 10.8 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).[(a)]

10.8 Executive Retirement Plan of JPMorgan Chase & Co., as amended and restated December 31, 2008 (incorporated by reference to Exhibit 10.9 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).[(a)]

10.9 Bank One Corporation Stock Performance Plan, as amended and restated effective February 20, 2001 (incorporated by reference to Exhibit 10.12 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).[(a)]

10.10 Bank One Corporation Supplemental Savings and Investment Plan, as amended and restated effective December 31, 2008 (incorporated by reference to Exhibit 10.13 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).[(a)]

10.11 Banc One Corporation Revised and Restated 1995 Stock Incentive Plan, effective April 17, 1995 (incorporated by reference to Exhibit 10.15 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).[(a)]

10.12 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Award Agreement of January 22, 2008 stock appreciation rights (incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2007).[a]

10.13 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Award Agreement of January 22, 2008 stock appreciation rights for James Dimon (incorporated by reference to Exhibit 10.27 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2007).[a]

10.14 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for stock appreciation rights, dated as of January 20, 2009 (incorporated by reference to Exhibit 10.20 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).[a]

10.15 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for Operating Committee member stock appreciation rights, dated as of January 20, 2009 (incorporated by reference to Exhibit 10.21 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).[a]

10.16 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for Operating Committee member stock appreciation rights, dated as of February 3, 2010 (incorporated by reference to Exhibit 10.23 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2009).[a]

10.17 Forms of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for stock appreciation rights and restricted stock units, dated as of January 18, 2012 (incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2011).[a]

10.18 Forms of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for stock appreciation rights and restricted stock units for Operating Committee members, dated as of January 17, 2013 (incorporated by reference to Exhibit 10.23 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2012).[a]

10.19 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for restricted stock units for Operating Committee members, dated as of January 22, 2014 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of JPMorgan Chase & Co. (File No. 1-5805) for the quarter ended March 31, 2014).[a]

10.20 Forms of JPMorgan Chase & Co. Long-Term Incentive Plan Terms & Conditions for restricted stock units for Operating Committee members (U.S., E.U. and U.K.), dated as of January 20, 2015 (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of JPMorgan Chase & Co. (File No. 1-5805) for the quarter ended March 31, 2015).[a]

10.21 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for restricted stock units for Operating Committee members, dated as of January 19, 2016.[a][b]

10.22 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for performance share units for Operating Committee members, dated as of January 19, 2016.[a][b]

10.23 Form of JPMorgan Chase & Co. Terms and Conditions of Fixed Allowance (UK) (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q of JPMorgan Chase & Co. (File No. 1-5805) for the quarter ended June 30, 2014).[a]

10.24 Form of JPMorgan Chase & Co. Performance-Based Incentive Compensation Plan, effective as of January 1, 2006, as amended (incorporated by reference to Exhibit 10.27 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2009).[a]

10.25 Plea Agreement dated May 20, 2015 between JPMorgan Chase & Co. and the U.S. Department of Justice (incorporated by reference to Exhibit 99.3 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed May 20, 2015).

12.1 Computation of ratio of earnings to fixed charges.[b]

12.2 Computation of ratio of earnings to fixed charges and preferred stock dividend requirements.[b]

21 List of subsidiaries of JPMorgan Chase & Co.[b]

22.1 Annual Report on Form 11-K of The JPMorgan Chase 401(k) Savings Plan for the year ended December 31, 2015 (to be filed pursuant to Rule 15d-21 under the Securities Exchange Act of 1934).

23 Consent of independent registered public accounting firm.[b]

31.1 Certification.[b]

31.2 Certification.[b]

32 Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.[c]

101.INS	XBRL Instance Document.[(b)(d)]
101.SCH	XBRL Taxonomy Extension Schema Document.[(b)]
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.[(b)]
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.[(b)]
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.[(b)]
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.[(b)]

(a) This exhibit is a management contract or compensatory plan or arrangement.
(b) Filed herewith.
(c) Furnished herewith. This exhibit shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section. Such exhibit shall not be deemed incorporated into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.
(d) Pursuant to Rule 405 of Regulation S-T, includes the following financial information included in the Firm's Annual Report on Form 10-K for the year ended December 31, 2015, formatted in XBRL (eXtensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income for the years ended December 31, 2015, 2014 and 2013, (ii) the Consolidated statements of comprehensive income for the years ended December 31, 2015, 2014 and 2013, (iii) the Consolidated balance sheets as of December 31, 2015 and 2014, (iv) the Consolidated statements of changes in stockholders' equity for the years ended December 31, 2015, 2014 and 2013, (v) the Consolidated statements of cash flows for the years ended December 31, 2015, 2014 and 2013, and (vi) the Notes to Consolidated Financial Statements.

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FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited)
As of or for the year ended December 31,

(in millions, except per share, ratio, headcount data and where otherwise noted)	2015	2014	2013	2012	2011
Selected income statement data					
Total net revenue	**$ 93,543**	$ 95,112	$ 97,367	$ 97,680	$ 97,843
Total noninterest expense	**59,014**	61,274	70,467	64,729	62,911
Pre-provision profit	**34,529**	33,838	26,900	32,951	34,932
Provision for credit losses	**3,827**	3,139	225	3,385	7,574
Income before income tax expense	**30,702**	30,699	26,675	29,566	27,358
Income tax expense	**6,260**	8,954	8,789	8,307	8,402
Net income	**$ 24,442**	$ 21,745	$ 17,886	$ 21,259	$ 18,956
Earnings per share data					
Net income: Basic	**$ 6.05**	$ 5.33	$ 4.38	$ 5.21	$ 4.50
Diluted	**6.00**	5.29	4.34	5.19	4.48
Average shares: Basic	**3,700.4**	3,763.5	3,782.4	3,809.4	3,900.4
Diluted	**3,732.8**	3,797.5	3,814.9	3,822.2	3,920.3
Market and per common share data					
Market capitalization	**$ 241,899**	$ 232,472	$ 219,657	$ 167,260	$ 125,442
Common shares at period-end	**3,663.5**	3,714.8	3,756.1	3,804.0	3,772.7
Share price[a]					
High	**$ 70.61**	$ 63.49	$ 58.55	$ 46.49	$ 48.36
Low	**50.07**	52.97	44.20	30.83	27.85
Close	**66.03**	62.58	58.48	43.97	33.25
Book value per share	**60.46**	56.98	53.17	51.19	46.52
Tangible book value per share ("TBVPS")[b]	**48.13**	44.60	40.72	38.68	33.62
Cash dividends declared per share	**1.72**	1.58	1.44	1.20	1.00
Selected ratios and metrics					
Return on common equity ("ROE")	**11%**	10%	9%	11%	11%
Return on tangible common equity ("ROTCE")[b]	**13**	13	11	15	15
Return on assets ("ROA")	**0.99**	0.89	0.75	0.94	0.86
Overhead ratio	**63**	64	72	66	64
Loans-to-deposits ratio	**65**	56	57	61	64
High quality liquid assets ("HQLA") (in billions)[c]	**$ 496**	$ 600	$ 522	341	NA
Common equity tier 1 ("CET1") capital ratio[d]	**11.8%**	10.2%	10.7%	11.0%	10.0%
Tier 1 capital ratio[d]	**13.5**	11.6	11.9	12.6	12.3
Total capital ratio[d]	**15.1**	13.1	14.3	15.2	15.3
Tier 1 leverage ratio[d]	**8.5**	7.6	7.1	7.1	6.8
Selected balance sheet data (period-end)					
Trading assets	**$ 343,839**	$ 398,988	$ 374,664	$ 450,028	$ 443,963
Securities	**290,827**	348,004	354,003	371,152	364,793
Loans	**837,299**	757,336	738,418	733,796	723,720
Core Loans	**732,093**	628,785	583,751	555,351	518,095
Total assets	**2,351,698**	2,572,274	2,414,879	2,358,323	2,264,976
Deposits	**1,279,715**	1,363,427	1,287,765	1,193,593	1,127,806
Long-term debt[e]	**288,651**	276,379	267,446	248,521	255,962
Common stockholders' equity	**221,505**	211,664	199,699	194,727	175,514
Total stockholders' equity	**247,573**	231,727	210,857	203,785	183,314
Headcount	**234,598**	241,359	251,196	258,753	259,940
Credit quality metrics					
Allowance for credit losses	**$ 14,341**	$ 14,807	$ 16,969	$ 22,604	$ 28,282
Allowance for loan losses to total retained loans	**1.63%**	1.90%	2.25%	3.02%	3.84%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[f]	**1.37**	1.55	1.80	2.43	3.35
Nonperforming assets	**$ 7,034**	$ 7,967	$ 9,706	$ 11,906	$ 11,315
Net charge-offs	**4,086**	4,759	5,802	9,063	12,237
Net charge-off rate	**0.52%**	0.65%	0.81%	1.26%	1.78%

Note: Effective October 1, 2015, and January 1, 2015, JPMorgan Chase & Co. adopted new accounting guidance, retrospectively, related to (1) the presentation of debt issuance costs, and (2) investments in affordable housing projects that qualify for the low-income housing tax credit, respectively. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82 , Accounting and Reporting Developments on page 170 , and Note 1.

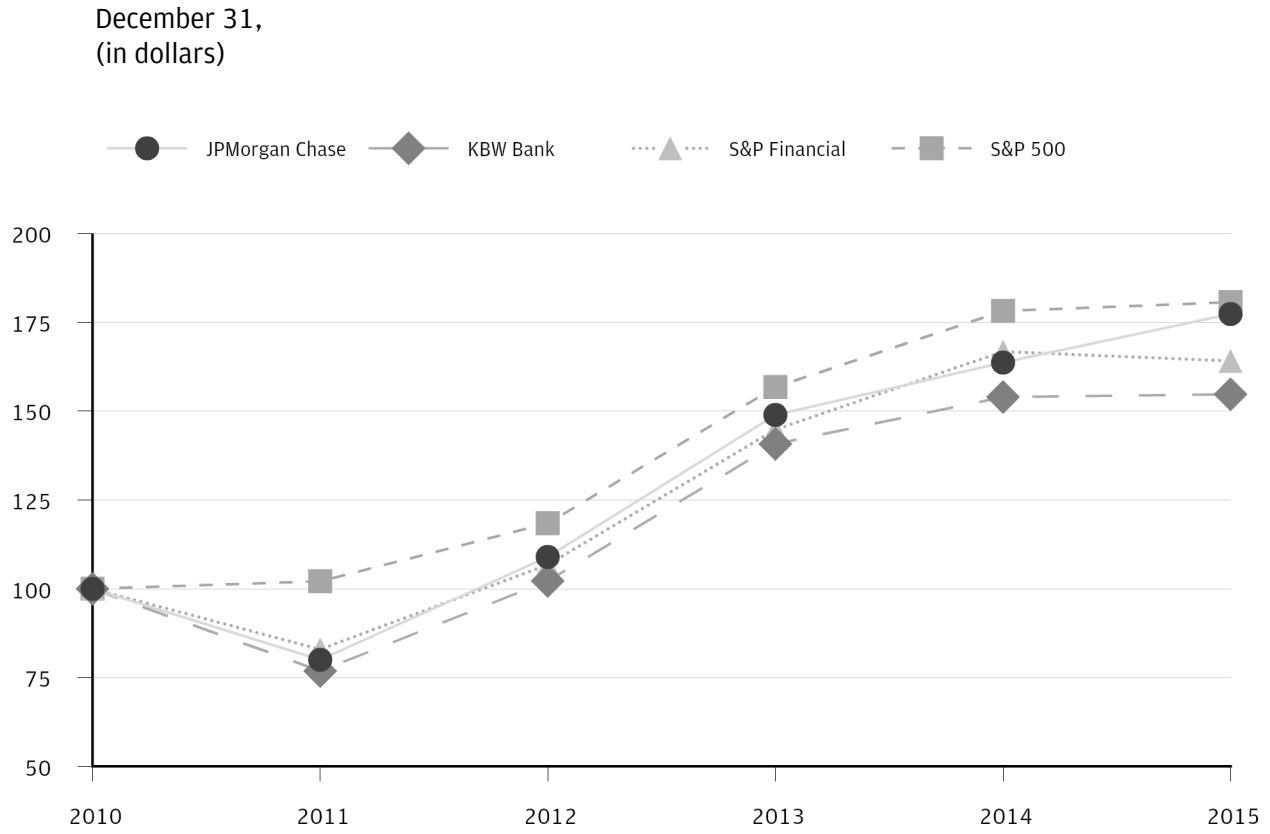
(a) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange.
(b) TBVPS and ROTCE are non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82.
(c) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR") for December 31, 2015 and the Firm's estimated amount for December 31, 2014 prior to the effective date of the final rule, and under the Basel III liquidity coverage ratio ("Basel III LCR") for prior periods. The Firm did not begin estimating HQLA until December 31, 2012. For additional information, see HQLA on page 160.
(d) Basel III Transitional rules became effective on January 1, 2014; prior period data is based on Basel I rules. As of December 31, 2014 the ratios presented are calculated under the Basel III Advanced Transitional Approach. CET1 capital under Basel III replaced Tier 1 common capital under Basel I. Prior to Basel III becoming effective on January 1, 2014, Tier 1 common capital under Basel I was a non-GAAP financial measure. See Capital Management on pages 149–158 for additional information on Basel III and non-GAAP financial measures of regulatory capital.
(e) Included unsecured long-term debt of $211.8 billion, $207.0 billion, $198.9 billion, $200.1 billion and $230.5 billion respectively, as of December 31, of each year presented.
(f) Excluded the impact of residential real estate purchased credit-impaired ("PCI") loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82. For further discussion, see Allowance for credit losses on pages 130–132.

FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced United States of America ("U.S.") equity benchmark consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly traded in the U.S. and is composed of 24 leading national money center and regional banks and thrifts. The S&P Financial Index is an index of 87 financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of $100 on December 31, 2010, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2010	2011	2012	2013	2014	**2015**
JPMorgan Chase	$ 100.00	$ 80.03	$ 108.98	$ 148.98	$ 163.71	**$ 177.40**
KBW Bank Index	100.00	76.82	102.19	140.77	153.96	**154.71**
S&P Financial Index	100.00	82.94	106.78	144.79	166.76	**164.15**
S&P 500 Index	100.00	102.11	118.44	156.78	178.22	**180.67**



This section of JPMorgan Chase's Annual Report for the year ended December 31, 2015 ("Annual Report"), provides Management's discussion and analysis of the financial condition and results of operations ("MD&A") of JPMorgan Chase. See the Glossary of Terms on pages 311–315 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 173) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2015 ("2015 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the U.S., with operations worldwide; the Firm had $2.4 trillion in assets and $247.6 billion in stockholders' equity as of December 31, 2015. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national banking association with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national banking association that is the Firm's credit card-issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the United Kingdom ("U.K.") is J.P. Morgan Securities plc, a subsidiary of JPMorgan Chase Bank, N.A.

For management reporting purposes, the Firm's activities are organized into four major reportable business segments, as well as a Corporate segment. The Firm's consumer business is the Consumer & Community Banking ("CCB") segment. The Firm's wholesale business segments are Corporate & Investment Bank ("CIB"), Commercial Banking ("CB"), and Asset Management ("AM"). For a description of the Firm's business segments, and the products and services they provide to their respective client bases, refer to Business Segment Results on pages 83–106, and Note 33.

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of the trends and uncertainties, as well as the risks and critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

Financial performance of JPMorgan Chase

Year ended December 31, (in millions, except per share data and ratios)	**2015**	2014	Change
Selected income statement data			
Total net revenue	**$ 93,543**	$ 95,112	(2)%
Total noninterest expense	**59,014**	61,274	(4)
Pre-provision profit	**34,529**	33,838	2
Provision for credit losses	**3,827**	3,139	22
Net income	**24,442**	21,745	12
Diluted earnings per share	**6.00**	5.29	13
Return on common equity	**11%**	10%	
Capital ratios[(a)]			
CET1	**11.8**	10.2	
Tier 1 capital	**13.5**	11.6	

(a) Ratios presented are calculated under the transitional Basel III rules and represent the Collins Floor. See Capital Management on pages 149–158 for additional information on Basel III.

Summary of 2015 Results

JPMorgan Chase reported record full-year 2015 net income of $24.4 billion, and record earnings per share of $6.00, on net revenue of $93.5 billion. Net income increased by $2.7 billion compared with net income of $21.7 billion in 2014. ROE for the year was 11%, up from 10% in the prior year.

The increase in net income in 2015 was driven by lower taxes and lower noninterest expense, partially offset by lower net revenue and a higher provision for credit losses. The decline in net revenue was predominantly driven by lower Corporate private equity gains, lower CIB revenue reflecting the impact of business simplification, and lower CCB Mortgage Banking revenue. These decreases were partially offset by a benefit from a legal settlement in Corporate and higher operating lease income, predominantly in CCB.

The decrease in noninterest expense was driven by lower CIB expense, reflecting the impact of business simplification, and lower CCB expense as a result of efficiencies, predominantly reflecting declines in headcount-related expense and lower professional fees, partially offset by investments in the business. As a result of these changes, the Firm's overhead ratio in 2015 was lower compared with the prior year.

The provision for credit losses increased from the prior year as a result of an increase in the wholesale provision, reflecting the impact of downgrades, including in the Oil & Gas portfolio. The consumer provision declined, reflecting lower net charge-offs due to continued discipline in credit underwriting, as well as improvement in the economy driven by increasing home prices and lower unemployment levels. This was partially offset by a lower reduction in the allowance for loan losses.

Total firmwide allowance for credit losses in 2015 was $14.3 billion, resulting in a loan loss coverage ratio of 1.37%, excluding the PCI portfolio, compared with 1.55% in the prior year. The Firm's allowance for loan losses to retained nonaccrual loans, excluding the PCI portfolio and credit card, was 117% compared with 106% in 2014. Firmwide, net charge-offs were $4.1 billion for the year, down $673 million from 2014. Nonperforming assets at year-end were $7.0 billion, down $933 million.

The Firm's results reflected solid underlying performance across its four major reportable business segments, with continued strong lending and consumer deposit growth. Firmwide average core loans increased by 12% compared with the prior year. Within CCB, Consumer & Business Banking average deposits increased 9% over the prior year. The Firm had nearly 23 million active mobile customers at year end, an increase of 20% over the prior year. Credit card sales volume (excluding Commercial Card) was up 7% for the year and merchant processing volume was up 12%. The CIB maintained its #1 ranking in Global Investment Banking Fees according to Dealogic. CB had record average loans, with an 11% increase compared with the prior year. CB also had record gross investment banking revenue of $2.2 billion, up 10% from the prior year. AM had positive net long-term

client inflows and continued to deliver strong investment performance with 80% of mutual fund assets under management ("AUM") ranked in the 1st or 2nd quartiles over the past five years. AM also increased average loan balances by 8% in 2015.

In 2015, the Firm continued to adapt its strategy and financial architecture toward meeting regulatory and capital requirements and the changing banking landscape, while serving its clients and customers, investing in its businesses, and delivering strong returns to its shareholders. Importantly, the Firm exceeded all of its 2015 financial targets including those related to balance sheet optimization and managing its capital, its GSIB surcharge and expense. On capital, the Firm exceeded its capital target of reaching Basel III Fully Phased-In Advanced and Standardized CET1 ratios of approximately 11%, ending the year with estimated Basel III Advanced Fully Phased-in CET1 capital and ratio of $173.2 billion and 11.6%, respectively. The Firm also exceeded its target of reducing its GSIB capital surcharge, ending the year at an estimated 3.5% GSIB surcharge, achieved through a combination of reducing wholesale non-operating deposits, level 3 assets and derivative notionals.

The Firm's fully phased-in supplementary leverage ratio ("SLR") was 6.5% and JPMorgan Chase Bank, N.A.'s fully phased-in SLR was 6.6%. The Firm was also compliant with the fully phased-in U.S. liquidity coverage ratio ("LCR") and had $496 billion of HQLA as of year-end 2015.

The Firm's tangible book value per share was $48.13, an increase of 8% from the prior year. Total stockholders' equity was $247.6 billion at December 31, 2015.

Tangible book value per share and each of these Basel III Advanced Fully Phased-In measures are non-GAAP financial measures; they are used by management, bank regulators, investors and analysts to assess and monitor the Firm's capital position and liquidity. For further discussion of Basel III Advanced Fully Phased-in measures and the SLR under the U.S. final SLR rule, see Capital Management on pages 149–158, and for further discussion of LCR and HQLA, see Liquidity Risk Management on pages 159–164.

The Firm provided credit to and raised capital of $2.0 trillion for its clients during 2015. This included $705 billion of credit to corporations, $233 billion of credit to consumers, and $22 billion to U.S. small businesses. During 2015, the Firm also raised $1.0 trillion of capital for clients. Additionally, $68 billion of credit was provided to, and capital was raised for, nonprofit and government entities, including states, municipalities, hospitals and universities.

The Firm has substantially completed its business simplification agenda, exiting businesses, products or clients that were non-core, not at scale or not returning the appropriate level of return in order to focus on core activities for its core clients and reduce risk to the Firm. While the business simplification initiative impacted revenue growth in 2015, it did not have a meaningful impact on the Firm's profitability. The Firm continues to focus on streamlining, simplifying and centralizing operational functions and processes in order to attain more consistencies and efficiencies across the Firm. To that end, the Firm continues to make progress on simplifying its legal entity structure, streamlining its Global Technology function, rationalizing its use of vendors, and optimizing its real estate location strategy.

Business outlook

These current expectations are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 173 and the Risk Factors section on pages 8–18.

Business Outlook

JPMorgan Chase's outlook for the full-year 2016 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these inter-related factors will affect the performance of the Firm and its lines of business. The Firm expects it will continue to make appropriate adjustments to its businesses and operations in response to ongoing developments in the legal and regulatory, as well as business and economic, environment in which it operates.

In the first quarter of 2016, management expects net interest income and net interest margin to be relatively flat when compared with the fourth quarter of 2015. During 2016, if there are no changes in interest rates, management expects net interest income could be approximately $2 billion higher than in 2015, reflecting the Federal Reserve's rate increase in December 2015 and loan growth.

Management expects core loan growth of approximately 10%-15% in 2016 as well as continued growth in retail deposits which are anticipated to lead to the Firm's balance sheet growing to approximately $2.45 trillion in 2016.

Management also expects managed noninterest revenue of approximately $50 billion in 2016, a decrease from 2015, primarily driven by lower Card revenue reflecting renegotiated co-brand partnership agreements and lower revenue in Mortgage Banking.

The Firm continues to experience charge-offs at levels lower than its through-the-cycle expectations reflecting favorable credit trends across the consumer and wholesale portfolios, excluding Oil & Gas. Management expects total net charge-offs of up to approximately $4.75 billion in 2016. Based on the changes in market expectations for oil prices since year-end 2015, management believes reserves during the first quarter of 2016 could increase by approximately $500 million for Oil & Gas, and by approximately $100 million for Metals & Mining.

The Firm continues to take a disciplined approach to managing its expenses, while investing in growth and innovation. The Firm intends to leverage its scale and improve its operating efficiencies, in order to reinvest its expense savings in additional technology and marketing investments and fund other growth initiatives. As a result, Firmwide adjusted expense in 2016 is expected to be approximately $56 billion (excluding Firmwide legal expense).

Additionally, the Firm will continue to adapt its capital assessment framework to review businesses and client relationships against multiple binding constraints, including GSIB and other applicable capital requirements, imposing internal limits on business activities to align or optimize the Firm's balance sheet and risk-weighted assets ("RWA") with regulatory requirements in order to ensure that business activities generate appropriate levels of shareholder value.

During 2016, the Firm expects the CET1 capital ratio calculated under the Basel III Standardized Approach to become its binding constraint. As a result of the anticipated growth in the balance sheet, management anticipates that the Firm will have, over time, $1.55 trillion in Standardized risk weighted assets, and is expecting that, over the next several years, its Basel III CET1 capital ratio will be between 11% and 12.5%. In the longer term, management expects to maintain a minimum Basel III CET1 ratio of 11%. It is the Firm's current intention that the Firm's capital ratios continue to exceed regulatory minimums as they are fully implemented in 2019 and thereafter. Likewise, the Firm will be evolving its funding framework to ensure it meets the current and proposed more stringent regulatory liquidity rules, including those relating to the availability of adequate Total Loss Absorbing Capacity ("TLAC").

In Mortgage Banking within CCB, management expects noninterest revenue to decline by approximately $700 million in 2016 as servicing balances continue to decline from year-end 2015 levels. The Card net charge-off rate is expected to be approximately 2.5% in 2016.

In CIB, management expects Investment Banking revenue in the first quarter of 2016 to be approximately 25% lower than the prior year first quarter, driven by current market conditions in the underwriting businesses. In addition, Markets revenue to date in the first quarter of 2016 is down approximately 20%, when compared to a particularly strong period in the prior year and reflecting the current challenging market conditions. Prior year Markets revenue was positively impacted by macroeconomic events, including the Swiss franc decoupling from the Euro. Actual Markets revenue results for the first quarter will continue to be affected by market conditions, which can be volatile. In Securities Services, management expects revenue of approximately $875 million in the first quarter of 2016.

CONSOLIDATED RESULTS OF OPERATIONS

The following section of the MD&A provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2015. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 165–169.

Revenue

Year ended December 31, (in millions)	2015	2014	2013
Investment banking fees	**$ 6,751**	$ 6,542	$ 6,354
Principal transactions	**10,408**	10,531	10,141
Lending- and deposit-related fees	**5,694**	5,801	5,945
Asset management, administration and commissions	**15,509**	15,931	15,106
Securities gains	**202**	77	667
Mortgage fees and related income	**2,513**	3,563	5,205
Card income	**5,924**	6,020	6,022
Other income[(a)]	**3,032**	3,013	4,608
Noninterest revenue	**50,033**	51,478	54,048
Net interest income	**43,510**	43,634	43,319
Total net revenue	**$ 93,543**	$ 95,112	$ 97,367

(a) Included operating lease income of $2.1 billion, $1.7 billion and $1.5 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Total net revenue for 2015 was down by 2% compared with the prior year, predominantly driven by lower Corporate private equity gains, lower CIB revenue reflecting the impact of business simplification initiatives, and lower CCB Mortgage Banking revenue. These decreases were partially offset by a benefit from a legal settlement in Corporate, and higher operating lease income, predominantly in CCB.

Investment banking fees increased from the prior year, reflecting higher advisory fees, partially offset by lower equity and debt underwriting fees. The increase in advisory fees was driven by a greater share of fees for completed transactions as well as growth in industry-wide fee levels. The decrease in equity underwriting fees resulted from lower industry-wide issuance, and the decrease in debt underwriting fees resulted primarily from lower loan syndication and bond underwriting fees on lower industry-wide fee levels. For additional information on investment banking fees, see CIB segment results on pages 94–98 and Note 7.

Principal transactions revenue decreased from the prior year, reflecting lower private equity gains in Corporate driven by lower valuation gains and lower net gains on sales as the Firm exits this non-core business. The decrease was partially offset by higher client-driven market-making revenue, particularly in foreign exchange, interest rate and equity-related products in CIB, as well as a gain of approximately $160 million on CCB's investment in Square, Inc. upon its initial public offering. For additional information, see CIB and Corporate segment results on pages 94–98 and pages 105–106, respectively, and Note 7.

Asset management, administration and commissions revenue decreased compared with the prior year, largely as a result of lower fees in CIB and lower performance fees in AM. The decrease was partially offset by higher asset management fees as a result of net client inflows into assets under management and the impact of higher average market levels in AM and CCB. For additional information, see the segment discussions of CIB and AM on pages 94–98 and pages 102–104, respectively, and Note 7.

Mortgage fees and related income decreased compared with the prior year, reflecting lower servicing revenue largely as a result of lower average third-party loans serviced, and lower net production revenue reflecting a lower repurchase benefit. For further information on mortgage fees and related income, see the segment discussion of CCB on pages 85–93 and Notes 7 and 17.

For information on lending- and deposit-related fees, see the segment results for CCB on pages 85–93, CIB on pages 94–98, and CB on pages 99–101 and Note 7; securities gains, see the Corporate segment discussion on pages 105–106; and card income, see CCB segment results on pages 85–93.

Other income was relatively flat compared with the prior year, reflecting a $514 million benefit from a legal settlement in Corporate, higher operating lease income as a result of growth in auto operating lease assets in CCB, and the absence of losses related to the exit of non-core portfolios in Card. These increases were offset by the impact of business simplification in CIB; the absence of a benefit recognized in 2014 from a franchise tax settlement; and losses related to the accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits.

Net interest income was relatively flat compared with the prior year, as lower loan yields, lower investment securities net interest income, and lower trading asset balance and yields were offset by higher average loan balances and lower interest expense on deposits. The Firm's average interest-earning assets were $2.1 trillion in 2015, and the net interest yield on these assets, on a fully taxable-equivalent ("FTE") basis, was 2.14%, a decrease of 4 basis points from the prior year.

2014 compared with 2013

Total net revenue for 2014 was down by 2% compared with the prior year, predominantly due to lower mortgage fees and related income and lower other income. The decrease was partially offset by higher asset management, administration and commissions revenue.

Investment banking fees increased compared with the prior year, due to higher advisory and equity underwriting fees, largely offset by lower debt underwriting fees. The increase

in advisory fees was driven by the combined impact of a greater share of fees for completed transactions, and growth in industry-wide fees. The increase in equity underwriting fees was driven by higher industry-wide issuance. The decrease in debt underwriting fees was primarily related to lower bond underwriting fees compared with the prior year, and lower loan syndication fees on lower industry-wide fees.

Principal transactions revenue increased as the prior year included a $1.5 billion loss related to the implementation of the funding valuation adjustment ("FVA") framework for over-the-counter ("OTC") derivatives and structured notes. Private equity gains increased as a result of higher net gains on sales. These increases were partially offset by lower fixed income markets revenue in CIB, primarily driven by credit-related and rates products, as well as the impact of business simplification initiatives.

Lending- and deposit-related fees decreased compared with the prior year, reflecting the impact of business simplification initiatives and lower trade finance revenue in CIB.

Asset management, administration and commissions revenue increased compared with the prior year, reflecting higher asset management fees driven by net client inflows and higher market levels in AM and CCB. The increase was offset partially by lower commissions and other fee revenue in CCB as a result of the exit of a non-core product in 2013.

Securities gains decreased compared with the prior year, reflecting lower repositioning activity related to the Firm's investment securities portfolio.

Mortgage fees and related income decreased compared with the prior year, predominantly due to lower net production revenue driven by lower volumes due to higher mortgage interest rates, and tighter margins. The decline in net production revenue was partially offset by a lower loss on the risk management of mortgage servicing rights ("MSRs").

Card income was relatively flat compared with the prior year, but included higher net interchange income due to growth in credit and debit card sales volume, offset by higher amortization of new account origination costs.

Other income decreased from the prior year, predominantly from the absence of two significant items recorded in Corporate in 2013: gains of $1.3 billion and $493 million from sales of Visa shares and One Chase Manhattan Plaza, respectively. Lower valuations of seed capital investments in AM and losses related to the exit of non-core portfolios in Card also contributed to the decrease. These items were partially offset by higher auto lease income as a result of growth in auto lease volume, and a benefit from a tax settlement.

Net interest income increased slightly from the prior year, predominantly reflecting higher yields on investment securities, the impact of lower interest expense from lower rates, and higher average loan balances. The increase was partially offset by lower yields on loans due to the run-off of higher-yielding loans and new originations of lower-yielding loans, and lower average interest-earning trading asset balances. The Firm's average interest-earning assets were $2.0 trillion, and the net interest yield on these assets, on a FTE basis, was 2.18%, a decrease of 5 basis points from the prior year.

Provision for credit losses

Year ended December 31,

(in millions)	**2015**	2014	2013
Consumer, excluding credit card	**$ (81)**	$ 419	$ (1,871)
Credit card	**3,122**	3,079	2,179
Total consumer	**3,041**	3,498	308
Wholesale	**786**	(359)	(83)
Total provision for credit losses	**$ 3,827**	$ 3,139	$ 225

2015 compared with 2014

The provision for credit losses increased from the prior year as a result of an increase in the wholesale provision, largely reflecting the impact of downgrades in the Oil & Gas portfolio. The increase was partially offset by a decrease in the consumer provision, reflecting lower net charge-offs due to continued discipline in credit underwriting, as well as improvement in the economy driven by increasing home prices and lower unemployment levels. The increase was partially offset by a lower reduction in the allowance for loan losses. For a more detailed discussion of the credit portfolio and the allowance for credit losses, see the segment discussions of CCB on pages 85–93, CB on pages 99–101, and the Allowance For Credit Losses on pages 130–132.

2014 compared with 2013

The provision for credit losses increased by $2.9 billion from the prior year as result of a lower benefit from reductions in the consumer allowance for loan losses, partially offset by lower net charge-offs. The consumer allowance reduction in 2014 was primarily related to the consumer, excluding credit card, portfolio and reflected the continued improvement in home prices and delinquencies in the residential real estate portfolio. The wholesale provision reflected a continued favorable credit environment.

Noninterest expense

Year ended December 31, (in millions)	2015	2014	2013
Compensation expense	**$29,750**	$30,160	$30,810
Noncompensation expense:			
Occupancy	**3,768**	3,909	3,693
Technology, communications and equipment	**6,193**	5,804	5,425
Professional and outside services	**7,002**	7,705	7,641
Marketing	**2,708**	2,550	2,500
Other[(a)(b)]	**9,593**	11,146	20,398
Total noncompensation expense	**29,264**	31,114	39,657
Total noninterest expense	**$59,014**	$61,274	$70,467

(a) Included legal expense of $3.0 billion, $2.9 billion and $11.1 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

(b) Included Federal Deposit Insurance Corporation ("FDIC")-related expense of $1.2 billion, $1.0 billion and $1.5 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Total noninterest expense decreased by 4% from the prior year, as a result of lower CIB expense, predominantly reflecting the impact of business simplification; and lower CCB expense resulting from efficiencies related to declines in headcount-related expense and lower professional fees. These decreases were partially offset by investment in the businesses, including for infrastructure and controls.

Compensation expense decreased compared with the prior year, predominantly driven by lower performance-based incentives and reduced headcount, partially offset by higher postretirement benefit costs and investment in the businesses, including for infrastructure and controls.

Noncompensation expense decreased from the prior year, reflecting benefits from business simplification in CIB; lower professional and outside services expense, reflecting lower legal services expense and a reduced number of contractors in the businesses; lower amortization of intangibles; and the absence of a goodwill impairment in Corporate. These factors were partially offset by higher depreciation expense, largely associated with higher auto operating lease assets in CCB; higher marketing expense in CCB; and higher FDIC-related assessments. Legal expense was relatively flat compared with the prior year. For a further discussion of legal expense, see Note 31.

2014 compared with 2013

Total noninterest expense decreased by $9.2 billion, or 13%, from the prior year, as a result of lower other expense (in particular, legal expense) and lower compensation expense.

Compensation expense decreased compared with the prior year, predominantly driven by lower headcount in CCB Mortgage Banking, lower performance-based compensation expense in CIB, and lower postretirement benefit costs. The decrease was partially offset by investments in the businesses, including headcount for controls.

Noncompensation expense decreased compared with the prior year, due to lower other expense, predominantly reflecting lower legal expense. Lower expense for foreclosure-related matters and production and servicing-related expense in CCB Mortgage Banking, lower FDIC-related assessments, and lower amortization due to certain fully amortized intangibles, also contributed to the decline. The decrease was offset partially by investments in the businesses, including for controls, and costs related to business simplification initiatives across the Firm.

Income tax expense

Year ended December 31, (in millions, except rate)	2015	2014	2013
Income before income tax expense	**$30,702**	$30,699	$26,675
Income tax expense	**6,260**	8,954	8,789
Effective tax rate	**20.4%**	29.2%	32.9%

2015 compared with 2014

The effective tax rate decreased compared with the prior year, predominantly due to the recognition in 2015 of tax benefits of $2.9 billion and other changes in the mix of income and expense subject to U.S. federal, state and local income taxes, partially offset by prior-year tax adjustments. The recognition of tax benefits in 2015 was due to the resolution of various tax audits, as well as the release of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities. For further information see Note 26.

2014 compared with 2013

The decrease in the effective tax rate from the prior year was largely attributable to the effect of the lower level of nondeductible legal-related penalties, partially offset by higher 2014 pretax income in combination with changes in the mix of income and expense subject to U.S. federal, state and local income taxes, and lower tax benefits associated with tax adjustments and the settlement of tax audits.

Selected Consolidated balance sheets data

December 31, (in millions)	2015	2014	Change
Assets			
Cash and due from banks	**$ 20,490**	$ 27,831	(26)%
Deposits with banks	**340,015**	484,477	(30)
Federal funds sold and securities purchased under resale agreements	**212,575**	215,803	(1)
Securities borrowed	**98,721**	110,435	(11)
Trading assets:			
Debt and equity instruments	**284,162**	320,013	(11)
Derivative receivables	**59,677**	78,975	(24)
Securities	**290,827**	348,004	(16)
Loans	**837,299**	757,336	11
Allowance for loan losses	**(13,555)**	(14,185)	(4)
Loans, net of allowance for loan losses	**823,744**	743,151	11
Accrued interest and accounts receivable	**46,605**	70,079	(33)
Premises and equipment	**14,362**	15,133	(5)
Goodwill	**47,325**	47,647	(1)
Mortgage servicing rights	**6,608**	7,436	(11)
Other intangible assets	**1,015**	1,192	(15)
Other assets	**105,572**	102,098	3
Total assets	**$ 2,351,698**	$ 2,572,274	(9)%
Liabilities			
Deposits	**$ 1,279,715**	$ 1,363,427	(6)
Federal funds purchased and securities loaned or sold under repurchase agreements	**152,678**	192,101	(21)
Commercial paper	**15,562**	66,344	(77)
Other borrowed funds	**21,105**	30,222	(30)
Trading liabilities:			
Debt and equity instruments	**74,107**	81,699	(9)
Derivative payables	**52,790**	71,116	(26)
Accounts payable and other liabilities	**177,638**	206,939	(14)
Beneficial interests issued by consolidated variable interest entities ("VIEs")	**41,879**	52,320	(20)
Long-term debt	**288,651**	276,379	4
Total liabilities	**2,104,125**	2,340,547	(10)
Stockholders' equity	**247,573**	231,727	7
Total liabilities and stockholders' equity	**$ 2,351,698**	$ 2,572,274	(9)%

The following is a discussion of the significant changes between December 31, 2015 and 2014.

Cash and due from banks and deposits with banks
The Firm's excess cash is placed with various central banks, predominantly Federal Reserve Banks. The net decrease in cash and due from banks and deposits with banks was primarily due to the Firm's actions to reduce wholesale non-operating deposits.

Securities borrowed
The decrease was largely driven by a lower demand for securities to cover short positions in CIB. For additional information, refer to Notes 3 and 13.

Trading assets-debt and equity instruments
The decrease was predominantly related to client-driven market-making activities in CIB, which resulted in lower levels of both debt and equity instruments. For additional information, refer to Note 3.

Trading assets and liabilities-derivative receivables and payables
The decrease in both receivables and payables was predominantly driven by declines in interest rate derivatives, commodity derivatives, foreign exchange derivatives and equity derivatives due to market movements, maturities and settlements related to client-driven market-making activities in CIB. For additional information, refer to Derivative contracts on pages 127-129, and Notes 3 and 6.

Securities
The decrease was largely due to paydowns and sales of non-U.S. residential mortgage-backed securities, non-U.S. government debt securities, and non-U.S. corporate debt securities reflecting a shift to loans. For additional information related to securities, refer to the discussion in the Corporate segment on pages 105-106, and Notes 3 and 12.

Loans and allowance for loan losses
The increase in loans was attributable to an increase in consumer loans due to higher originations and retention of prime mortgages in Mortgage Banking ("MB") and AM, and higher originations of auto loans in CCB, as well as an increase in wholesale loans driven by increased client activity, notably in commercial real estate.

The decrease in the allowance for loan losses was attributable to a lower consumer, excluding credit card, allowance for loan losses, driven by a reduction in the residential real estate portfolio allowance as a result of continued improvement in home prices and delinquencies and increased granularity in the impairment estimates. The wholesale allowance increased, largely reflecting the impact of downgrades in the Oil & Gas portfolio. For a more detailed discussion of loans and the allowance for loan losses, refer to Credit Risk Management on pages 112-132, and Notes 3, 4, 14 and 15.

Accrued interest and accounts receivable
The decrease was due to lower customer receivables related to client activity in CIB, and a reduction in unsettled securities transactions.

Mortgage servicing rights
For information on MSRs, see Note 17.

Other assets
Other assets increased modestly as a result of an increase in income tax receivables, largely associated with the resolution of certain tax audits, and higher auto operating lease assets from growth in business volume. These factors were mostly offset by lower private equity investments driven by the sale of a portion of the Private Equity business and other portfolio sales.

Deposits
The decrease was attributable to lower wholesale deposits, partially offset by higher consumer deposits. The decrease in wholesale deposits reflected the impact of the Firm's actions to reduce non-operating deposits. The increase in consumer deposits reflected continuing positive growth from strong customer retention. For more information, refer to the Liquidity Risk Management discussion on pages 159–164; and Notes 3 and 19.

Federal funds purchased and securities loaned or sold under repurchase agreements
The decrease was due to a decline in secured financing of trading assets-debt and equity instruments in CIB and of investment securities in the Chief Investment Office ("CIO"). For additional information on the Firm's Liquidity Risk Management, see pages 159–164.

Commercial paper
The decrease was associated with the discontinuation of a cash management product that offered customers the option of sweeping their deposits into commercial paper ("customer sweeps"), and lower issuances in the wholesale markets, consistent with Treasury's short-term funding plans. For additional information, see Liquidity Risk Management on pages 159–164.

Accounts payable and other liabilities
The decrease was due to lower brokerage customer payables related to client activity in CIB.

Beneficial interests issued by consolidated VIEs
The decrease was predominantly due to a reduction in commercial paper issued by conduits to third parties and to maturities of certain municipal bond vehicles in CIB, as well as net maturities of credit card securitizations. For further information on Firm-sponsored VIEs and loan securitization trusts, see Off-Balance Sheet Arrangements on pages 77–78 and Note 16.

Long-term debt
The increase was due to net issuances, consistent with Treasury's long-term funding plans. For additional information on the Firm's long-term debt activities, see Liquidity Risk Management on pages 159–164 and Note 21.

Stockholders' equity
The increase was due to net income and preferred stock issuances, partially offset by the declaration of cash dividends on common and preferred stock, and repurchases of common stock. For additional information on accumulated other comprehensive income/(loss) ("AOCI"), see Note 25; for the Firm's capital actions, see Capital Management on page 157 and Notes 22, 23 and 25.

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under accounting principles generally accepted in the U.S ("U.S. GAAP"). The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated special-purpose entities ("SPEs"), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

Special-purpose entities

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors' access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm's length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm's Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A. could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily "P-1", "A-1" and "F1" for Moody's Investors Service ("Moody's"), Standard & Poor's and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by Firm-administered consolidated SPEs. In the event of a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding held by third parties as of December 31, 2015 and 2014, was $8.7 billion and $12.1 billion, respectively. The aggregate amounts of commercial paper issued by these SPEs could increase in future periods should clients of the Firm-administered consolidated SPEs draw down on certain unfunded lending-related commitments. These unfunded lending-related commitments were $5.6 billion and $9.9 billion at December 31, 2015 and 2014, respectively. The Firm could facilitate the refinancing of some of the clients' assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multi-seller conduits in Note 16.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm's obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer and any credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 16 for additional information.

Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related financial instruments, guarantees and other commitments, and the Firm's accounting for them, see Lending-related commitments on page 127 and Note 29. For a discussion of liabilities associated with loan sales and securitization-related indemnifications, see Note 29.

Contractual cash obligations

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2015. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the below table are certain liabilities with variable cash flows and/or no obligation to return a stated amount of principal at maturity.

The carrying amount of on-balance sheet obligations on the Consolidated balance sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage repurchase liabilities and other obligations, see Note 29.

Contractual cash obligations

By remaining maturity at December 31, (in millions)	2015					2014
	2016	2017-2018	2019-2020	After 2020	**Total**	Total
On-balance sheet obligations						
Deposits[a]	**$ 1,262,865**	**$ 5,166**	**$ 3,553**	**$ 4,555**	**$ 1,276,139**	$ 1,361,597
Federal funds purchased and securities loaned or sold under repurchase agreements	**151,433**	**811**	**3**	**491**	**152,738**	192,128
Commercial paper	**15,562**	**–**	**–**	**–**	**15,562**	66,344
Other borrowed funds[a]	**11,331**	**–**	**–**	**–**	**11,331**	15,734
Beneficial interests issued by consolidated VIEs	**16,389**	**18,480**	**3,093**	**3,130**	**41,092**	50,200
Long-term debt[a]	**45,972**	**82,293**	**59,669**	**92,272**	**280,206**	262,888
Other[b]	**3,659**	**1,201**	**1,024**	**2,488**	**8,372**	8,355
Total on-balance sheet obligations	**1,507,211**	**107,951**	**67,342**	**102,936**	**1,785,440**	1,957,246
Off-balance sheet obligations						
Unsettled reverse repurchase and securities borrowing agreements[c]	**42,482**	**–**	**–**	**–**	**42,482**	40,993
Contractual interest payments[d]	**8,787**	**9,461**	**6,693**	**21,208**	**46,149**	48,038
Operating leases[e]	**1,668**	**3,094**	**2,388**	**4,679**	**11,829**	12,441
Equity investment commitments[f]	**387**	**–**	**75**	**459**	**921**	1,108
Contractual purchases and capital expenditures	**1,266**	**886**	**276**	**170**	**2,598**	2,832
Obligations under affinity and co-brand programs	**98**	**275**	**80**	**43**	**496**	2,303
Total off-balance sheet obligations	**54,688**	**13,716**	**9,512**	**26,559**	**104,475**	107,715
Total contractual cash obligations	**$ 1,561,899**	**$ 121,667**	**$ 76,854**	**$ 129,495**	**$ 1,889,915**	$ 2,064,961

(a) Excludes structured notes on which the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.
(b) Primarily includes dividends declared on preferred and common stock, deferred annuity contracts, pension and postretirement obligations and insurance liabilities.
(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 29.
(d) Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes for which the Firm's payment obligation is based on the performance of certain benchmarks.
(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of $1.9 billion and $2.2 billion at December 31, 2015 and 2014, respectively.
(f) At December 31, 2015 and 2014, included unfunded commitments of $50 million and $147 million, respectively, to third-party private equity funds, and $871 million and $961 million of unfunded commitments, respectively, to other equity investments.

CONSOLIDATED CASH FLOWS ANALYSIS

(in millions)	Year ended December 31, 2015	2014	2013
Net cash provided by/(used in)			
Operating activities	**$ 73,466**	$ 36,593	$ 107,953
Investing activities	**106,980**	(165,636)	(150,501)
Financing activities	**(187,511)**	118,228	28,324
Effect of exchange rate changes on cash	**(276)**	(1,125)	272
Net decrease in cash and due from banks	**$ (7,341)**	$ (11,940)	$ (13,952)

Operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's lending and capital markets activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities and market conditions. The Firm believes cash flows from operations, available cash balances and its capacity to generate cash through secured and unsecured sources are sufficient to meet the Firm's operating liquidity needs.

Cash provided by operating activities in 2015 resulted from a decrease in trading assets, predominantly due to client-driven market-making activities in CIB, resulting in lower levels of debt and equity securities. Additionally, cash was provided by a decrease in accounts receivable due to lower client receivables and higher net proceeds from loan sales activities. This was partially offset by cash used due to a decrease in accounts payable and other liabilities, resulting from lower brokerage customer payables related to client activity in CIB. In 2014 cash provided reflected higher net proceeds from loan securitizations and sales activities when compared with 2013. In 2013 cash provided reflected a decrease in trading assets from client-driven market-making activities in CIB, resulting in lower levels of debt securities, partially offset by net cash used in connection with loans originated or purchased for sale. Cash provided by operating activities for all periods also reflected net income after noncash operating adjustments.

Investing activities

The Firm's investing activities predominantly include loans originated to be held for investment, the investment securities portfolio and other short-term interest-earning assets. Cash provided by investing activities during 2015 predominantly resulted from lower deposits with banks due to the Firm's actions to reduce wholesale non-operating deposits; and net proceeds from paydowns, maturities, sales and purchases of investment securities. Partially offsetting these net inflows was cash used for net originations of consumer and wholesale loans, a portion of which reflected a shift from investment securities. Cash used in investing activities during 2014 and 2013 resulted from increases in deposits with banks, attributable to higher levels of excess funds; cash was also used for growth in wholesale and consumer loans in 2014, while in 2013 cash used reflected growth only in wholesale loans. Partially offsetting these cash outflows in 2014 and 2013 was a net decline in securities purchased under resale agreements due to a shift in the deployment of the Firm's excess cash by Treasury, and a net decline in consumer loans in 2013 resulting from paydowns and portfolio runoff or liquidation of delinquent loans. Investing activities in 2014 and 2013 also reflected net proceeds from paydowns, maturities, sales and purchases of investment securities.

Financing activities

The Firm's financing activities includes cash related to customer deposits, long-term debt, and preferred and common stock. Cash used in financing activities in 2015 resulted from lower wholesale deposits partially offset by higher consumer deposits. Additionally, in 2015 cash outflows were attributable to lower levels of commercial paper due to the discontinuation of a cash management product that offered customers the option of sweeping their deposits into commercial paper; lower commercial paper issuances in the wholesale markets; and a decrease in securities loaned or sold under repurchase agreements due to a decline in secured financings. Cash provided by financing activities in 2014 and 2013 predominantly resulted from higher consumer and wholesale deposits; partially offset in 2013 by a decrease in securities loaned or sold under repurchase agreements, predominantly due to changes in the mix of the Firm's funding sources. For all periods, cash was provided by net proceeds from long-term borrowings and issuances of preferred stock; and cash was used for repurchases of common stock and cash dividends on common and preferred stock.

* * *

For a further discussion of the activities affecting the Firm's cash flows, see Consolidated Balance Sheets Analysis on pages 75–76, Capital Management on pages 149–158, and Liquidity Risk Management on pages 159–164.

EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its Consolidated Financial Statements using U.S. GAAP; these financial statements appear on pages 176–180. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results, including the overhead ratio, and the results of the lines of business, on a "managed" basis, which are non-GAAP financial measures. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the reportable business segments) on an FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Effective January 1, 2015, the Firm adopted new accounting guidance for investments in affordable housing projects that qualify for the low-income housing tax credit, which impacted the CIB. As a result of the adoption of this new guidance, the Firm made an accounting policy election to amortize the initial cost of qualifying investments in proportion to the tax credits and other benefits received, and to present the amortization as a component of income tax expense; previously such amounts were predominantly presented in other income. The guidance was required to be applied retrospectively and, accordingly, certain prior period amounts have been revised to conform with the current period presentation. The adoption of the guidance did not materially change the Firm's results of operations on a managed basis as the Firm had previously presented and will continue to present the revenue from such investments on an FTE basis in other income for the purposes of managed basis reporting.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and, therefore, facilitate a comparison of the business segment with the performance of its competitors. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

	2015			2014			2013		
Year ended December 31, (in millions, except ratios)	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis	Reported Results	Fully taxable-equivalent adjustments[a]	Managed basis
Other income	**$ 3,032**	**$ 1,980**	**$ 5,012**	$ 3,013	$ 1,788	$ 4,801	$4,608	$1,660	$6,268
Total noninterest revenue	**50,033**	**1,980**	**52,013**	51,478	1,788	53,266	54,048	1,660	55,708
Net interest income	**43,510**	**1,110**	**44,620**	43,634	985	44,619	43,319	697	44,016
Total net revenue	**93,543**	**3,090**	**96,633**	95,112	2,773	97,885	97,367	2,357	99,724
Pre-provision profit	**34,529**	**3,090**	**37,619**	33,838	2,773	36,611	26,900	2,357	29,257
Income before income tax expense	**30,702**	**3,090**	**33,792**	30,699	2,773	33,472	26,675	2,357	29,032
Income tax expense	**6,260**	**3,090**	**9,350**	8,954	2,773	11,727	8,789	2,357	11,146
Overhead ratio	**63%**	**NM**	**61%**	64%	NM	63%	72%	NM	71%

(a) Predominantly recognized in CIB and CB business segments and Corporate

Calculation of certain U.S. GAAP and non-GAAP financial measures

Certain U.S. GAAP and non-GAAP financial measures are calculated as follows:

Book value per share ("BVPS")
Common stockholders' equity at period-end / Common shares at period-end

Overhead ratio
Total noninterest expense / Total net revenue

Return on assets ("ROA")
Reported net income / Total average assets

Return on common equity ("ROE")
Net income* / Average common stockholders' equity

Return on tangible common equity ("ROTCE")
Net income* / Average tangible common equity

Tangible book value per share ("TBVPS")
Tangible common equity at period-end / Common shares at period-end

* Represents net income applicable to common equity

Tangible common equity ("TCE"), ROTCE and TBVPS are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of average TCE. TBVPS represents the Firm's TCE at period-end divided by common shares at period-end. TCE, ROTCE, and TBVPS are meaningful to the Firm, as well as investors and analysts, in assessing the Firm's use of equity.

Additionally, certain credit and capital metrics and ratios disclosed by the Firm are non-GAAP measures. For additional information on these non-GAAP measures, see Credit Risk Management on pages 112–132, and Capital Management on pages 149–158.

Tangible common equity

	Period-end		Average		
			Year ended December 31,		
(in millions, except per share and ratio data)	**Dec 31, 2015**	Dec 31, 2014	**2015**	2014	2013
Common stockholders' equity	**$ 221,505**	$ 211,664	**$ 215,690**	$ 207,400	$ 196,409
Less: Goodwill	**47,325**	47,647	**47,445**	48,029	48,102
Less: Certain identifiable intangible assets	**1,015**	1,192	**1,092**	1,378	1,950
Add: Deferred tax liabilities[(a)]	**3,148**	2,853	**2,964**	2,950	2,885
Tangible common equity	**$ 176,313**	$ 165,678	**$ 170,117**	$ 160,943	$ 149,242
Return on tangible common equity	**NA**	NA	**13%**	13%	11%
Tangible book value per share	**$ 48.13**	$ 44.60	**NA**	NA	N/A

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

Net interest income excluding markets-based activities (formerly core net interest income)

In addition to reviewing net interest income on a managed basis, management also reviews net interest income excluding CIB's markets-based activities to assess the performance of the Firm's lending, investing (including asset-liability management) and deposit-raising activities. The data presented below are non-GAAP financial measures due to the exclusion of CIB's markets-based net interest income and related assets. Management believes this exclusion provides investors and analysts with another measure by which to analyze the non-markets-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on lending, investing and deposit-raising activities.

Net interest income excluding CIB markets-based activities data

Year ended December 31, (in millions, except rates)	**2015**	2014	2013
Net interest income – managed basis[(a)(b)]	**$ 44,620**	$ 44,619	$ 44,016
Less: Markets-based net interest income	**4,813**	5,552	5,492
Net interest income excluding markets[(a)]	**$ 39,807**	$ 39,067	$ 38,524
Average interest-earning assets	**$2,088,242**	$2,049,093	$1,970,231
Less: Average markets-based interest-earning assets	**493,225**	510,261	504,218
Average interest-earning assets excluding markets	**$1,595,017**	$1,538,832	$1,466,013
Net interest yield on average interest-earning assets – managed basis	**2.14%**	2.18%	2.23%
Net interest yield on average markets-based interest-earning assets	**0.97**	1.09	1.09
Net interest yield on average interest-earning assets excluding markets	**2.50%**	2.54%	2.63%

(a) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.

(b) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 80.

2015 compared with 2014

Net interest income excluding CIB's markets-based activities increased by $740 million in 2015 to $39.8 billion, and average interest-earning assets increased by $56.2 billion to $1.6 trillion. The increase in net interest income in 2015 predominantly reflected higher average loan balances and lower interest expense on deposits. The increase was partially offset by lower loan yields and lower investment securities net interest income. The increase in average interest-earning assets largely reflected the impact of higher average deposits with banks. These changes in net interest income and interest-earning assets resulted in the net interest yield decreasing by 4 basis points to 2.50% for 2015.

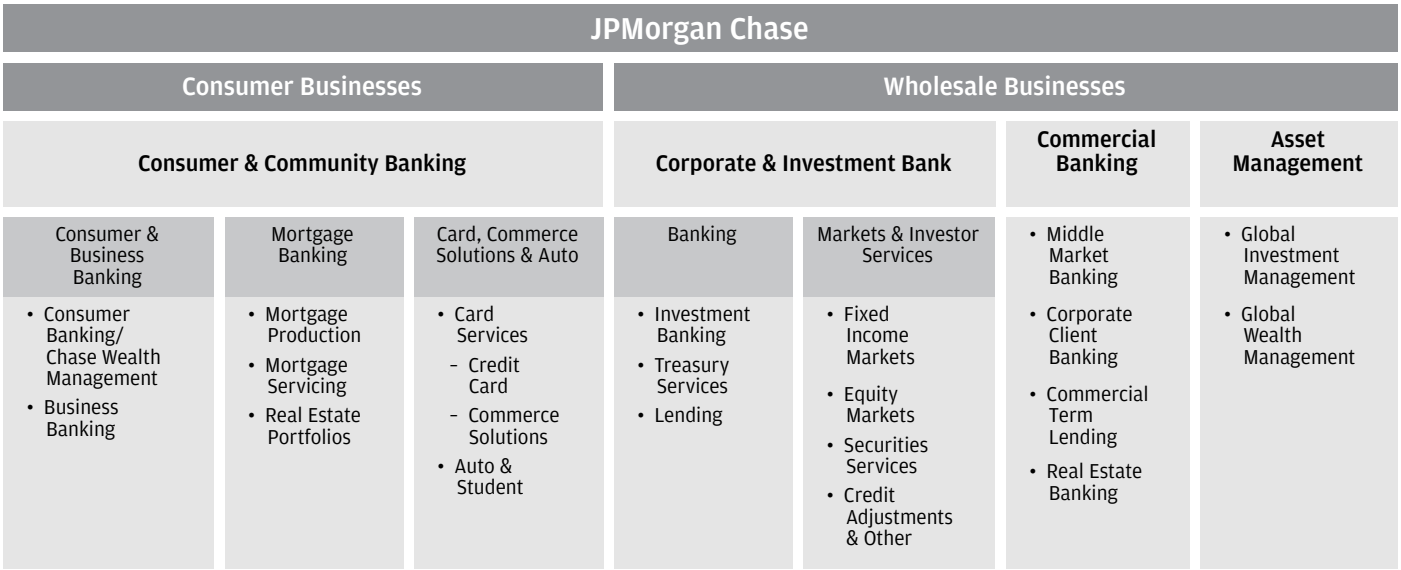
2014 compared with 2013

Net interest income excluding CIB's markets-based activities increased by $543 million in 2014 to $39.1 billion, and average interest-earning assets increased by $72.8 billion to $1.5 trillion. The increase in net interest income in 2014 predominantly reflected higher yields on investment securities, the impact of lower interest expense, and higher average loan balances. The increase was partially offset by lower yields on loans due to the run-off of higher-yielding loans and new originations of lower-yielding loans. The increase in average interest-earning assets largely reflected the impact of higher average balance of deposits with banks. These changes in net interest income and interest-earning assets resulted in the net interest yield decreasing by 9 basis points to 2.54% for 2014.

BUSINESS SEGMENT RESULTS

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate segment.

The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of Non-GAAP Financial Measures, on pages 80–82.



Description of business segment reporting methodology
Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm periodically assesses the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

Revenue sharing
When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

Funds transfer pricing
Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within Corporate. The allocation process is unique to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment as if it were operating independently, and as compared with its stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO").

Preferred stock dividend allocation
As part of its funds transfer pricing process, the Firm allocates substantially all of the cost of its outstanding preferred stock to its reportable business segments, while retaining the balance of the cost in Corporate. This cost is included as a reduction to net income applicable to common equity in order to be consistent with the presentation of firmwide results.

Business segment capital allocation changes
On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital to its lines of business and updates the equity allocations to its lines of business as refinements are implemented. Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In rules) and economic risk. The amount of capital assigned to each business is referred to as equity. For further information about line of business capital, see Line of business equity on page 156.

Expense allocation
Where business segments use services provided by corporate support units, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on actual cost and use of services provided. In contrast, certain other costs related to corporate support

units, or to certain technology and operations, are not allocated to the business segments and are retained in Corporate. Expense retained in Corporate generally includes parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align corporate support units; and other items not aligned with a particular business segment.

Segment Results – Managed Basis

The following tables summarize the business segment results for the periods indicated.

Year ended December 31,	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
(in millions)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Consumer & Community Banking	**$ 43,820**	$ 44,368	$ 46,537	**$ 24,909**	$ 25,609	$ 27,842	**$ 18,911**	$ 18,759	$ 18,695
Corporate & Investment Bank	**33,542**	34,595	34,712	**21,361**	23,273	21,744	**12,181**	11,322	12,968
Commercial Banking	**6,885**	6,882	7,092	**2,881**	2,695	2,610	**4,004**	4,187	4,482
Asset Management	**12,119**	12,028	11,405	**8,886**	8,538	8,016	**3,233**	3,490	3,389
Corporate	**267**	12	(22)	**977**	1,159	10,255	**(710)**	(1,147)	(10,277)
Total	**$ 96,633**	$ 97,885	$ 99,724	**$ 59,014**	$ 61,274	$ 70,467	**$ 37,619**	$ 36,611	$ 29,257

Year ended December 31,	Provision for credit losses			Net income/(loss)			Return on equity		
(in millions, except ratios)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Consumer & Community Banking	**$ 3,059**	$ 3,520	$ 335	**$ 9,789**	$ 9,185	$ 11,061	**18%**	18%	23%
Corporate & Investment Bank	**332**	(161)	(232)	**8,090**	6,908	8,850	**12**	10	15
Commercial Banking	**442**	(189)	85	**2,191**	2,635	2,648	**15**	18	19
Asset Management	**4**	4	65	**1,935**	2,153	2,083	**21**	23	23
Corporate	**(10)**	(35)	(28)	**2,437**	864	(6,756)	**NM**	NM	NM
Total	**$ 3,827**	$ 3,139	$ 225	**$ 24,442**	$ 21,745	$ 17,886	**11%**	10%	9%

Consumer & Community Banking serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Commerce Solutions & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card issues credit cards to consumers and small businesses, offers payment processing services to merchants, and provides auto loans and leases and student loan services.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Lending- and deposit-related fees	**$ 3,137**	$ 3,039	$ 2,983
Asset management, administration and commissions	**2,172**	2,096	2,116
Mortgage fees and related income	**2,511**	3,560	5,195
Card income	**5,491**	5,779	5,785
All other income	**2,281**	1,463	1,473
Noninterest revenue	**15,592**	15,937	17,552
Net interest income	**28,228**	28,431	28,985
Total net revenue	**43,820**	44,368	46,537
Provision for credit losses	**3,059**	3,520	335
Noninterest expense			
Compensation expense	**9,770**	10,538	11,686
Noncompensation expense	**15,139**	15,071	16,156
Total noninterest expense	**24,909**	25,609	27,842
Income before income tax expense	**15,852**	15,239	18,360
Income tax expense	**6,063**	6,054	7,299
Net income	**$ 9,789**	$ 9,185	$ 11,061
Financial ratios			
Return on common equity	**18%**	18%	23%
Overhead ratio	**57**	58	60

Note: In the discussion and the tables which follow, CCB presents certain financial measures which exclude the impact of PCI loans; these are non-GAAP financial measures. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures.

2015 compared with 2014

Consumer & Community Banking net income was $9.8 billion, an increase of 7% compared with the prior year, driven by lower noninterest expense and lower provision for credit losses, largely offset by lower net revenue.

Net revenue was $43.8 billion, a decrease of 1% compared with the prior year. Net interest income was $28.2 billion, down 1%, driven by spread compression, predominantly offset by higher deposit and loan balances, and improved credit quality including lower reversals of interest and fees due to lower net charge-offs in Credit Card. Noninterest revenue was $15.6 billion, down 2%, driven by lower mortgage fees and related income, predominantly offset by higher auto lease and card sales volume, and the impact of non-core portfolio exits in Card in the prior year.

The provision for credit losses was $3.1 billion, a decrease of 13% from the prior year, reflecting lower net charge-offs, partially offset by a lower reduction in the allowance for loan losses. The current-year provision reflected a $1.0 billion reduction in the allowance for loan losses, compared with a $1.3 billion reduction in the prior year.

Noninterest expense was $24.9 billion, a decrease of 3% from the prior year, driven by lower Mortgage Banking expense.

2014 compared with 2013

Consumer & Community Banking net income was $9.2 billion, a decrease of 17% compared with the prior year, due to higher provision for credit losses and lower net revenue, partially offset by lower noninterest expense.

Net revenue was $44.4 billion, a decrease of 5% compared with the prior year. Net interest income was $28.4 billion, down 2%, driven by spread compression and lower mortgage warehouse balances, largely offset by higher deposit balances in Consumer & Business Banking and higher loan balances in Credit Card. Noninterest revenue was $16.0 billion, a decrease of 9%, driven by lower mortgage fees and related income.

The provision for credit losses was $3.5 billion, compared with $335 million in the prior year. The current-year provision reflected a $1.3 billion reduction in the allowance for loan losses and total net charge-offs of $4.8 billion. The prior-year provision reflected a $5.5 billion reduction in the allowance for loan losses and total net charge-offs of $5.8 billion.

Noninterest expense was $25.6 billion, a decrease of 8% from the prior year, driven by lower Mortgage Banking expense.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2015	2014	2013
Selected balance sheet data (period-end)			
Total assets	**$ 502,652**	$ 455,634	$ 452,929
Trading assets – loans[a]	**5,953**	8,423	6,832
Loans:			
Loans retained	**445,316**	396,288	393,351
Loans held-for-sale[b]	**542**	3,416	940
Total loans	**445,858**	399,704	394,291
Core loans	**341,881**	273,494	246,751
Deposits	**557,645**	502,520	464,412
Equity[c]	**51,000**	51,000	46,000
Selected balance sheet data (average)			
Total assets	**$ 472,972**	$ 447,750	$ 456,468
Trading assets – loans[a]	**7,484**	8,040	15,603
Loans:			
Loans retained	**414,518**	389,967	392,797
Loans held-for-sale [d]	**2,062**	917	209
Total loans	**$ 416,580**	$ 390,884	$ 393,006
Core loans	**301,700**	253,803	234,135
Deposits	**530,938**	486,919	453,304
Equity[c]	**51,000**	51,000	46,000
Headcount	**127,094**	137,186	151,333

(a) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value.
(b) Included period-end credit card loans held-for-sale of $76 million, $3.0 billion and $326 million at December 31, 2015, 2014 and 2013, respectively. These amounts were excluded when calculating delinquency rates and the allowance for loan losses to period-end loans.
(c) Equity is allocated to the sub-business segments with $5.0 billion and $3.0 billion of capital in 2015 and 2014, respectively, held at the CCB level related to legacy mortgage servicing matters.
(d) Included average credit card loans held-for-sale of $1.6 billion, $509 million and $95 million for the years ended December 31, 2015, 2014 and 2013, respectively. These amounts are excluded when calculating the net charge-off rate.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2015	2014	2013
Credit data and quality statistics			
Net charge-offs[a]	**$ 4,084**	$ 4,773	$ 5,826
Nonaccrual loans[b][c]	**5,313**	6,401	7,455
Nonperforming assets[b][c]	**5,635**	6,872	8,109
Allowance for loan losses[a]	**9,165**	10,404	12,201
Net charge-off rate[a]	**0.99%**	1.22%	1.48%
Net charge-off rate, excluding PCI loans	**1.10**	1.40	1.73
Allowance for loan losses to period-end loans retained	**2.06**	2.63	3.10
Allowance for loan losses to period-end loans retained, excluding PCI loans[d]	**1.59**	2.02	2.36
Allowance for loan losses to nonaccrual loans retained, excluding credit card[b][d]	**57**	58	57
Nonaccrual loans to total period-end loans, excluding credit card	**1.69**	2.38	2.80
Nonaccrual loans to total period-end loans, excluding credit card and PCI loans[b]	**1.94**	2.88	3.49
Business metrics			
Number of:			
Branches	**5,413**	5,602	5,630
ATMs	**17,777**	18,056	20,290
Active online customers (in thousands)[e]	**39,242**	36,396	33,742
Active mobile customers (in thousands)	**22,810**	19,084	15,629
CCB households (in millions)	**57.8**	57.2	56.7

(a) Net charge-offs and the net charge-off rates excluded $208 million, $533 million, and $53 million of write-offs in the PCI portfolio for the years ended December 31, 2015, 2014 and 2013, respectively. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see Allowance for Credit Losses on pages 130–132.
(b) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as all of the pools are performing.
(c) At December 31, 2015, 2014 and 2013, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion, $7.8 billion and $8.4 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") of $290 million, $367 million and $428 million respectively, that are 90 or more days past due; (3) real estate owned ("REO") insured by U.S. government agencies of $343 million, $462 million and $2.0 billion, respectively. These amounts have been excluded based upon the government guarantee.
(d) The allowance for loan losses for PCI loans of $2.7 billion, $3.3 billion and $4.2 billion at December 31, 2015, 2014, and 2013, respectively; these amounts were also excluded from the applicable ratios.
(e) Users of all internet browsers and mobile platforms (mobile smartphone, tablet and SMS) who have logged in within the past 90 days.

Consumer & Business Banking

Selected income statement data

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Lending- and deposit-related fees	**$ 3,112**	$ 3,010	$ 2,942
Asset management, administration and commissions	**2,097**	2,025	1,815
Card income	**1,721**	1,605	1,495
All other income	**611**	534	492
Noninterest revenue	**7,541**	7,174	6,744
Net interest income	**10,442**	11,052	10,668
Total net revenue	**17,983**	18,226	17,412
Provision for credit losses	**254**	305	347
Noninterest expense	**11,916**	12,149	12,162
Income before income tax expense	**5,813**	5,772	4,903
Net income	**$ 3,581**	$ 3,443	$ 2,943
Return on common equity	**30%**	31%	26%
Overhead ratio	**66**	67	70
Equity (period-end and average)	**$11,500**	$ 11,000	$ 11,000

2015 compared with 2014

Consumer & Business Banking net income was $3.6 billion, an increase of 4% compared with the prior year.

Net revenue was $18.0 billion, down 1% compared with the prior year. Net interest income was $10.4 billion, down 6% due to deposit spread compression, largely offset by higher deposit balances. Noninterest revenue was $7.5 billion, up 5%, driven by higher debit card revenue, reflecting an increase in transaction volume, higher deposit-related fees as a result of an increase in customer accounts and a gain on the sale of a branch.

Noninterest expense was $11.9 billion, a decrease of 2% from the prior year, driven by lower headcount-related expense due to branch efficiencies, partially offset by higher legal expense.

2014 compared with 2013

Consumer & Business Banking net income was $3.4 billion, an increase of 17%, compared with the prior year, due to higher net revenue.

Net revenue was $18.2 billion, up 5% compared with the prior year. Net interest income was $11.1 billion, up 4% compared with the prior year, driven by higher deposit balances, largely offset by deposit spread compression. Noninterest revenue was $7.2 billion, up 6%, driven by higher investment revenue, reflecting an increase in client investment assets, higher debit card revenue, reflecting an increase in transaction volume, and higher deposit-related fees as a result of an increase in customer accounts.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Business metrics			
Business banking origination volume	**$ 6,775**	$ 6,599	$ 5,148
Period-end loans	**22,730**	21,200	19,416
Period-end deposits:			
Checking	**246,448**	213,049	187,182
Savings	**279,897**	255,148	238,223
Time and other	**18,063**	21,349	26,022
Total period-end deposits	**544,408**	489,546	451,427
Average loans	**21,894**	20,152	18,844
Average deposits:			
Checking	**226,713**	198,996	176,005
Savings	**269,057**	249,281	229,341
Time and other	**19,452**	24,057	29,227
Total average deposits	**515,222**	472,334	434,573
Deposit margin	**1.90%**	2.21%	2.32%
Average assets	**$ 41,457**	$ 38,298	$ 37,174
Credit data and quality statistics			
Net charge-offs	**$ 253**	$ 305	$ 337
Net charge-off rate	**1.16%**	1.51%	1.79%
Allowance for loan losses	**$ 703**	$ 703	$ 707
Nonperforming assets	**270**	286	391
Retail branch business metrics			
Net new investment assets	**$ 11,852**	$ 16,088	$ 16,006
Client investment assets	**218,551**	213,459	188,840
% managed accounts	**41%**	39%	36%
Number of:			
Chase Private Client locations	**2,764**	2,514	2,149
Personal bankers	**18,041**	21,039	23,588
Sales specialists	**3,539**	3,994	5,740
Client advisors	**2,931**	3,090	3,044
Chase Private Clients	**441,369**	325,653	215,888
Accounts (in thousands)[a]	**31,342**	30,481	29,437

(a) Includes checking accounts and Chase Liquid® cards.

Mortgage Banking

Selected Financial statement data

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Mortgage fees and related income[a]	**$ 2,511**	$ 3,560	$ 5,195
All other income	**(65)**	37	283
Noninterest revenue	**2,446**	3,597	5,478
Net interest income	**4,371**	4,229	4,758
Total net revenue	**6,817**	7,826	10,236
Provision for credit losses	**(690)**	(217)	(2,681)
Noninterest expense	**4,607**	5,284	7,602
Income before income tax expense	**2,900**	2,759	5,315
Net income	**$ 1,778**	$ 1,668	$ 3,211
Return on common equity	**10%**	9%	16%
Overhead ratio	**68**	68	74
Equity (period-end and average)	**$ 16,000**	$ 18,000	$ 19,500

(a) For further information on mortgage fees and related income, see Note 17.

2015 compared with 2014

Mortgage Banking net income was $1.8 billion, an increase of 7% from the prior year, driven by lower noninterest expense and a higher benefit from the provision for credit losses, predominantly offset by lower net revenue.

Net revenue was $6.8 billion, a decrease of 13% compared with the prior year. Net interest income was $4.4 billion, an increase of 3% from the prior year, due to higher loan balances resulting from originations of high-quality loans that have been retained, partially offset by spread compression. Noninterest revenue was $2.4 billion, a decrease of 32% from the prior year. This decrease was driven by lower servicing revenue, largely as a result of lower average third-party loans serviced and lower net production revenue, reflecting a lower repurchase benefit.

The provision for credit losses was a benefit of $690 million, compared to a benefit of $217 million in the prior year, reflecting a larger reduction in the allowance for loan losses and lower net charge-offs. The current-year provision reflected a $600 million reduction in the non credit-impaired allowance for loan losses and a $375 million reduction in the purchased credit-impaired allowance for loan losses; the prior-year provision included a $400 million reduction in the non credit-impaired allowance for loan losses and a $300 million reduction in the purchased credit-impaired allowance for loan losses. These reductions were due to continued improvement in home prices and delinquencies in both periods, as well as increased granularity in the impairment estimates in the current year.

Noninterest expense was $4.6 billion, a decrease of 13% from the prior year, reflecting lower headcount-related expense and lower professional fees.

2014 compared with 2013

Mortgage Banking net income was $1.7 billion, a decrease of 48%, from the prior year, driven by a lower benefit from the provision for credit losses and lower net revenue, partially offset by lower noninterest expense.

Net revenue was $7.8 billion, a decrease of 24%, compared with the prior year. Net interest income was $4.2 billion, a decrease of 11%, driven by spread compression and lower loan balances due to portfolio runoff and lower warehouse balances. Noninterest revenue was $3.6 billion, a decrease of 34%, driven by lower net production revenue, largely reflecting lower volumes, lower servicing revenue, largely as a result of lower average third-party loans serviced, and lower revenue from an exited non-core product, largely offset by higher MSR risk management income and lower MSR asset amortization expense as a result of lower MSR asset value. See Note 17 for further information regarding changes in value of the MSR asset and related hedges, and mortgage fees and related income.

The provision for credit losses was a benefit of $217 million, compared to a benefit of $2.7 billion in the prior year, reflecting a smaller reduction in the allowance for loan losses, partially offset by lower net charge-offs. The current-year provision reflected a $400 million reduction in the non credit-impaired allowance for loan losses and $300 million reduction in the purchased credit-impaired allowance for loan losses; the prior-year provision included a $2.3 billion reduction in the non credit-impaired allowance for loan losses and a $1.5 billion reduction in the purchased credit-impaired allowance for loan losses. These reductions were due to continued improvement in home prices and delinquencies.

Noninterest expense was $5.3 billion, a decrease of 30%, from the prior year, reflecting lower headcount-related expense, the absence of non-mortgage-backed securities ("MBS") related legal expense, lower expense on foreclosure-related matters, and lower FDIC-related expense.

Supplemental information

For the year ended December 31, (in millions)	2015	2014	2013
Net interest income:			
Mortgage Production and Mortgage Servicing	**$ 575**	$ 736	$ 887
Real Estate Portfolios	**3,796**	3,493	3,871
Total net interest income	**$ 4,371**	$ 4,229	$ 4,758
Noninterest expense:			
Mortgage Production	**$ 1,491**	$ 1,644	3,083
Mortgage Servicing	**2,041**	2,267	2,966
Real Estate Portfolios	**1,075**	1,373	1,553
Total noninterest expense	**$ 4,607**	$ 5,284	$ 7,602

Selected balance sheet data

As of or for the year ended December 31, (in millions)	2015	2014	2013
Trading assets – loans (period-end)[a]	**$ 5,953**	$ 8,423	$ 6,832
Trading assets – loans (average)[a]	**7,484**	8,040	15,603
Loans, excluding PCI loans			
Period-end loans owned			
Home equity	**43,745**	50,899	57,863
Prime mortgage, including option adjustable rate mortgages ("ARMs")	**134,361**	80,414	65,213
Subprime mortgage	**3,732**	5,083	7,104
Other	**398**	477	551
Total period-end loans owned	**182,236**	136,873	130,731
Average loans owned			
Home equity	**47,216**	54,410	62,369
Prime mortgage, including option ARMs	**107,723**	71,491	61,597
Subprime mortgage	**4,434**	6,257	7,687
Other	**436**	511	588
Total average loans owned	**159,809**	132,669	132,241
PCI loans			
Period-end loans owned			
Home equity	**14,989**	17,095	18,927
Prime mortgage	**8,893**	10,220	12,038
Subprime mortgage	**3,263**	3,673	4,175
Option ARMs	**13,853**	15,708	17,915
Total period-end loans owned	**40,998**	46,696	53,055
Average loans owned			
Home equity	**16,045**	18,030	19,950
Prime mortgage	**9,548**	11,257	12,909
Subprime mortgage	**3,442**	3,921	4,416
Option ARMs	**14,711**	16,794	19,236
Total average loans owned	**43,746**	50,002	56,511
Total Mortgage Banking			
Period-end loans owned			
Home equity	**58,734**	67,994	76,790
Prime mortgage, including option ARMs	**157,107**	106,342	95,166
Subprime mortgage	**6,995**	8,756	11,279
Other	**398**	477	551
Total period-end loans owned	**223,234**	183,569	183,786
Average loans owned			
Home equity	**63,261**	72,440	82,319
Prime mortgage, including option ARMs	**131,982**	99,542	93,742
Subprime mortgage	**7,876**	10,178	12,103
Other	**436**	511	588
Total average loans owned	**203,555**	182,671	188,752

(a) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value.

Credit data and quality statistics

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Net charge-offs/(recoveries), excluding PCI loans[a]			
Home equity	**$ 283**	$ 473	$ 966
Prime mortgage, including option ARMs	**48**	28	53
Subprime mortgage	**(53)**	(27)	90
Other	**7**	9	10
Total net charge-offs/ (recoveries), excluding PCI loans	**285**	483	1,119
Net charge-off/(recovery) rate, excluding PCI loans			
Home equity	**0.60%**	0.87%	1.55%
Prime mortgage, including option ARMs	**0.04**	0.04	0.09
Subprime mortgage	**(1.22)**	(0.43)	1.17
Other	**1.61**	1.76	1.70
Total net charge-off/ (recovery) rate, excluding PCI loans	**0.18**	0.37	0.85
Net charge-off/(recovery) rate – reported[a]			
Home equity	**0.45**	0.65	1.17
Prime mortgage, including option ARMs	**0.04**	0.03	0.06
Subprime mortgage	**(0.68)**	(0.27)	0.74
Other	**1.61**	1.76	1.70
Total net charge-off/ (recovery) rate – reported	**0.14**	0.27	0.59
30+ day delinquency rate, excluding PCI loans[b][c]	**1.57**	2.61	3.55
Allowance for loan losses, excluding PCI loans	**$ 1,588**	$ 2,188	$ 2,588
Allowance for PCI loans[a]	**2,742**	3,325	4,158
Allowance for loan losses	**4,330**	5,513	6,746
Nonperforming assets[d][e]	**4,971**	6,175	7,438
Allowance for loan losses to period-end loans retained	**1.94%**	3.01%	3.68%
Allowance for loan losses to period-end loans retained, excluding PCI loans	**0.87**	1.60	1.99

(a) Net charge-offs and the net charge-off rates excluded $208 million, $533 million and $53 million of write-offs in the PCI portfolio for the years ended December 31, 2015, 2014 and 2013, respectively. These write-offs decreased the allowance for loan losses for PCI loans. For further information on PCI write-offs, see Allowance for Credit Losses on pages 130–132.

(b) At December 31, 2015, 2014 and 2013, excluded mortgage loans insured by U.S. government agencies of $8.4 billion $9.7 billion and $9.6 billion, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee. For further discussion, see Note 14 which summarizes loan delinquency information.

(c) The 30+ day delinquency rate for PCI loans was 11.21%, 13.33% and 15.31% at December 31, 2015, 2014 and 2013, respectively.

(d) At December 31, 2015, 2014 and 2013, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion, $7.8 billion and $8.4 billion, respectively, that are 90 or more days past due and (2) REO insured by U.S. government agencies of $343 million, $462 million and $2.0 billion, respectively. These amounts have been excluded based upon the government guarantee.

(e) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as all of the pools are performing.

Business metrics

As of or for the year ended December 31, (in billions, except ratios)	2015	2014	2013
Mortgage origination volume by channel			
Retail	**$ 36.1**	$ 29.5	77.0
Correspondent	**70.3**	48.5	88.5
Total mortgage origination volume[a]	**106.4**	78.0	165.5
Total loans serviced (period-end)	**910.1**	948.8	1,017.2
Third-party mortgage loans serviced (period-end)	**674.0**	751.5	815.5
Third-party mortgage loans serviced (average)	**715.4**	784.6	837.3
MSR carrying value (period-end)	**6.6**	7.4	9.6
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	**0.98%**	0.98%	1.18%
Ratio of annualized loan servicing-related revenue to third-party mortgage loans serviced (average)	**0.35**	0.36	0.40
MSR revenue multiple[b]	**2.80x**	2.72x	2.95x

(a) Firmwide mortgage origination volume was $115.2 billion, $83.3 billion and $176.4. billion for the years ended December 31, 2015, 2014 and 2013, respectively.

(b) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of loan servicing-related revenue to third-party mortgage loans serviced (average).

Mortgage servicing-related matters

The financial crisis resulted in unprecedented levels of delinquencies and defaults of 1–4 family residential real estate loans. Such loans required varying degrees of loss mitigation activities. Foreclosure is usually a last resort, and accordingly, the Firm has made, and continues to make, significant efforts to help borrowers remain in their homes.

The Firm entered into various Consent Orders and settlements with federal and state governmental agencies and private parties related to mortgage servicing, origination, and residential mortgage-backed securities activities. The requirements of these Consent Orders and settlements vary, but in the aggregate, include cash compensatory payments (in addition to fines) and/or "borrower relief," which may include principal reduction, refinancing, short sale assistance, and other specified types of borrower relief. Other obligations required under certain Consent Orders and settlements, as well as under new regulatory requirements, include enhanced mortgage servicing and foreclosure standards and processes.

On June 11, 2015, the Firm signed the Second Amended Mortgage Banking Consent Order (the "Amended OCC Consent Order") with the Office of the Comptroller of the Currency ("OCC"), which focused on ten remaining open items from the original mortgage-servicing Consent Order entered into with the OCC in April 2011 and imposed certain business restrictions on the Firm's mortgage banking activities. The Firm completed its work on those items, and on January 4, 2016, the OCC terminated the Amended OCC Consent Order and lifted the mortgage business restrictions. The Firm remains under the mortgage-servicing Consent Order entered into with the Board of Governors of the Federal Reserve System ("Federal Reserve") on April 13, 2011, as amended on February 28, 2013 (the "Federal Reserve Consent Order"). The Audit Committee of the Board of Directors will provide governance and oversight of the Federal Reserve Consent Order in 2016.

The Federal Reserve Consent Order and certain other mortgage-related settlements are the subject of ongoing reporting to various regulators and independent overseers. The Firm's compliance with certain of these settlements is detailed in periodic reports published by the independent overseers. The Firm is committed to fulfilling all of these commitments with appropriate due diligence and oversight.

Card, Commerce Solutions & Auto

Selected income statement data

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Card income	**$ 3,769**	$ 4,173	$ 4,289
All other income	**1,836**	993	1,041
Noninterest revenue	**5,605**	5,166	5,330
Net interest income	**13,415**	13,150	13,559
Total net revenue	**19,020**	18,316	18,889
Provision for credit losses	**3,495**	3,432	2,669
Noninterest expense[(a)]	**8,386**	8,176	8,078
Income before income tax expense	**7,139**	6,708	8,142
Net income	**$ 4,430**	$ 4,074	$ 4,907
Return on common equity	**23%**	21%	31%
Overhead ratio	**44**	45	43
Equity (period-end and average)	**$ 18,500**	$ 19,000	$ 15,500

Note: Chase Commerce Solutions, formerly known as Merchant Services, includes Chase Paymentech, ChaseNet and Chase Offers businesses.

(a) Included operating lease depreciation expense of $1.4 billion, $1.2 billion and $972 million for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Card net income was $4.4 billion, an increase of 9% compared with the prior year, driven by higher net revenue, partially offset by higher noninterest expense.

Net revenue was $19.0 billion, an increase of 4% compared with the prior year. Net interest income was $13.4 billion, up 2% from the prior year, driven by higher loan balances and improved credit quality including lower reversals of interest and fees due to lower net charge-offs in Credit Card and a reduction in the reserve for uncollectible interest and fees, partially offset by spread compression. Noninterest revenue was $5.6 billion, up 8% compared with the prior year, driven by higher auto lease and card sales volumes, the impact of non-core portfolio exits in the prior year and a gain on the investment in Square, Inc. upon its initial public offering, largely offset by the impact of renegotiated co-brand partnership agreements and higher amortization of new account origination costs.

The provision for credit losses was $3.5 billion, an increase of 2% compared with the prior year, reflecting a lower reduction in the allowance for loan losses, predominantly offset by lower net charge-offs. The current-year provision reflected a $51 million reduction in the allowance for loan losses, primarily due to runoff in the student loan portfolio. The prior-year provision included a $554 million reduction in the allowance for loan losses, primarily related to a decrease in the asset-specific allowance resulting from increased granularity of the impairment estimates and lower balances related to credit card loans modified in troubled debt restructurings ("TDRs"), runoff in the student loan portfolio and lower estimated losses in auto loans.

Noninterest expense was $8.4 billion, up 3% from the prior year, driven by higher auto lease depreciation and higher marketing expense, partially offset by lower legal expense.

2014 compared with 2013

Card net income was $4.1 billion, a decrease of 17%, compared with the prior year, predominantly driven by higher provision for credit losses and lower net revenue.

Net revenue was $18.3 billion, down 3% compared with the prior year. Net interest income was $13.2 billion, a decrease of 3% from the prior year, primarily driven by spread compression in Credit Card and Auto, partially offset by higher average loan balances. Noninterest revenue was $5.2 billion, down 3% from the prior year. The decrease was primarily driven by higher amortization of new account origination costs and the impact of non-core portfolio exits, largely offset by higher auto lease income and net interchange income from higher sales volume.

The provision for credit losses was $3.4 billion, compared with $2.7 billion in the prior year. The current-year provision reflected lower net charge-offs and a $554 million reduction in the allowance for loan losses. The reduction in the allowance for loan losses was primarily related to a decrease in the asset-specific allowance resulting from increased granularity of the impairment estimates and lower balances related to credit card loans modified in TDRs, runoff in the student loan portfolio, and lower estimated losses in auto loans. The prior-year provision included a $1.7 billion reduction in the allowance for loan losses.

Noninterest expense was $8.2 billion, up 1% from the prior year, primarily driven by higher auto lease depreciation expense and higher investment in controls, predominantly offset by lower intangible amortization and lower remediation costs.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios and where otherwise noted)	2015	2014	2013
Selected balance sheet data (period-end)			
Loans:			
Credit Card	**$ 131,463**	$ 131,048	$ 127,791
Auto	**60,255**	54,536	52,757
Student	**8,176**	9,351	10,541
Total loans	**$ 199,894**	$ 194,935	$ 191,089
Auto operating lease assets	**9,182**	6,690	5,512
Selected balance sheet data (average)			
Total assets	**$ 206,765**	$ 202,609	$ 198,265
Loans:			
Credit Card	**125,881**	125,113	123,613
Auto	**56,487**	52,961	50,748
Student	**8,763**	9,987	11,049
Total loans	**$ 191,131**	$ 188,061	$ 185,410
Auto operating lease assets	**7,807**	6,106	5,102
Business metrics			
Credit Card, excluding Commercial Card			
Sales volume (in billions)	**$ 495.9**	$ 465.6	$ 419.5
New accounts opened	**8.7**	8.8	7.3
Open accounts	**59.3**	64.6	65.3
Accounts with sales activity	**33.8**	34.0	32.3
% of accounts acquired online	**67%**	56%	55%
Commerce Solutions			
Merchant processing volume (in billions)	**$ 949.3**	$ 847.9	$ 750.1
Total transactions (in billions)	**42.0**	38.1	35.6
Auto			
Loan and lease origination volume (in billions)	**32.4**	27.5	26.1

The following are brief descriptions of selected business metrics within Card, Commerce Solutions & Auto.

Card Services includes the Credit Card and Commerce Solutions businesses.

Commerce Solutions is a business that primarily processes transactions for merchants.

Total transactions – Number of transactions and authorizations processed for merchants.

Sales volume – Dollar amount of cardmember purchases, net of returns.

Open accounts – Cardmember accounts with charging privileges.

Accounts with sales activity – represents the number of cardmember accounts with a sales transaction within the past month.

Auto origination volume – Dollar amount of auto loans and leases originated.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Credit data and quality statistics			
Net charge-offs:			
Credit Card	**$ 3,122**	$ 3,429	$ 3,879
Auto	**214**	181	158
Student	**210**	375	333
Total net charge-offs	**$ 3,546**	$ 3,985	$ 4,370
Net charge-off rate:			
Credit Card[a]	**2.51%**	2.75%	3.14%
Auto	**0.38**	0.34	0.31
Student	**2.40**	3.75	3.01
Total net charge-off rate	**1.87**	2.12	2.36
Delinquency rates			
30+ day delinquency rate:			
Credit Card[b]	**1.43**	1.44	1.67
Auto	**1.35**	1.23	1.15
Student[c]	**1.81**	2.35	2.56
Total 30+ day delinquency rate	**1.42**	1.42	1.58
90+ day delinquency rate – Credit Card[b]	**0.72**	0.70	0.80
Nonperforming assets[d]	**$ 394**	$ 411	$ 280
Allowance for loan losses:			
Credit Card	**$ 3,434**	$ 3,439	$ 3,795
Auto & Student	**698**	749	953
Total allowance for loan losses	**$ 4,132**	$ 4,188	$ 4,748
Allowance for loan losses to period-end loans:			
Credit Card[b]	**2.61%**	2.69%	2.98%
Auto & Student	**1.02**	1.17	1.51
Total allowance for loan losses to period-end loans	**2.07**	2.18	2.49

(a) Average credit card loans included loans held-for-sale of $1.6 billion, $509 million and $95 million for the years ended December 31, 2015, 2014 and 2013, respectively. These amounts are excluded when calculating the net charge-off rate.

(b) Period-end credit card loans included loans held-for-sale of $76 million, $3.0 billion and $326 million at December 31, 2015, 2014 and 2013, respectively. These amounts were excluded when calculating delinquency rates and the allowance for loan losses to period-end loans.

(c) Excluded student loans insured by U.S. government agencies under the FFELP of $526 million, $654 million and $737 million at December 31, 2015, 2014 and 2013, respectively, that are 30 or more days past due. These amounts have been excluded based upon the government guarantee.

(d) Nonperforming assets excluded student loans insured by U.S. government agencies under the FFELP of $290 million, $367 million and $428 million at December 31, 2015, 2014 and 2013, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

Card Services supplemental information

Year ended December 31, (in millions, except ratios)	2015	2014	2013
Revenue			
Noninterest revenue	**$ 3,673**	$ 3,593	$ 3,977
Net interest income	**11,845**	11,462	11,638
Total net revenue	**15,518**	15,055	15,615
Provision for credit losses	**3,122**	3,079	2,179
Noninterest expense	**6,065**	6,152	6,245
Income before income tax expense	**6,331**	5,824	7,191
Net income	**$ 3,930**	$ 3,547	$ 4,340
Percentage of average loans:			
Noninterest revenue	**2.92%**	2.87%	3.22%
Net interest income	**9.41**	9.16	9.41
Total net revenue	**12.33**	12.03	12.63

CORPORATE & INVESTMENT BANK

The Corporate & Investment Bank, which consists of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Treasury Services, which provides transaction services, consisting of cash management and liquidity solutions. Markets & Investor Services is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Selected income statement data

Year ended December 31, (in millions)	2015	2014	2013
Revenue			
Investment banking fees	**$ 6,736**	$ 6,570	$ 6,331
Principal transactions[a]	**9,905**	8,947	9,289
Lending- and deposit-related fees	**1,573**	1,742	1,884
Asset management, administration and commissions	**4,467**	4,687	4,713
All other income	**1,012**	1,474	1,519
Noninterest revenue	**23,693**	23,420	23,736
Net interest income	**9,849**	11,175	10,976
Total net revenue[b]	**33,542**	34,595	34,712
Provision for credit losses	**332**	(161)	(232)
Noninterest expense			
Compensation expense	**9,973**	10,449	10,835
Noncompensation expense	**11,388**	12,824	10,909
Total noninterest expense	**21,361**	23,273	21,744
Income before income tax expense	**11,849**	11,483	13,200
Income tax expense	**3,759**	4,575	4,350
Net income	**$ 8,090**	$ 6,908	$ 8,850

(a) Included FVA and debt valuation adjustment ("DVA") on OTC derivatives and structured notes, measured at fair value. FVA and DVA gains/(losses) were $687 million and $468 million and $(1.9) billion for the years ended December 31, 2015, 2014 and 2013, respectively.

(b) Included tax-equivalent adjustments, predominantly due to income tax credits related to alternative energy investments; income tax credits and amortization of the cost of investments in affordable housing projects; as well as tax-exempt income from municipal bond investments of $1.7 billion, $1.6 billion and $1.5 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

Selected income statement data

Year ended December 31, (in millions, except ratios)	2015	2014	2013
Financial ratios			
Return on common equity	**12%**	10%	15%
Overhead ratio	**64**	67	63
Compensation expense as percentage of total net revenue	**30**	30	31
Revenue by business			
Investment banking[a]	**6,376**	6,122	5,922
Treasury Services[b]	**3,631**	3,728	3,693
Lending[b]	**1,461**	1,547	2,147
Total Banking[a]	**11,468**	11,397	11,762
Fixed Income Markets[a]	**12,592**	14,075	15,976
Equity Markets[a]	**5,694**	5,044	4,994
Securities Services	**3,777**	4,351	4,100
Credit Adjustments & Other[c]	**11**	(272)	(2,120)
Total Markets & Investor Service[a]	**22,074**	23,198	22,950
Total net revenue	**$ 33,542**	$ 34,595	$ 34,712

(a) Effective in 2015, Investment banking revenue (formerly Investment banking fees) incorporates all revenue associated with investment banking activities, and is reported net of investment banking revenue shared with other lines of business; previously such shared revenue had been reported in Fixed Income Markets and Equity Markets. Prior period amounts have been revised to conform with the current period presentation.

(b) Effective in 2015, Trade Finance revenue was transferred from Treasury Services to Lending. Prior period amounts have been revised to conform with the current period presentation.

(c) Consists primarily of credit valuation adjustments ("CVA") managed by the credit portfolio group, and FVA and DVA on OTC derivatives and structured notes. Results are presented net of associated hedging activities and net of CVA and FVA amounts allocated to Fixed Income Markets and Equity Markets.

2015 compared with 2014

Net income was $8.1 billion, up 17% compared with $6.9 billion in the prior year. The increase primarily reflected lower income tax expenses largely reflecting the release in 2015 of U.S. deferred taxes associated with the restructuring of certain non-U.S. entities and lower noninterest expense partially offset by lower net revenue, both driven by business simplification, as well as higher provisions for credit losses.

Banking revenue was $11.5 billion, up 1% versus the prior year. Investment banking revenue was $6.4 billion, up 4% from the prior year, driven by higher advisory fees, partially offset by lower debt and equity underwriting fees. Advisory fees were $2.1 billion, up 31% on a greater share of fees for completed transactions as well as growth in the industry-wide fee levels. The Firm maintained its #2 ranking for M&A, according to Dealogic. Debt underwriting fees were $3.2 billion, down 6%, primarily related to lower bond underwriting and loan syndication fees on lower industry-wide fee levels. The Firm ranked #1 globally in fee share across high grade, high yield and loan products. Equity underwriting fees were $1.4 billion, down 9%, driven by lower industry-wide fee levels. The Firm was #1 in equity underwriting fees in 2015, up from #3 in 2014. Treasury Services revenue was $3.6 billion, down 3% compared with the prior year, primarily driven by lower net interest income. Lending revenue was $1.5 billion, down 6% from the prior year, driven by lower trade finance revenue on lower loan balances.

Markets & Investor Services revenue was $22.1 billion, down 5% from the prior year. Fixed Income Markets revenue was $12.6 billion, down 11% from the prior year, primarily driven by the impact of business simplification as well as lower revenue in credit-related products on an industry-wide slowdown, partially offset by increased revenue in Rates and Currencies & Emerging Markets on higher client activity. The lower Fixed Income revenue also reflected higher interest costs on higher long-term debt. Equity Markets revenue was $5.7 billion, up 13%, primarily driven by higher equity derivatives revenue across all regions. Securities Services revenue was $3.8 billion, down 13% from the prior year, driven by lower fees as well as lower net interest income.

The provision for credit losses was $332 million, compared to a benefit of $161 million in the prior year, reflecting a higher allowance for credit losses, including the impact of select downgrades within the Oil & Gas portfolio.

Noninterest expense was $21.4 billion, down 8% compared with the prior year, driven by the impact of business simplification as well as lower legal and compensation expenses.

2014 compared with 2013

Net income was $6.9 billion, down 22% compared with $8.9 billion in the prior year. These results primarily reflected higher noninterest expense. Net revenue was $34.6 billion, flat compared with the prior year.

Banking revenue was $11.4 billion, down 3% from the prior year. Investment banking revenue was $6.1 billion, up 3% from the prior year. The increase was driven by higher advisory and equity underwriting fees, partially offset by lower debt underwriting fees. Advisory fees were $1.6 billion, up 24% on stronger share of fees for completed transactions as well as growth in the industry-wide fee levels, according to Dealogic. Equity underwriting fees were $1.6 billion, up 5%, driven by higher industry-wide issuance. Debt underwriting fees were $3.4 billion, down 4%, primarily related to lower loan syndication fees on lower industry-wide fee levels and lower bond underwriting fees. The Firm also ranked #1 globally in fees and volumes share across high grade, high yield and loan products. The Firm maintained its #2 ranking for M&A, and improved share of fees both globally and in the U.S. compared with the prior year. Treasury Services revenue was $3.7 billion, up 1% compared with the prior year, primarily driven by higher net interest income from increased deposits, largely offset by business simplification initiatives. Lending revenue was $1.5 billion, down from $2.1 billion in the prior year, driven by losses, compared with gains in the prior periods, on securities received from restructured loans, as well as lower net interest income and lower trade finance revenue.

Markets & Investor Services revenue was $23.2 billion, up 1% from the prior year. Fixed Income Markets revenue was $14.1 billion, down 12% from the prior year, driven by lower revenues in Fixed Income primarily from credit-related and rates products as well as the impact of business simplification. Equity Markets revenue was $5.0 billion, up 1% as higher prime services revenue was partially offset by lower equity derivatives revenue. Securities Services revenue was $4.4 billion, up 6% from the prior year, primarily driven by higher net interest income on increased deposits and higher fees and commissions. Credit Adjustments & Other revenue was a loss of $272 million, driven by net CVA losses partially offset by gains, net of hedges, related to FVA/DVA. The prior year was a loss of $2.1 billion (including the FVA implementation loss of $1.5 billion and DVA losses of $452 million).

Noninterest expense was $23.3 billion, up 7% compared with the prior year as a result of higher legal expense and investment in controls. This was partially offset by lower performance-based compensation expense as well as the impact of business simplification.

Selected metrics

As of or for the year ended December 31, (in millions, except headcount)	2015	2014	2013
Selected balance sheet data (period-end)			
Assets	**$ 748,691**	$ 861,466	$ 843,248
Loans:			
Loans retained[a]	**106,908**	96,409	95,627
Loans held-for-sale and loans at fair value	**3,698**	5,567	11,913
Total loans	**110,606**	101,976	107,540
Core Loans	**110,084**	100,772	101,376
Equity	**62,000**	61,000	56,500
Selected balance sheet data (average)			
Assets	**$ 824,208**	$ 854,712	$ 859,071
Trading assets-debt and equity instruments	**302,514**	317,535	321,585
Trading assets-derivative receivables	**67,263**	64,833	70,353
Loans:			
Loans retained[a]	**98,331**	95,764	104,864
Loans held-for-sale and loans at fair value	**4,572**	7,599	5,158
Total loans	**102,903**	103,363	110,022
Core Loans	**99,231**	102,604	108,199
Equity	**62,000**	61,000	56,500
Headcount[b]	**49,067**	50,965	52,082

(a) Loans retained includes credit portfolio loans, loans held by consolidated Firm-administered multi-seller conduits, trade finance loans, other held-for-investment loans and overdrafts.

(b) Effective in 2015, certain technology staff were transferred from CIB to CB; previously-reported headcount has been revised to conform with the current period presentation. As the related expense for these staff is not material, prior period expenses have not been revised. Prior to 2015, compensation expense related to this headcount was recorded in the CIB, with an allocation to CB (reported in noncompensation expense); commencing with 2015, such expense is recorded as compensation expense in CB and accordingly total noninterest expense related to this headcount in both CB and CIB remains unchanged.

Selected metrics

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Credit data and quality statistics			
Net charge-offs/ (recoveries)	**$ (19)**	$ (12)	$ (78)
Nonperforming assets:			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**428**	110	163
Nonaccrual loans held-for-sale and loans at fair value	**10**	11	180
Total nonaccrual loans	**438**	121	343
Derivative receivables	**204**	275	415
Assets acquired in loan satisfactions	**62**	67	80
Total nonperforming assets	**704**	463	838
Allowance for credit losses:			
Allowance for loan losses	**1,258**	1,034	1,096
Allowance for lending-related commitments	**569**	439	525
Total allowance for credit losses	**1,827**	1,473	1,621
Net charge-off/(recovery) rate	**(0.02)%**	(0.01)%	0.07%
Allowance for loan losses to period-end loans retained	**1.18**	1.07	1.15
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits[b]	**1.88**	1.82	2.02
Allowance for loan losses to nonaccrual loans retained[a]	**294**	940	672
Nonaccrual loans to total period-end loans	**0.40**	0.12	0.32

(a) Allowance for loan losses of $177 million, $18 million and $51 million were held against these nonaccrual loans at December 31, 2015, 2014 and 2013, respectively.

(b) Management uses allowance for loan losses to period-end loans retained, excluding trade finance and conduits, a non-GAAP financial measure, to provide a more meaningful assessment of CIB's allowance coverage ratio.

Business metrics

	Year ended December 31,		
(in millions)	2015	2014	2013
Advisory	**$ 2,133**	$ 1,627	$ 1,315
Equity underwriting	**1,434**	1,571	1,499
Debt underwriting	**3,169**	3,372	3,517
Total investment banking fees	**$ 6,736**	$ 6,570	$ 6,331

League table results – wallet share

Year ended December 31,	2015 Fee Share	2015 Rankings	2014 Fee Share	2014 Rankings	2013 Fee Share	2013 Rankings
Based on fees[a]						
Debt, equity and equity-related						
Global	**7.7%**	**#1**	7.6%	#1	8.3%	#1
U.S.	**11.6**	**1**	10.7	1	11.4	1
Long-term debt[b]						
Global	**8.3**	**1**	8.0	1	8.2	1
U.S.	**11.9**	**1**	11.7	1	11.5	2
Equity and equity-related						
Global[c]	**7.0**	**1**	7.1	3	8.4	2
U.S.	**11.1**	**1**	9.6	3	11.2	2
M&A[d]						
Global	**8.5**	**2**	8.0	2	7.5	2
U.S.	**10.0**	**2**	9.7	2	8.7	2
Loan syndications						
Global	**7.6**	**1**	9.3	1	9.9	1
U.S.	**10.7**	**2**	13.1	1	13.8	1
Global Investment Banking fees [a][e]	**7.9%**	**#1**	8.0%	#1	8.5%	#1

League table results – volumes

Year ended December 31,	2015 Market Share	2015 Rankings	2014 Market Share	2014 Rankings	2013 Market Share	2013 Rankings
Based on volume[f]						
Debt, equity and equity-related						
Global	**6.8%**	**#1**	6.8%	#1	7.3%	#1
U.S.	**11.3**	**1**	11.8	1	11.9	1
Long-term debt[b]						
Global	**6.8**	**1**	6.7	1	7.2	1
U.S.	**10.8**	**1**	11.3	1	11.8	1
Equity and equity-related						
Global[c]	**7.2**	**3**	7.5	3	8.2	2
U.S.	**12.4**	**1**	11.0	2	12.1	2
M&A announced[d]						
Global	**30.1**	**3**	20.5	2	24.1	2
U.S.	**36.7**	**2**	25.2	3	36.9	1
Loan syndications						
Global	**10.5**	**1**	12.3	1	11.6	1
U.S.	**16.8**	**#1**	19.0	#1	17.8	#1

(a) Source: Dealogic. Reflects the ranking of revenue wallet and market share.
(b) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and MBS; and exclude money market, short-term debt, and U.S. municipal securities.
(c) Global equity and equity-related rankings include rights offerings and Chinese A-Shares.
(d) M&A and Announced M&A rankings reflect the removal of any withdrawn transactions. U.S. M&A revenue wallet represents wallet from client parents based in the U.S. U.S. announced M&A volumes represents any U.S. involvement ranking.
(e) Global investment banking fees per Dealogic exclude money market, short-term debt and shelf deals.
(f) Source: Dealogic. Reflects transaction volume and market share. Global announced M&A is based on transaction value at announcement; because of joint M&A assignments, M&A market share of all participants will add up to more than 100%. All other transaction volume-based rankings are based on proceeds, with full credit to each book manager/equal if joint.

Business metrics

As of or for the year ended December 31, (in millions, except where otherwise noted)	2015	2014	2013
Market risk-related revenue – trading loss days[a]	**9**	9	0
Assets under custody ("AUC") by asset class (period-end) in billions:			
Fixed Income	**$ 12,042**	$ 12,328	$ 11,903
Equity	**6,194**	6,524	6,913
Other[b]	**1,707**	1,697	1,669
Total AUC	**$ 19,943**	$ 20,549	$ 20,485
Client deposits and other third party liabilities (average)[c]	**$ 395,297**	$ 417,369	$ 383,667
Trade finance loans (period-end)	**19,255**	25,713	30,752

(a) Market risk-related revenue is defined as the change in value of: principal transactions revenue; trading-related net interest income; brokerage commissions, underwriting fees or other revenue; and revenue from syndicated lending facilities that the Firm intends to distribute; gains and losses from DVA and FVA are excluded. Market risk-related revenue–trading loss days represent the number of days for which the CIB posted losses under this measure. The loss days determined under this measure differ from the loss days that are determined based on the disclosure of market risk-related gains and losses for the Firm in the value-at-risk ("VaR") back-testing discussion on pages 135–137.
(b) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.
(c) Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses.

International metrics

Year ended December 31, (in millions)	2015	2014	2013
Total net revenue[(a)]			
Europe/Middle East/Africa	**$ 10,894**	$ 11,598	$ 10,689
Asia/Pacific	**4,901**	4,698	4,736
Latin America/Caribbean	**1,096**	1,179	1,340
Total international net revenue	**16,891**	17,475	16,765
North America	**16,651**	17,120	17,947
Total net revenue	**$ 33,542**	$ 34,595	$ 34,712
Loans (period-end)[(a)]			
Europe/Middle East/Africa	**$ 24,622**	$ 27,155	$ 29,392
Asia/Pacific	**17,108**	19,992	22,151
Latin America/Caribbean	**8,609**	8,950	8,362
Total international loans	**50,339**	56,097	59,905
North America	**56,569**	40,312	35,722
Total loans	**$106,908**	$ 96,409	$ 95,627
Client deposits and other third-party liabilities (average)[(a)]			
Europe/Middle East/Africa	**$141,062**	$152,712	$ 143,807
Asia/Pacific	**67,111**	66,933	54,428
Latin America/Caribbean	**23,070**	22,360	15,301
Total international	**$231,243**	$242,005	$ 213,536
North America	**164,054**	175,364	170,131
Total client deposits and other third-party liabilities	**$395,297**	$417,369	$ 383,667
AUC (period-end) (in billions)[(a)]			
North America	**$ 12,034**	$ 11,987	$ 11,299
All other regions	**7,909**	8,562	9,186
Total AUC	**$ 19,943**	$ 20,549	$ 20,485

(a) Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable. Loans outstanding (excluding loans held-for-sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. In addition, CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Selected income statement data

Year ended December 31, (in millions)	2015	2014	2013
Revenue			
Lending- and deposit-related fees	**$ 944**	$ 978	$ 1,033
Asset management, administration and commissions	**88**	92	116
All other income[a]	**1,333**	1,279	1,149
Noninterest revenue	**2,365**	2,349	2,298
Net interest income	**4,520**	4,533	4,794
Total net revenue[b]	**6,885**	6,882	7,092
Provision for credit losses	**442**	(189)	85
Noninterest expense			
Compensation expense	**1,238**	1,203	1,115
Noncompensation expense	**1,643**	1,492	1,495
Total noninterest expense	**2,881**	2,695	2,610
Income before income tax expense	**3,562**	4,376	4,397
Income tax expense	**1,371**	1,741	1,749
Net income	**$ 2,191**	$ 2,635	$ 2,648

(a) Includes revenue from investment banking products and commercial card transactions.

(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-income communities, as well as tax-exempt income from municipal bond activities of $493 million, $462 million and $407 million for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Net income was $2.2 billion, a decrease of 17% compared with the prior year, driven by a higher provision for credit losses and higher noninterest expense.

Net revenue was $6.9 billion, flat compared with the prior year. Net interest income was $4.5 billion, flat compared with the prior year, with interest income from higher loan balances offset by spread compression. Noninterest revenue was $2.4 billion, flat compared with the prior year, with higher investment banking revenue offset by lower lending-related fees.

Noninterest expense was $2.9 billion, an increase of 7% compared with the prior year, reflecting investment in controls.

The provision for credit losses was $442 million, reflecting an increase in the allowance for credit losses for Oil & Gas exposure and other select downgrades. The prior year was a benefit of $189 million.

2014 compared with 2013

Net income was $2.6 billion, flat compared with the prior year, reflecting lower net revenue and higher noninterest expense, predominantly offset by a lower provision for credit losses.

Net revenue was $6.9 billion, a decrease of 3% compared with the prior year. Net interest income was $4.5 billion, a decrease of 5%, reflecting spread compression, the absence of proceeds received in the prior year from a lending-related workout, and lower purchase discounts recognized on loan repayments, partially offset by higher loan balances. Noninterest revenue was $2.3 billion, up 2%, reflecting higher investment banking revenue, largely offset by business simplification and lower lending fees.

Noninterest expense was $2.7 billion, an increase of 3% from the prior year, largely reflecting investments in controls.

CB product revenue consists of the following:

Lending includes a variety of financing alternatives, which are primarily provided on a secured basis; collateral includes receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, and standby letters of credit.

Treasury services includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from Fixed Income and Equity Markets products used by CB clients is also included. Investment banking revenue, gross, represents total revenue related to investment banking products sold to CB clients.

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activities and certain income derived from principal transactions.

CB is divided into four primary client segments: Middle Market Banking, Corporate Client Banking, Commercial Term Lending, and Real Estate Banking.

Middle Market Banking covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between $20 million and $500 million.

Corporate Client Banking covers clients with annual revenue generally ranging between $500 million and $2 billion and focuses on clients that have broader investment banking needs.

Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as office, retail and industrial properties.

Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate investment properties.

Other primarily includes lending and investment-related activities within the Community Development Banking business.

Selected metrics

Year ended December 31, (in millions, except ratios)	**2015**	2014	2013
Revenue by product			
Lending[(a)]	**$ 3,429**	$ 3,358	$ 3,730
Treasury services[(a)]	**2,581**	2,681	2,649
Investment banking	**730**	684	575
Other[(a)]	**145**	159	138
Total Commercial Banking net revenue	**$ 6,885**	$ 6,882	$ 7,092
Investment banking revenue, gross	**$ 2,179**	$ 1,986	$ 1,676
Revenue by client segment			
Middle Market Banking[(b)]	**$ 2,742**	$ 2,791	$ 3,015
Corporate Client Banking[(b)]	**2,012**	1,982	1,911
Commercial Term Lending	**1,275**	1,252	1,239
Real Estate Banking	**494**	495	561
Other	**362**	362	366
Total Commercial Banking net revenue	**$ 6,885**	$ 6,882	$ 7,092
Financial ratios			
Return on common equity	**15%**	18%	19%
Overhead ratio	**42**	39	37

(a) Effective in 2015, Commercial Card and Chase Commerce Solutions product revenue was transferred from Lending and Other, respectively, to Treasury Services. Prior period amounts were revised to conform with the current period presentation.

(b) Effective in 2015, mortgage warehouse lending clients were transferred from Middle Market Banking to Corporate Client Banking. Prior period revenue, period-end loans, and average loans by client segment were revised to conform with the current period presentation.

Selected metrics (continued)

As of or for the year ended December 31, (in millions, except headcount)	2015	2014	2013
Selected balance sheet data (period-end)			
Total assets	**$ 200,700**	$ 195,267	$ 190,782
Loans:			
Loans retained	**167,374**	147,661	135,750
Loans held-for-sale and loans at fair value	**267**	845	1,388
Total loans	**$ 167,641**	$ 148,506	$ 137,138
Core loans	**166,939**	147,392	135,583
Equity	**14,000**	14,000	13,500
Period-end loans by client segment			
Middle Market Banking[a]	**$ 51,362**	$ 51,009	$ 50,702
Corporate Client Banking[a]	**31,871**	25,321	22,512
Commercial Term Lending	**62,860**	54,038	48,925
Real Estate Banking	**16,211**	13,298	11,024
Other	**5,337**	4,840	3,975
Total Commercial Banking loans	**$ 167,641**	$ 148,506	$ 137,138
Selected balance sheet data (average)			
Total assets	**$ 198,076**	$ 191,857	$ 185,776
Loans:			
Loans retained	**157,389**	140,982	131,100
Loans held-for-sale and loans at fair value	**492**	782	930
Total loans	**$ 157,881**	$ 141,764	$ 132,030
Core loans	**156,975**	140,390	130,141
Client deposits and other third-party liabilities	**191,529**	204,017	198,356
Equity	**14,000**	14,000	13,500
Average loans by client segment			
Middle Market Banking[a]	**$ 51,303**	$ 50,939	$ 50,236
Corporate Client Banking[a]	**29,125**	23,113	22,512
Commercial Term Lending	**58,138**	51,120	45,989
Real Estate Banking	**14,320**	12,080	9,582
Other	**4,995**	4,512	3,711
Total Commercial Banking loans	**$ 157,881**	$ 141,764	$ 132,030
Headcount[b]	**7,845**	7,426	7,016

(a) Effective in 2015, mortgage warehouse lending clients were transferred from Middle Market Banking to Corporate Client Banking. Prior period revenue, period-end loans, and average loans by client segment were revised to conform with the current period presentation.

(b) Effective in 2015, certain technology staff were transferred from CIB to CB; previously-reported headcount has been revised to conform with the current period presentation. As the related expense for these staff is not material, prior period expenses have not been revised. Prior to 2015, compensation expense related to this headcount was recorded in the CIB, with an allocation to CB (reported in noncompensation expense); commencing with 2015, such expense is recorded as compensation expense in CB and accordingly total noninterest expense related to this headcount in both CB and CIB remains unchanged.

Selected metrics (continued)

As of or for the year ended December 31, (in millions, except ratios)	2015	2014	2013
Credit data and quality statistics			
Net charge-offs/(recoveries)	**$ 21**	$ (7)	$ 43
Nonperforming assets			
Nonaccrual loans:			
Nonaccrual loans retained[a]	**375**	317	471
Nonaccrual loans held-for-sale and loans at fair value	**18**	14	43
Total nonaccrual loans	**393**	331	514
Assets acquired in loan satisfactions	**8**	10	15
Total nonperforming assets	**401**	341	529
Allowance for credit losses:			
Allowance for loan losses	**2,855**	2,466	2,669
Allowance for lending-related commitments	**198**	165	142
Total allowance for credit losses	**3,053**	2,631	2,811
Net charge-off/(recovery) rate[b]	**0.01%**	–%	0.03%
Allowance for loan losses to period-end loans retained	**1.71**	1.67	1.97
Allowance for loan losses to nonaccrual loans retained[a]	**761**	778	567
Nonaccrual loans to period-end total loans	**0.23**	0.22	0.37

(a) An allowance for loan losses of $64 million, $45 million and $81 million was held against nonaccrual loans retained at December 31, 2015, 2014 and 2013, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off/(recovery) rate.

ASSET MANAGEMENT

Asset Management, with client assets of $2.4 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in many major markets throughout the world. AM offers investment management across most major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Global Wealth Management clients, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Selected income statement data

Year ended December 31, (in millions, except ratios and headcount)	2015	2014	2013
Revenue			
Asset management, administration and commissions	**$ 9,175**	$ 9,024	$ 8,232
All other income	**388**	564	797
Noninterest revenue	**9,563**	9,588	9,029
Net interest income	**2,556**	2,440	2,376
Total net revenue	**12,119**	12,028	11,405
Provision for credit losses	**4**	4	65
Noninterest expense			
Compensation expense	**5,113**	5,082	4,875
Noncompensation expense	**3,773**	3,456	3,141
Total noninterest expense	**8,886**	8,538	8,016
Income before income tax expense	**3,229**	3,486	3,324
Income tax expense	**1,294**	1,333	1,241
Net income	**$ 1,935**	$ 2,153	$ 2,083
Revenue by line of business			
Global Investment Management	**$ 6,301**	$ 6,327	$ 5,951
Global Wealth Management	**5,818**	5,701	5,454
Total net revenue	**$12,119**	$12,028	$11,405
Financial ratios			
Return on common equity	**21%**	23%	23%
Overhead ratio	**73**	71	70
Pretax margin ratio:			
Global Investment Management	**31**	31	32
Global Wealth Management	**22**	27	26
Asset Management	**27**	29	29
Headcount	**20,975**	19,735	20,048
Number of client advisors	**2,778**	2,836	2,962

2015 compared with 2014

Net income was $1.9 billion, a decrease of 10% compared with the prior year, reflecting higher noninterest expense, partially offset by higher net revenue.

Net revenue was $12.1 billion, an increase of 1%. Net interest income was $2.6 billion, up 5%, driven by higher loan balances and spreads. Noninterest revenue was $9.6 billion, flat from last year, as net client inflows into assets under management and the impact of higher average market levels were predominantly offset by lower performance fees and the sale of Retirement Plan Services ("RPS") in 2014.

Revenue from Global Investment Management was $6.3 billion, flat from the prior year as the sale of RPS in 2014 and lower performance fees were largely offset by net client inflows. Revenue from Global Wealth Management was $5.8 billion, up 2% from the prior year due to higher net interest income from higher loan balances and spreads and net client inflows, partially offset by lower brokerage revenue.

Noninterest expense was $8.9 billion, an increase of 4%, predominantly due to higher legal expense and investment in both infrastructure and controls.

2014 compared with 2013

Net income was $2.2 billion, an increase of 3% from the prior year, reflecting higher net revenue and lower provision for credit losses, predominantly offset by higher noninterest expense.

Net revenue was $12.0 billion, an increase of 5% from the prior year. Noninterest revenue was $9.6 billion, up 6% from the prior year due to net client inflows and the effect of higher market levels, partially offset by lower valuations of seed capital investments. Net interest income was $2.4 billion, up 3% from the prior year due to higher loan and deposit balances, largely offset by spread compression.

Revenue from Global Investment Management was $6.3 billion, up 6% due to net client inflows and the effect of higher market levels, partially offset by lower valuations of seed capital investments. Revenue from Global Wealth Management was $5.7 billion, up 5% from the prior year due to higher net interest income from loan and deposit balances and net client inflows, partially offset by spread compression and lower brokerage revenue.

Noninterest expense was $8.5 billion, an increase of 7% from the prior year as the business continues to invest in both infrastructure and controls.

AM's lines of business consist of the following:

Global Investment Management provides comprehensive global investment services, including asset management, pension analytics, asset-liability management and active risk-budgeting strategies.

Global Wealth Management offers investment advice and wealth management, including investment management, capital markets and risk management, tax and estate planning, banking, lending and specialty-wealth advisory services.

AM's client segments consist of the following:

Private Banking clients include high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide.

Institutional clients include both corporate and public institutions, endowments, foundations, nonprofit organizations and governments worldwide.

Retail clients include financial intermediaries and individual investors.

J.P. Morgan Asset Management has two high-level measures of its overall fund performance.

- **Percentage of mutual fund assets under management in funds rated 4- or 5-star:** Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best rating and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22.5% of industry-wide ranked funds. A 3-star rating represents the next 35% of industry-wide ranked funds. A 2-star rating represents the next 22.5% of industry-wide ranked funds. A 1-star rating is the worst rating and represents the bottom 10% of industry-wide ranked funds. The "overall Morningstar rating" is derived from a weighted average of the performance associated with a fund's three-, five- and ten-year (if applicable) Morningstar Rating metrics. For U.S. domiciled funds, separate star ratings are given at the individual share class level. The Nomura "star rating" is based on three-year risk-adjusted performance only. Funds with fewer than three years of history are not rated and hence excluded from this analysis. All ratings, the assigned peer categories and the asset values used to derive this analysis are sourced from these fund rating providers mentioned in footnote (a). The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on star ratings at the share class level for U.S. domiciled funds, and at a "primary share class" level to represent the star rating of all other funds except for Japan where Nomura provides ratings at the fund level. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.
- **Percentage of mutual fund assets under management in funds ranked in the 1st or 2nd quartile (one, three and five years)**: All quartile rankings, the assigned peer categories and the asset values used to derive this analysis are sourced from the fund ranking providers mentioned in footnote (b). Quartile rankings are done on the net-of-fee absolute return of each fund. The data providers re-denominate the asset values into U.S. dollars. This % of AUM is based on fund performance and associated peer rankings at the share class level for U.S. domiciled funds, at a "primary share class" level to represent the quartile ranking of the U.K., Luxembourg and Hong Kong funds and at the fund level for all other funds. The "primary share class", as defined by Morningstar, denotes the share class recommended as being the best proxy for the portfolio and in most cases will be the most retail version (based upon annual management charge, minimum investment, currency and other factors). Where peer group rankings given for a fund are in more than one "primary share class" territory both rankings are included to reflect local market competitiveness (applies to "Offshore Territories" and "HK SFC Authorized" funds only). The performance data could have been different if all funds/accounts would have been included. Past performance is not indicative of future results.

Selected metrics

As of or for the year ended December 31, (in millions, except ranking data and ratios)	**2015**	2014	2013
% of JPM mutual fund assets rated as 4- or 5-star[(a)]	**53%**	52%	49%
% of JPM mutual fund assets ranked in 1st or 2nd quartile:[(b)]			
1 year	**62**	72	68
3 years	**78**	72	68
5 years	**80**	76	69
Selected balance sheet data (period-end)			
Total assets	**$ 131,451**	$ 128,701	$ 122,414
Loans[(c)]	**111,007**	104,279	95,445
Core loans	**111,007**	104,279	95,445
Deposits	**146,766**	155,247	146,183
Equity	**9,000**	9,000	9,000
Selected balance sheet data (average)			
Total assets	**$ 129,743**	$ 126,440	$ 113,198
Loans	**107,418**	99,805	86,066
Core loans	**107,418**	99,805	86,066
Deposits	**149,525**	150,121	139,707
Equity	**9,000**	9,000	9,000
Credit data and quality statistics			
Net charge-offs	**$ 12**	$ 6	$ 40
Nonaccrual loans	**218**	218	167
Allowance for credit losses:			
Allowance for loan losses	**266**	271	278
Allowance for lending-related commitments	**5**	5	5
Total allowance for credit losses	**271**	276	283
Net charge-off rate	**0.01%**	0.01%	0.05%
Allowance for loan losses to period-end loans	**0.24**	0.26	0.29
Allowance for loan losses to nonaccrual loans	**122**	124	166
Nonaccrual loans to period-end loans	**0.20**	0.21	0.17

(a) Represents the "overall star rating" derived from Morningstar for the U.S., the U.K., Luxembourg, Hong Kong and Taiwan domiciled funds; and Nomura "star rating" for Japan domiciled funds. Includes only Global Investment Management retail open-ended mutual funds that have a rating. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(b) Quartile ranking sourced from: Lipper for the U.S. and Taiwan domiciled funds; Morningstar for the U.K., Luxembourg and Hong Kong domiciled funds; Nomura for Japan domiciled funds and FundDoctor for South Korea domiciled funds. Includes only Global Investment Management retail open-ended mutual funds that are ranked by the aforementioned sources. Excludes money market funds, Undiscovered Managers Fund, and Brazil and India domiciled funds.

(c) Included $26.6 billion, $22.1 billion and $18.9 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at December 31, 2015, 2014 and 2013, respectively.

Client assets

2015 compared with 2014

Client assets were $2.4 trillion, a decrease of 2% compared with the prior year. Assets under management were $1.7 trillion, a decrease of 1% from the prior year due to the effect of lower market levels partially offset by net inflows to long-term products.

2014 compared with 2013

Client assets were $2.4 trillion, an increase of 2% compared with the prior year. Excluding the sale of Retirement Plan Services, client assets were up 8% compared with the prior year. Assets under management were $1.7 trillion, an increase of 9% from the prior year due to net inflows to long-term products and the effect of higher market levels.

Client assets

December 31, (in billions)	2015	2014	2013
Assets by asset class			
Liquidity	**$ 464**	$ 461	$ 451
Fixed income	**342**	359	330
Equity	**353**	375	370
Multi-asset and alternatives	**564**	549	447
Total assets under management	**1,723**	1,744	1,598
Custody/brokerage/ administration/deposits	**627**	643	745
Total client assets	**$ 2,350**	$ 2,387	$ 2,343
Memo:			
Alternatives client assets[(a)]	**172**	166	158
Assets by client segment			
Private Banking	**$ 437**	$ 428	$ 361
Institutional	**816**	827	777
Retail	**470**	489	460
Total assets under management	**$ 1,723**	$ 1,744	$ 1,598
Private Banking	**$ 1,050**	$ 1,057	$ 977
Institutional	**824**	835	777
Retail	**476**	495	589
Total client assets	**$ 2,350**	$ 2,387	$ 2,343

(a) Represents assets under management, as well as client balances in brokerage accounts.

Client assets (continued)

Year ended December 31, (in billions)	2015	2014	2013
Assets under management rollforward			
Beginning balance	**$ 1,744**	$ 1,598	$ 1,426
Net asset flows:			
Liquidity	**(1)**	18	(4)
Fixed income	**(7)**	33	8
Equity	**1**	5	34
Multi-asset and alternatives	**22**	42	48
Market/performance/other impacts	**(36)**	48	86
Ending balance, December 31	**$ 1,723**	$ 1,744	$ 1,598
Client assets rollforward			
Beginning balance	**$ 2,387**	$ 2,343	$ 2,095
Net asset flows	**27**	118	80
Market/performance/other impacts	**(64)**	(74)	168
Ending balance, December 31	**$ 2,350**	$ 2,387	$ 2,343

International metrics

Year ended December 31, (in billions, except where otherwise noted)	2015	2014	2013
Total net revenue (in millions)[(a)]			
Europe/Middle East/Africa	**$ 1,946**	$ 2,080	$ 1,881
Asia/Pacific	**1,130**	1,199	1,133
Latin America/Caribbean	**795**	841	879
Total international net revenue	**3,871**	4,120	3,893
North America	**8,248**	7,908	7,512
Total net revenue	**$ 12,119**	$ 12,028	$ 11,405
Assets under management			
Europe/Middle East/Africa	**$ 302**	$ 329	$ 305
Asia/Pacific	**123**	126	132
Latin America/Caribbean	**45**	46	47
Total international assets under management	**470**	501	484
North America	**1,253**	1,243	1,114
Total assets under management	**$ 1,723**	$ 1,744	$ 1,598
Client assets			
Europe/Middle East/Africa	**$ 351**	$ 391	$ 367
Asia/Pacific	**173**	174	180
Latin America/Caribbean	**110**	115	117
Total international client assets	**634**	680	664
North America	**1,716**	1,707	1,679
Total client assets	**$ 2,350**	$ 2,387	$ 2,343

(a) Regional revenue is based on the domicile of the client.

The Corporate segment consists of Treasury and Chief Investment Office ("CIO") and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expenses that are subject to allocation to the businesses.

Selected income statement data

Year ended December 31, (in millions, except headcount)	2015	2014	2013
Revenue			
Principal transactions	**$ 41**	$ 1,197	$ 563
Securities gains	**190**	71	666
All other income	**569**	704	1,864
Noninterest revenue	**800**	1,972	3,093
Net interest income[a]	**(533)**	(1,960)	(3,115)
Total net revenue	**267**	12	(22)
Provision for credit losses	**(10)**	(35)	(28)
Noninterest expense[b]	**977**	1,159	10,255
Loss before income tax benefit	**(700)**	(1,112)	(10,249)
Income tax benefit	**(3,137)**	(1,976)	(3,493)
Net income/(loss)	**$ 2,437**	$ 864	$ (6,756)
Total net revenue			
Treasury and CIO	**(493)**	(1,317)	(2,068)
Other Corporate [c]	**760**	1,329	2,046
Total net revenue	**$ 267**	$ 12	$ (22)
Net income/(loss)			
Treasury and CIO	**(235)**	(1,165)	(1,454)
Other Corporate [c]	**2,672**	2,029	(5,302)
Total net income/(loss)	**$ 2,437**	$ 864	$ (6,756)
Selected balance sheet data (period-end)			
Total assets (period-end)	**$768,204**	$ 931,206	$ 805,506
Loans	**2,187**	2,871	4,004
Core loans[d]	**2,182**	2,848	3,958
Headcount	**29,617**	26,047	20,717

(a) Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments of $839 million, $730 million and $480 million for the years ended December 31, 2015, 2014 and 2013, respectively.
(b) Included legal expense of $832 million, $821 million and $10.2 billion for the years ended December 31, 2015, 2014 and 2013, respectively.
(c) Effective in 2015, the Firm began including the results of Private Equity in the Other Corporate line within the Corporate segment. Prior period amounts have been revised to conform with the current period presentation. The Corporate segment's balance sheets and results of operations were not impacted by this reporting change.
(d) Average core loans were $2.5 billion, $3.3 billion and $5.2 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

2015 compared with 2014

Net income was $2.4 billion, compared with net income of $864 million in the prior year.

Net revenue was $267 million, compared with $12 million in the prior year. The current year included a $514 million benefit from a legal settlement. Treasury and CIO included a benefit of approximately $178 million associated with recognizing the unamortized discount on certain debt securities which were called at par and a $173 million pretax loss primarily related to accelerated amortization of cash flow hedges associated with the exit of certain non-operating deposits. Private Equity gains were $1.2 billion lower compared with the prior year, reflecting lower valuation gains and lower net gains on sales as the Firm exits this non-core business.

Noninterest expense was $977 million, a decrease of $182 million from the prior year which had included a $276 million goodwill impairment related to the sale of a portion of the Private Equity business.

The current year reflected tax benefits of $2.6 billion predominantly from the resolution of various tax audits compared with tax benefits of $1.1 billion in the prior year.

2014 compared with 2013

Net income was $864 million, compared to a net loss of $6.8 billion in the prior year.

Net revenue was $12 million compared to a net loss of $22 million in the prior year. Current year net interest income was a loss of $2 billion compared to a loss of $3.1 billion in the prior year, primarily reflecting higher yields on investment securities. Securities gains were $71 million, compared with $659 million in the prior year, reflecting lower repositioning activity of the investment securities portfolio in the current period.

Private Equity gains were $540 million higher compared with the prior year reflecting higher net gains on sales. Prior year net revenue also included gains of $1.3 billion and $493 million on the sales of Visa shares and One Chase Manhattan Plaza, respectively.

Noninterest expense was $1.2 billion, a decrease of $9.1 billion due to a decrease in reserves for litigation and regulatory proceedings in the prior year partially offset by the impact of a $276 million goodwill impairment related to the sale of a portion of the Private Equity business.

Treasury and CIO overview

Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

Treasury and CIO achieve the Firm's asset-liability management objectives generally by investing in high-quality securities that are managed for the longer-term as part of the Firm's investment securities portfolio. Treasury and CIO also use derivatives to meet the Firm's asset-liability management objectives. For further information on derivatives, see Note 6. The investment securities portfolio primarily consists of U.S. and non-U.S. government securities, agency and nonagency mortgage-backed securities, other asset-backed securities, corporate debt securities and obligations of U.S. states and municipalities. At December 31, 2015, the investment securities portfolio was $287.8 billion, and the average credit rating of the securities comprising the portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). See Note 12 for further information on the details of the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 159–164. For information on interest rate, foreign exchange and other risks, Treasury and CIO VaR and the Firm's earnings-at-risk, see Market Risk Management on pages 133–139.

Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	**2015**	2014	2013
Securities gains	**$ 190**	$ 71	$ 659
Investment securities portfolio (average) [(a)]	**314,802**	349,285	353,712
Investment securities portfolio (period-end)[(b)]	**287,777**	343,146	347,562
Mortgage loans (average)	**2,501**	3,308	5,145
Mortgage loans (period-end)	**2,136**	2,834	3,779

(a) Average investment securities included held-to-maturity balances of $50.0 billion and $47.2 billion for the years ended December 31, 2015 and 2014 respectively. The held-to-maturity balance for full year 2013 was not material.

(b) Period-end investment securities included held-to-maturity securities of $49.1 billion, $49.3 billion, $24.0 billion at December 31, 2015, 2014 and 2013, respectively.

Private equity portfolio information[(a)]

December 31, (in millions)	**2015**	2014	2013
Carrying value	**$ 2,103**	$ 5,866	$ 7,868
Cost	**3,798**	6,281	8,491

(a) For more information on the Firm's methodologies regarding the valuation of the Private Equity portfolio, see Note 3. For information on the sale of a portion of the Private Equity business completed on January 9, 2015, see Note 2.

2015 compared with 2014

The carrying value of the private equity portfolio at December 31, 2015 was $2.1 billion, down from $5.9 billion at December 31, 2014, driven by the sale of a portion of the Private Equity business.

2014 compared with 2013

The carrying value of the private equity portfolio at December 31, 2014 was $5.9 billion, down from $7.9 billion at December 31, 2013. The decrease in the portfolio was predominantly driven by sales of investments, partially offset by unrealized gains.

ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. When the Firm extends a consumer or wholesale loan, advises customers on their investment decisions, makes markets in securities, or offers other products or services, the Firm takes on some degree of risk. The Firm's overall objective is to manage its businesses, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors and protects the safety and soundness of the Firm.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's approach to risk management covers a broad spectrum of risk areas, such as credit, market, liquidity, model, structural interest rate, principal, country, operational, compliance, legal, capital and reputation risk, with controls and governance established for each area, as appropriate.

The Firm believes that effective risk management requires:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within the Firm;
- Ownership of risk management within each of the lines of business and corporate functions; and
- Firmwide structures for risk governance.

The Firm's Operating Committee, which consists of the Firm's Chief Executive Officer ("CEO"), Chief Risk Officer ("CRO") and other senior executives, is responsible for developing and executing the Firm's risk management framework. The framework is intended to provide controls and ongoing management of key risks inherent in the Firm's business activities and create a culture of transparency, awareness and personal responsibility through reporting, collaboration, discussion, escalation and sharing of information. The Operating Committee is responsible and accountable to the Firm's Board of Directors.

The Firm strives for continual improvement through ongoing employee training and development, as well as talent retention. The Firm follows a disciplined and balanced compensation framework with strong internal governance and independent Board oversight. The impact of risk and control issues are carefully considered in the Firm's performance evaluation and incentive compensation processes. The Firm is also engaged in a number of activities focused on conduct risk and in regularly evaluating its culture with respect to its business principles.

The following sections outline the key risks that are inherent in the Firm's business activities.

Risk	Definition	Select risk management metrics	Page references
Capital risk	The risk the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during normal economic environments and stressed conditions.	Risk-based capital ratios; supplementary leverage ratio; stress	149-158
Compliance risk	The risk of failure to comply with applicable laws, rules, and regulations.	Various metrics related to market conduct, Bank Secrecy Act/Anti-Money Laundering ("BSA/AML"), employee compliance, fiduciary, privacy and information risk	147
Country risk	The risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country.	Default exposure at 0% recovery; stress; risk ratings; ratings based capital limits	140-141
Credit risk	The risk of loss arising from the default of a customer, client or counterparty.	Total exposure; industry, geographic and customer concentrations; risk ratings; delinquencies; loss experience; stress	112-132
Legal risk	The risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which the Firm is subject.	Not applicable	146
Liquidity risk	The risk that the Firm will be unable to meet its contractual and contingent obligations or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets.	LCR; stress	159-164
Market risk	The risk of loss arising from potential adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.	VaR, stress, sensitivities	133-139
Model risk	The risk of the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports.	Model status, model tier	142
Non-U.S. dollar foreign exchange ("FX") risk	The risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results.	FX net open position ("NOP")	139
Operational risk	The risk of loss resulting from inadequate or failed processes or systems, human factors, or due to external events that are neither market nor credit-related.	Firm-specific loss experience; industry loss experience; business environment and internal control factors ("BEICF"); key risk indicators; key control indicators; operating metrics	144-146
Principal risk	The risk of an adverse change in the value of privately-held financial assets and instruments, typically representing an ownership or junior capital position that have unique risks due to their illiquidity or for which there is less observable market or valuation data.	Carrying value, stress	143
Reputation risk	The risk that an action, transaction, investment or event will reduce trust in the Firm's integrity or competence by our various constituents, including clients, counterparties, investors, regulators, employees and the broader public.	Not applicable	148
Structural interest rate risk	The risk resulting from the Firm's traditional banking activities (both on- and off-balance sheet positions) arising from the extension of loans and credit facilities, taking deposits and issuing debt (collectively referred to as "non-trading activities"), and also the impact from the CIO investment securities portfolio and other related CIO and Treasury activities.	Earnings-at-risk	138-139

Risk appetite and governance

The Firm's overall tolerance for risk is governed by a "Risk Appetite" framework for measuring and monitoring risk. The framework measures the Firm's capacity to take risk against stated quantitative tolerances and qualitative factors at each of the line of business ("LOB") levels, as well as at the Firmwide level. The framework and tolerances are set and approved by the Firm's CEO, Chief Financial Officer ("CFO"), CRO and Chief Operating Officer ("COO"). LOB-level Risk Appetite parameters and tolerances are set by the respective LOB CEO, CFO and CRO and are approved by the Firm's CEO, CFO, CRO and COO. Quantitative risk tolerances are expressed in terms of tolerance levels for stressed net income, market risk, credit risk, liquidity risk, structural interest rate risk, operational risk and capital. Risk Appetite results are reported quarterly to the Risk Policy Committee of the Board of Directors ("DRPC").

The Firm's CRO is responsible for the overall direction of the Firm's Risk Management functions and is head of the Risk Management Organization, reporting to the Firm's CEO and DRPC. The Risk Management Organization operates independently from the revenue-generating businesses, which enables it to provide credible challenge to the businesses. The leadership team of the Risk Management Organization is aligned to the various LOBs and corporate functions as well as across the Firm for firmwide risk categories (e.g. firmwide market risk, firmwide model risk, firmwide reputation risk, etc.) producing a matrix structure with specific subject matter expertise to manage risks both within the businesses and across the Firm.

The Firm places key reliance on each of the LOBs as the first line of defense in risk governance. The LOBs are accountable for identifying and addressing the risks in their

respective businesses and for operating within a sound control environment.

In addition to the Risk Management Organization, the Firm's control environment also includes firmwide functions like Oversight and Control, Compliance and Internal Audit.

The Firmwide Oversight and Control Group consists of dedicated control officers within each of the lines of business and corporate functions, as well as a central oversight function. The group is charged with enhancing the Firm's control environment by looking within and across the lines of business and corporate functions to identify and remediate control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and engage other stakeholders to understand common themes and interdependencies among the various parts of the Firm.

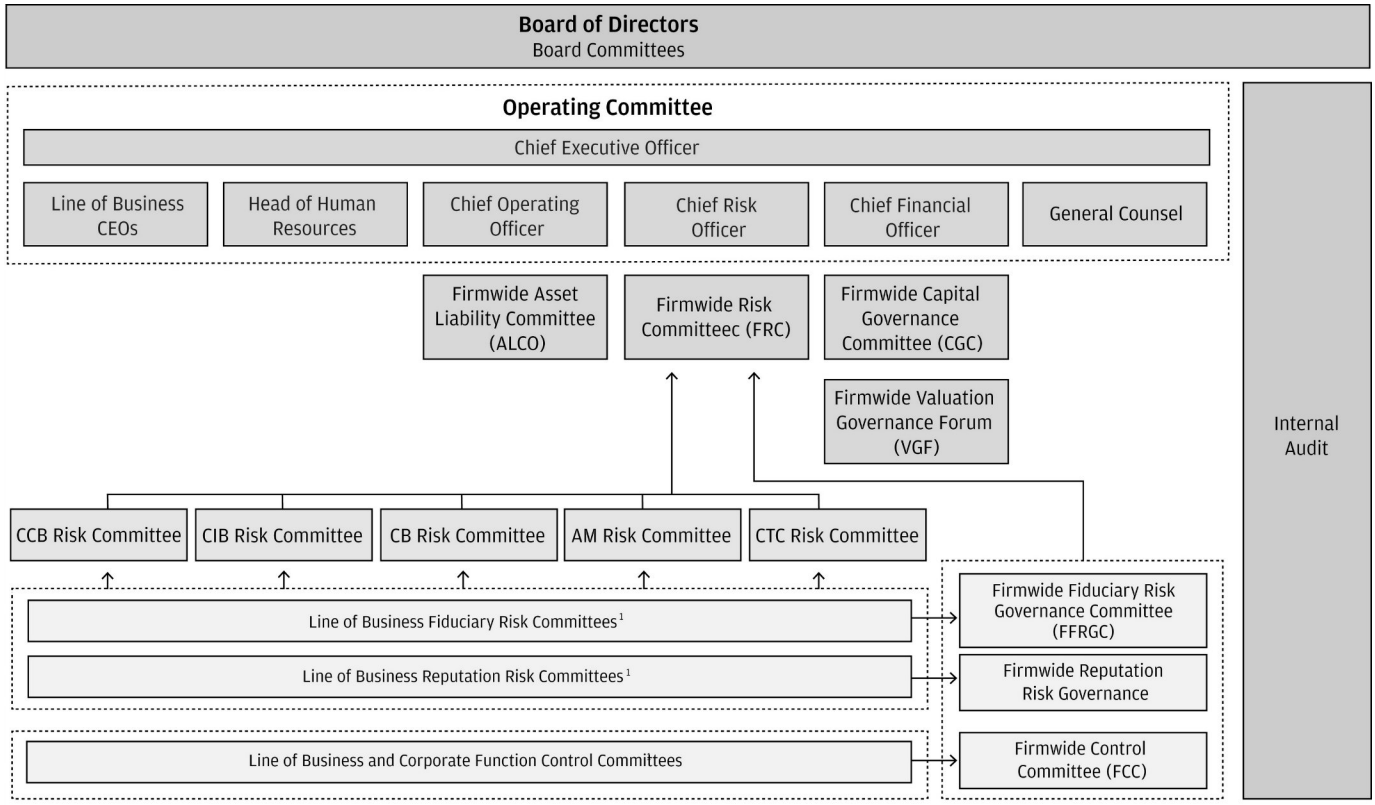
Each line of business is accountable for managing its compliance risk. The Firm's Compliance Organization ("Compliance"), which is independent of the lines of business, works closely with the Operating Committee and management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the offering of the Firm's products and services to clients and customers.

Internal Audit, a function independent of the businesses, Compliance and the Risk Management Organization, tests and evaluates the Firm's risk governance and management, as well as its internal control processes. This function brings a systematic and disciplined approach to evaluating and improving the effectiveness of the Firm's governance, risk management and internal control processes.

Risk governance structure

The independent status of the Risk Management Organization is supported by a governance structure that provides for escalation of risk issues up to senior management and the Board of Directors.

The chart below illustrates the key senior management level committees in the Firm's risk governance structure. Other committees and forums are in place that are responsible for management and oversight of risk, although they are not shown in the chart below.



[1] As applicable.

The Board of Directors provides oversight of risk principally through the DRPC, Audit Committee and, with respect to compensation and other management-related matters, Compensation & Management Development Committee. Each committee of the Board oversees reputation risk issues within its scope of responsibility.

The Risk Policy Committee of the Board oversees the Firm's global risk management framework and approves the primary risk-management policies of the Firm. The Committee's responsibilities include oversight of management's exercise of its responsibility to assess and manage risks of the Firm, as well as its capital and liquidity planning and analysis. Breaches in risk appetite tolerances, liquidity issues that may have a material adverse impact on the Firm and other significant risk-related matters are escalated to the Committee.

The Audit Committee of the Board assists the Board in its oversight of management's responsibilities to assure that there is an effective system of controls reasonably designed to safeguard the assets and income of the Firm, assure the integrity of the Firm's financial statements and maintain compliance with the Firm's ethical standards, policies, plans and procedures, and with laws and regulations. In addition, the Audit Committee assists the Board in its oversight of the Firm's independent registered public accounting firm's qualifications and independence. The Independent Internal Audit Function at the Firm is headed by the General Auditor, who reports to the Audit Committee.

The Compensation & Management Development Committee assists the Board in its oversight of the Firm's compensation programs and reviews and approves the Firm's overall compensation philosophy, incentive compensation pools, and compensation practices consistent with key business objectives and safety and soundness. The Committee reviews Operating Committee members' performance against their goals, and approves their compensation awards. The Committee also periodically reviews the Firm's diversity programs and management development and succession planning, and provides oversight of the Firm's culture and conduct programs.

Among the Firm's senior management-level committees that are primarily responsible for key risk-related functions are:

The Firmwide Risk Committee ("FRC") is the Firm's highest management-level risk committee. It provides oversight of the risks inherent in the Firm's businesses. The Committee is co-chaired by the Firm's CEO and CRO. Members of the Committee include the Firm's COO, CFO, Treasurer & Chief Investment Officer, and General Counsel, as well as LOB CEOs and CROs, and other senior managers from risk and control functions. This Committee serves as an escalation point for risk topics and issues raised by its members, the Line of Business Risk Committees, Firmwide Control Committee, Firmwide Fiduciary Risk Governance Committee, Firmwide Reputation Risk Governance and regional Risk Committees. The Committee escalates significant issues to the Board of Directors, as appropriate.

The Firmwide Control Committee ("FCC") is a forum for senior management to discuss firmwide operational risks including existing and emerging issues, to monitor operational risk metrics, and to review the execution of the Operational Risk Management Framework ("ORMF"). The FCC is co-chaired by the Chief Control Officer and the Firmwide Risk Executive for Operational Risk Governance. It serves as an escalation point for the line of business, corporate functions and regional Control Committees and escalates significant issues to the FRC, as appropriate.

The Firmwide Fiduciary Risk Governance Committee ("FFRGC") is a forum for risk matters related to the Firm's fiduciary activities. The Committee oversees the firmwide fiduciary risk governance framework, which supports the consistent identification and escalation of fiduciary risk matters by the relevant lines of business or corporate functions responsible for managing fiduciary activities. The Committee escalates significant issues to the FRC and any other committee, as appropriate.

The Firmwide Reputation Risk Governance Group seeks to promote consistent management of reputation risk across the Firm. Its objectives are to increase visibility of reputation risk governance; promote and maintain a globally consistent governance model for reputation risk across lines of business; promote early self-identification of potential reputation risks to the Firm; and provide thought leadership on cross-line-of-business reputation risk issues. Each line of business has a separate reputation risk governance structure which includes, in most cases, one or more dedicated reputation risk committees.

Line of Business and Regional Risk Committees review the ways in which the particular line of business or the business operating in a particular region could be exposed to adverse outcomes with a focus on identifying, accepting, escalating and/or requiring remediation of matters brought to these committees. These committees may escalate to the FRC, as appropriate.

Line of Business, Corporate Function and Regional Control Committees oversee the control environment in the particular line of business or corporate function or the business operating in a particular region. They are responsible for reviewing the data indicating the quality and stability of the processes in a business or function, focusing on those processes with shortcomings and overseeing process remediation. These committees escalate to the FCC, as appropriate.

The Asset Liability Committee ("ALCO"), chaired by the Firm's Treasurer under the direction of the COO, monitors the Firm's balance sheet, liquidity risk and structural interest rate risk. ALCO reviews the Firm's overall structural interest rate risk position, funding requirements and strategy, and securitization programs (and any required liquidity support by the Firm of such programs). ALCO is responsible for reviewing and approving the Firm's Funds Transfer Pricing Policy (through which lines of business "transfer" interest rate risk to Treasury) and the Firm's Intercompany Funding and Liquidity Policy. ALCO is also responsible for reviewing the Firm's Contingency Funding Plan.

The Capital Governance Committee, chaired by the Head of the Regulatory Capital Management Office (under the direction of the Firm's CFO) is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams, and for ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firmwide head of the Valuation Control function (under the direction of the Firm's CFO), and includes sub-forums covering the Corporate & Investment Bank, Consumer & Community Banking, Commercial Banking, Asset Management and certain corporate functions, including Treasury and Chief Investment Office.

In addition, the JPMorgan Chase Bank, N.A. Board of Directors is responsible for the oversight of management of the Bank. The JPMorgan Chase Bank, N.A. Board accomplishes this function acting directly and through the principal standing committees of the Firm's Board of Directors. Risk oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the DRPC and Audit Committee of the Firm's Board of Directors and, with respect to compensation and other management-related matters, the Compensation & Management Development Committee of the Firm's Board of Directors.

Risk measurement

The Firm has a broad spectrum of risk management metrics, as appropriate for each risk category (refer to the table on key risks included on page 108). Additionally, the Firm is exposed to certain potential low-probability, but plausible and material, idiosyncratic risks that are not well-captured by its other existing risk analysis and reporting for credit, market, and other risks. These idiosyncratic risks may arise in a number of ways, such as changes in legislation, an unusual combination of market events, or specific counterparty events. The Firm has a process intended to identify these risks in order to allow the Firm to monitor vulnerabilities that are not adequately covered by its other standard risk measurements.

CREDIT RISK MANAGEMENT

Credit risk is the risk of loss arising from the default of a customer, client or counterparty. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk primarily through its residential real estate, credit card, auto, business banking and student lending businesses. Originated mortgage loans are retained in the mortgage portfolio, securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on the balance sheet. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through its operating services activities (such as cash management and clearing activities), securities financing activities, investment securities portfolio, and cash placed with banks. A portion of the loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet; the Firm's syndicated loan business distributes a significant percentage of originations into the market and is an important component of portfolio management.

Credit risk management

Credit risk management is an independent risk management function that identifies and monitors credit risk throughout the Firm and defines credit risk policies and procedures. The credit risk function reports to the Firm's CRO. The Firm's credit risk management governance includes the following activities:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and exposure approval
- Setting industry concentration limits and establishing underwriting guidelines
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Determining the allowance for credit losses and ensuring appropriate credit risk-based capital management

Risk identification and measurement

The Credit Risk Management function identifies, measures, limits, manages and monitors credit risk across the Firm's businesses. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and related market-based inputs, the Firm estimates credit losses for its exposures. Probable credit losses inherent in the consumer and wholesale loan portfolios are reflected in the allowance for loan losses, and probable credit losses inherent in lending-related commitments are reflected in the allowance for lending-related commitments. These losses are estimated using statistical analyses and other factors as described in Note 15. In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments. The analyses for these losses include stress testing considering alternative economic scenarios as described in the Stress testing section below. For further information, see Critical Accounting Estimates used by the Firm on pages 165–169.

The methodologies used to estimate credit losses depend on the characteristics of the credit exposure, as described below.

Scored exposure

The scored portfolio is generally held in CCB and predominantly includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans. For the scored portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time. The statistical analysis uses portfolio modeling, credit scoring, and decision-support tools, which consider loan-level factors such as delinquency status, credit scores, collateral values, and other risk factors. Credit loss analyses also consider, as appropriate, uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality of underwriting standards, and other internal and external factors. The factors and analysis are updated on a quarterly basis or more frequently as market conditions dictate.

Risk-rated exposure

Risk-rated portfolios are generally held in CIB, CB and AM, but also include certain business banking and auto dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default ("PD") and loss severity given a default. The estimation process begins with risk ratings that are assigned to each loan facility to differentiate risk within the portfolio. These risk ratings are reviewed regularly by Credit Risk Management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral. The probability of default is the likelihood that a loan will default and not be fully repaid by the borrower. The loss given default ("LGD") is the estimated loss on the loan that would be realized upon the default of

the borrower and takes into consideration collateral and structural support for each credit facility. The probability of default is estimated for each borrower, and a loss given default is estimated for each credit facility. The calculations and assumptions are based on historic experience and management judgment and are reviewed regularly.

Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios, and the parameters underlying those scenarios, are defined centrally, are articulated in terms of macroeconomic factors, and applied across the businesses. The stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, including industry and country-specific stress scenarios, as necessary. The Firm uses stress testing to inform decisions on setting risk appetite both at a Firm and LOB level, as well as to assess the impact of stress on individual counterparties.

Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

For consumer credit risk, delinquency and other trends, including any concentrations at the portfolio level, are monitored, as certain of these trends can be modified through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio. For further discussion of consumer loans, see Note 14.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry, and individual client and counterparty level with established concentration limits that are reviewed and revised as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic risk appetite, are subject to stress-based loss constraints. In addition, wrong-way risk — the risk that exposure to a counterparty is positively correlated with the impact of a default by the same counterparty, which could cause exposure to increase at the same time as the counterparty's capacity to meet its obligations is decreasing — is actively monitored as this risk could result in greater exposure at default compared with a transaction with another counterparty that does not have this risk.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means, including:

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Master netting agreements
- Collateral and other risk-reduction techniques

In addition to Credit Risk Management, Internal Audit performs periodic exams, as well as continuous reviews, where appropriate, of the Firm's consumer and wholesale portfolios. For risk-rated portfolios, a Credit Review group within Internal Audit is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk ratings, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda.

Risk reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior members of Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, risk committees, senior management and the Board of Directors as appropriate.

CREDIT PORTFOLIO

In the following tables, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale (which are carried at the lower of cost or fair value, with valuation changes recorded in noninterest revenue); and certain loans accounted for at fair value. In addition, the Firm records certain loans accounted for at fair value in trading assets. For further information regarding these loans, see Note 3 and Note 4. For additional information on the Firm's loans and derivative receivables, including the Firm's accounting policies, see Note 14 and Note 6, respectively. For further information regarding the credit risk inherent in the Firm's cash placed with banks, investment securities portfolio, and securities financing portfolio, see Note 5, Note 12, and Note 13, respectively.

Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.

For discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 115–121 and Note 14. For discussion of wholesale credit environment and wholesale loans, see Wholesale Credit Portfolio on pages 122–129 and Note 14.

Total credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming[b][c]	
	2015	2014	**2015**	2014
Loans retained	**$ 832,792**	$ 747,508	**$ 6,303**	$ 7,017
Loans held-for-sale	**1,646**	7,217	**101**	95
Loans at fair value	**2,861**	2,611	**25**	21
Total loans – reported	**837,299**	757,336	**6,429**	7,133
Derivative receivables	**59,677**	78,975	**204**	275
Receivables from customers and other	**13,497**	29,080	**–**	–
Total credit-related assets	**910,473**	865,391	**6,633**	7,408
Assets acquired in loan satisfactions				
Real estate owned	**NA**	NA	**347**	515
Other	**NA**	NA	**54**	44
Total assets acquired in loan satisfactions	**NA**	NA	**401**	559
Total assets	**910,473**	865,391	**7,034**	7,967
Lending-related commitments	**940,395**	950,997	**193**	103
Total credit portfolio	**$1,850,868**	$1,816,388	**$ 7,227**	$ 8,070
Credit derivatives used in credit portfolio management activities[a]	**$ (20,681)**	$ (26,703)	**$ (9)**	$ –
Liquid securities and other cash collateral held against derivatives	**(16,580)**	(19,604)	**NA**	NA

Year ended December 31, (in millions, except ratios)	**2015**	2014
Net charge-offs	**$ 4,086**	$ 4,759
Average retained loans		
Loans – reported	**780,293**	729,876
Loans – reported, excluding residential real estate PCI loans	**736,543**	679,869
Net charge-off rates		
Loans – reported	**0.52%**	0.65%
Loans – reported, excluding PCI	**0.55**	0.70

(a) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 129 and Note 6.

(b) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.

(c) At December 31, 2015 and 2014, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion and $7.8 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $290 million and $367 million, respectively, that are 90 or more days past due; and (3) REO insured by U.S. government agencies of $343 million and $462 million, respectively. These amounts have been excluded based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council ("FFIEC").

CONSUMER CREDIT PORTFOLIO

The Firm's consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans, and student loans. The Firm's focus is on serving the prime segment of the consumer credit market. The credit performance of the consumer portfolio continues to benefit from discipline in credit underwriting as well as improvement in the economy driven by increasing home prices and lower unemployment. Both early-stage delinquencies (30–89 days delinquent) and late-stage delinquencies (150+ days delinquent) for residential real estate, excluding government guaranteed loans, declined from December 31, 2014 levels. The Credit Card 30+ day delinquency rate and the net charge-off rate remain near historic lows. For further information on consumer loans, see Note 14.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB, prime mortgage and home equity loans held by AM, and prime mortgage loans held by Corporate. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14.

Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans[g][h]		Net charge-offs/ (recoveries)[i]		Average annual net charge-off/(recovery) rate[i][j]	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity – senior lien	**$ 14,848**	$ 16,367	**$ 867**	$ 938	**$ 69**	$ 82	**0.43%**	0.50%
Home equity – junior lien	**30,711**	36,375	**1,324**	1,590	**222**	391	**0.67**	1.03
Prime mortgage, including option ARMs	**162,549**	104,921	**1,752**	2,190	**49**	39	**0.04**	0.04
Subprime mortgage	**3,690**	5,056	**751**	1,036	**(53)**	(27)	**(1.22)**	(0.43)
Auto[a]	**60,255**	54,536	**116**	115	**214**	181	**0.38**	0.34
Business banking	**21,208**	20,058	**263**	279	**253**	305	**1.23**	1.58
Student and other	**10,096**	10,970	**242**	270	**200**	347	**1.89**	3.07
Total loans, excluding PCI loans and loans held-for-sale	**303,357**	248,283	**5,315**	6,418	**954**	1,318	**0.35**	0.55
Loans – PCI								
Home equity	**14,989**	17,095	**–**	NA	**–**	NA	**–**	NA
Prime mortgage	**8,893**	10,220	**–**	NA	**–**	NA	**–**	NA
Subprime mortgage	**3,263**	3,673	**–**	NA	**–**	NA	**–**	NA
Option ARMs[b]	**13,853**	15,708	**–**	NA	**–**	NA	**–**	NA
Total loans – PCI	**40,998**	46,696	**–**	NA	**–**	NA	**–**	NA
Total loans – retained	**344,355**	294,979	**5,315**	6,418	**954**	1,318	**0.30**	0.46
Loans held-for-sale	**466** [f]	395 [f]	**98**	91	**–**	–	**–**	–
Total consumer, excluding credit card loans	**344,821**	295,374	**5,413**	6,509	**954**	1,318	**0.30**	0.46
Lending-related commitments[c]	**58,478**	58,153						
Receivables from customers[d]	**125**	108						
Total consumer exposure, excluding credit card	**403,424**	353,635						
Credit Card								
Loans retained[e]	**131,387**	128,027	**–**	–	**3,122**	3,429	**2.51**	2.75
Loans held-for-sale	**76**	3,021	**–**	–	**–**	–	**–**	–
Total credit card loans	**131,463**	131,048	**–**	–	**3,122**	3,429	**2.51**	2.75
Lending-related commitments[c]	**515,518**	525,963						
Total credit card exposure	**646,981**	657,011						
Total consumer credit portfolio	**$ 1,050,405**	$ 1,010,646	**$ 5,413**	$ 6,509	**$ 4,076**	$ 4,747	**0.92%**	1.15%
Memo: Total consumer credit portfolio, excluding PCI	**$ 1,009,407**	$ 963,950	**$ 5,413**	$ 6,509	**$ 4,076**	$ 4,747	**1.02%**	1.30%

(a) At December 31, 2015 and 2014, excluded operating lease assets of $9.2 billion and $6.7 billion, respectively.
(b) At December 31, 2015 and 2014, approximately 64% and 57% of the PCI option ARMs portfolio has been modified into fixed-rate, fully amortizing loans, respectively.
(c) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice.
(d) Receivables from customers represent margin loans to retail brokerage customers, and are included in Accrued interest and accounts receivable on the Consolidated balance sheets.
(e) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.
(f) Predominantly represents prime mortgage loans held-for-sale.

(g) At December 31, 2015 and 2014, nonaccrual loans excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion and $7.8 billion, respectively, that are 90 or more days past due; and (2) student loans insured by U.S. government agencies under the FFELP of $290 million and $367 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, credit card loans are generally exempt from being placed on nonaccrual status, as permitted by regulatory guidance.
(h) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as each of the pools is performing.
(i) Net charge-offs and net charge-off rates excluded $208 million and $533 million of write-offs of prime mortgages in the PCI portfolio for the years ended December 31, 2015 and 2014. These write-offs decreased the allowance for loan losses for PCI loans. See Allowance for Credit Losses on pages 130–132 for further details.
(j) Average consumer loans held-for-sale were $2.1 billion and $917 million, respectively, for the years ended December 31, 2015 and 2014. These amounts were excluded when calculating net charge-off rates.

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances increased during the year ended December 31, 2015, predominantly due to originations of high-quality prime mortgage loans that have been retained, partially offset by paydowns and the charge-off or liquidation of delinquent loans. Credit performance has continued to improve across most portfolios as the economy strengthened and home prices increased.

PCI loans are excluded from the following discussions of individual loan products and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 14.

Home equity: The home equity portfolio declined from December 31, 2014 primarily reflecting loan paydowns and charge-offs. Both early-stage and late-stage delinquencies declined from December 31, 2014. Net charge-offs for both senior and junior lien home equity loans at December 31, 2015, declined when compared with the prior year as a result of improvement in home prices and delinquencies, but charge-offs remain elevated compared with pre-recessionary levels.

At December 31, 2015, approximately 15% of the Firm's home equity portfolio consists of home equity loans ("HELOANs") and the remainder consists of home equity lines of credit ("HELOCs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. Approximately 60% of the HELOANs are senior lien loans and the remainder are junior lien loans. In general, HELOCs originated by the Firm are revolving loans for a 10-year period, after which time the HELOC recasts into a loan with a 20-year amortization period. At the time of origination, the borrower typically selects one of two minimum payment options that will generally remain in effect during the revolving period: a monthly payment of 1% of the outstanding balance, or interest-only payments based on a variable index (typically Prime). HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.

The unpaid principal balance of HELOCs outstanding was $41 billion at December 31, 2015. Since January 1, 2014, approximately $8 billion of HELOCs have recast from interest-only to fully amortizing payments; based upon contractual terms, approximately $19 billion is scheduled to recast in the future, consisting of $7 billion in 2016, $6 billion in 2017 and $6 billion in 2018 and beyond. However, of the total $19 billion scheduled to recast in the future, $13 billion is expected to actually recast; and the remaining $6 billion represents loans to borrowers who are expected to pre-pay or loans that are likely to charge-off prior to recast. The Firm has considered this payment recast risk in its allowance for loan losses based upon the estimated amount of payment shock (i.e., the excess of the fully-amortizing payment over the interest-only payment in effect prior to recast) expected to occur at the payment recast date, along with the corresponding estimated probability of default and loss severity assumptions. Certain factors, such as future developments in both unemployment rates and home prices, could have a significant impact on the performance of these loans.

The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile. The Firm will continue to evaluate both the near-term and longer-term repricing and recast risks inherent in its HELOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance for loan losses and that the Firm's account management practices are appropriate given the portfolio's risk profile.

High-risk seconds are junior lien loans where the borrower has a senior lien loan that is either delinquent or has been modified. Such loans are considered to pose a higher risk of default than junior lien loans for which the senior lien loan is neither delinquent nor modified. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using internal data and loan level credit bureau data (which typically provides the delinquency status of the senior lien loan). The estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior lien loans into and out of the 30+ day delinquency bucket.

Current high-risk seconds

December 31, (in billions)	2015	2014
Junior liens subordinate to:		
Modified current senior lien	**$ 0.6**	$ 0.7
Senior lien 30 – 89 days delinquent	**0.4**	0.5
Senior lien 90 days or more delinquent[(a)]	**0.4**	0.6
Total current high-risk seconds	**$ 1.4**	$ 1.8

(a) Junior liens subordinate to senior liens that are 90 days or more past due are classified as nonaccrual loans. At December 31, 2015 and 2014, excluded approximately $25 million and $50 million, respectively, of junior liens that are performing but not current, which were placed on nonaccrual in accordance with the regulatory guidance.

Of the estimated $1.4 billion of current high-risk junior liens at December 31, 2015, the Firm owns approximately 10% and services approximately 25% of the related senior lien loans to the same borrowers. The increased probability of default associated with these higher-risk junior lien loans was considered in estimating the allowance for loan losses.

Mortgage: Prime mortgages, including option ARMs and loans held-for-sale, increased from December 31, 2014 due to originations of high-quality prime mortgage loans that have been retained partially offset by paydowns, the run-off of option ARM loans and the charge-off or liquidation of delinquent loans. High-quality loan originations for the year ending December 31, 2015 included both jumbo and conforming loans, primarily consisting of fixed interest rate loans. Excluding loans insured by U.S. government agencies, both early-stage and late-stage delinquencies declined from December 31, 2014. Nonaccrual loans decreased from the prior year but remain elevated primarily as a result of loss mitigation activities. Net charge-offs remain low, reflecting continued improvement in home prices and delinquencies.

At December 31, 2015 and 2014, the Firm's prime mortgage portfolio included $11.1 billion and $12.4 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which $8.4 billion and $9.7 billion, respectively, were 30 days or more past due (of these past due loans, $6.3 billion and $7.8 billion, respectively, were 90 days or more past due). In 2014, the Firm entered into a settlement regarding loans insured under federal mortgage insurance programs overseen by the Federal Housing Administration ("FHA"), the U.S. Department of Housing and Urban Development ("HUD"), and the U.S. Department of Veterans Affairs ("VA"); the Firm will continue to monitor exposure on future claim payments for government insured loans, but any financial impact related to exposure on future claims is not expected to be significant and was considered in estimating the allowance for loan losses.

At December 31, 2015 and 2014, the Firm's prime mortgage portfolio included $17.7 billion and $16.3 billion, respectively, of interest-only loans, which represented 11% and 15%, respectively, of the prime mortgage portfolio. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment period to maturity and are typically originated as higher-balance loans to higher-income borrowers. To date, losses on this portfolio generally have been consistent with the broader prime mortgage portfolio and the Firm's expectations. The Firm continues to monitor the risks associated with these loans.

Subprime mortgages continued to decrease due to portfolio runoff. Early-stage and late-stage delinquencies have improved from December 31, 2014. Net charge-offs continued to improve as a result of improvement in home prices and delinquencies.

Auto: Auto loans increased from December 31, 2014, as new originations outpaced paydowns and payoffs. Nonaccrual loans were stable compared with December 31, 2014. Net charge-offs for the year ended December 31, 2015 increased compared with the prior year, as a result of higher loan balances and a moderate increase in loss severity. The auto loan portfolio predominantly consists of prime-quality credits.

Business banking: Business banking loans increased from December 31, 2014 due to an increase in loan originations. Nonaccrual loans declined from December 31, 2014 and net charge-offs for the year ended December 31, 2015 decreased from the prior year due to continued discipline in credit underwriting.

Student and other: Student and other loans decreased from December 31, 2014 due primarily to the run-off of the student loan portfolio as the Firm ceased originations of student loans during the fourth quarter of 2013. Nonaccrual loans and net charge-offs also declined as a result of the run-off of the student loan portfolio.

Purchased credit-impaired loans: PCI loans acquired in the Washington Mutual transaction decreased as the portfolio continues to run off.

As of December 31, 2015, approximately 14% of the option ARM PCI loans were delinquent and approximately 64% of the portfolio has been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans is subject to the risk of payment shock due to future payment recast. Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's quarterly impairment assessment.

The following table provides a summary of lifetime principal loss estimates included in either the nonaccretable difference or the allowance for loan losses.

Summary of lifetime principal loss estimates

December 31, (in billions)	Lifetime loss estimates[a]		LTD liquidation losses[b]	
	2015	2014	**2015**	2014
Home equity	**$ 14.5**	$ 14.6	**$ 12.7**	$ 12.4
Prime mortgage	**4.0**	3.8	**3.7**	3.5
Subprime mortgage	**3.3**	3.3	**3.0**	2.8
Option ARMs	**10.0**	9.9	**9.5**	9.3
Total	**$ 31.8**	$ 31.6	**$ 28.9**	$ 28.0

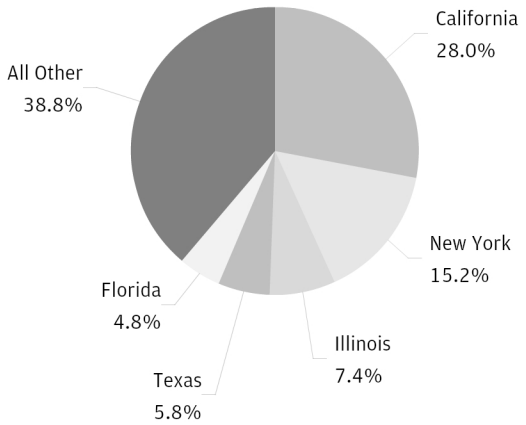
(a) Includes the original nonaccretable difference established in purchase accounting of $30.5 billion for principal losses plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses was $1.5 billion and $2.3 billion at December 31, 2015 and 2014, respectively.
(b) Life-to-date ("LTD") liquidation losses represent both realization of loss upon loan resolution and any principal forgiven upon modification.

For further information on the Firm's PCI loans, including write-offs, see Note 14.

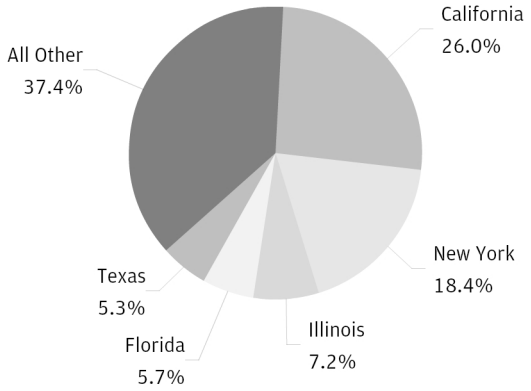
Geographic composition of residential real estate loans

At December 31, 2015, $123.0 billion, or 61% of total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, were concentrated in California, New York, Illinois, Texas and Florida, compared with $94.3 billion, or 63%, at December 31, 2014. California had the greatest concentration of retained residential loans with 28% at December 31, 2015, compared with 26% at December 31, 2014. The unpaid principal balance of PCI loans concentrated in these five states represented 74% of total PCI loans at both December 31, 2015, and December 31, 2014. For further information on the geographic composition of the Firm's residential real estate loans, see Note 14.

Top 5 States - Residential Real Estate (at December 31, 2015)



Top 5 States - Residential Real Estate (at December 31, 2014)



Current estimated loan-to-values ("LTVs") of residential real estate loans

The current estimated average LTV ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 59% at both December 31, 2015 and 2014.

Although home prices continue to recover, the decline in home prices since 2007 has had a significant impact on the collateral values underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high LTV ratios is greater than the delinquency rate for loans in which the borrower has greater equity in the collateral. While a large portion of the loans with current estimated LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay remains a risk.

The following table presents the current estimated LTV ratios for PCI loans, as well as the ratios of the carrying value of the underlying loans to the current estimated collateral value. Because such loans were initially measured at fair value, the ratios of the carrying value to the current estimated collateral value will be lower than the current estimated LTV ratios, which are based on the unpaid principal balances. The estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

LTV ratios and ratios of carrying values to current estimated collateral values – PCI loans

	2015				2014			
December 31, (in millions, except ratios)	Unpaid principal balance	Current estimated LTV ratio[a][b]	Net carrying value[d]	Ratio of net carrying value to current estimated collateral value[b][d]	Unpaid principal balance	Current estimated LTV ratio[a][b]	Net carrying value[d]	Ratio of net carrying value to current estimated collateral value[b][d]
Home equity	**$ 15,342**	**73%** [c]	**$ 13,281**	**68%** [e]	$ 17,740	78% [c]	$ 15,337	73% [e]
Prime mortgage	**8,919**	**66**	**7,908**	**58**	10,249	71	9,027	63
Subprime mortgage	**4,051**	**73**	**3,263**	**59**	4,652	79	3,493	59
Option ARMs	**14,353**	**64**	**13,804**	**62**	16,496	69	15,514	65

(a) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated at least quarterly based on home valuation models that utilize nationally recognized home price index valuation estimates; such models incorporate actual data to the extent available and forecasted data where actual data is not available.
(b) Effective December 31, 2015, the current estimated LTV ratios and the ratios of net carrying value to current estimated collateral value reflect updates to the nationally recognized home price index valuation estimates incorporated into the Firm's home valuation models. The prior period ratios have been revised to conform with these updates in the home price index.
(c) Represents current estimated combined LTV for junior home equity liens, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.
(d) Net carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition and is also net of the allowance for loan losses at December 31, 2015 and 2014 of $985 million and $1.2 billion for prime mortgage, $49 million and $194 million for option ARMs, $1.7 billion and $1.8 billion for home equity, respectively, and $180 million for subprime mortgage at December 31, 2014. There was no allowance for loan losses for subprime mortgage at December 31, 2015.
(e) The current period ratio has been updated to include the effect of any outstanding senior lien related to a property for which the Firm holds the junior home equity lien. The prior period ratio has been revised to conform with the current presentation.

The current estimated average LTV ratios were 65% and 78% for California and Florida PCI loans, respectively, at December 31, 2015, compared with 71% and 85%, respectively, at December 31, 2014. Average LTV ratios have declined consistent with recent improvements in home prices as well as a result of loan pay downs. Although home prices have improved, home prices in most areas of California and Florida are still lower than at the peak of the housing market; this continues to negatively affect current estimated average LTV ratios and the ratio of net carrying value to current estimated collateral value for loans in the PCI portfolio. Of the total PCI portfolio, 6% of the loans had a current estimated LTV ratio greater than 100%, and 1% had a current LTV ratio of greater than 125% at December 31, 2015, compared with 10% and 2%, respectively, at December 31, 2014.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing.

For further information on current estimated LTVs of residential real estate loans, see Note 14.

Loan modification activities – residential real estate loans

The performance of modified loans generally differs by product type due to differences in both the credit quality and the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCI loans, that have been seasoned more than six months show weighted-average redefault rates of 20% for senior lien home equity, 22% for junior lien home equity, 17% for prime mortgages including option ARMs, and 29% for subprime mortgages. The cumulative performance metrics for modifications to the PCI residential real estate portfolio that have been seasoned more than six months show weighted average redefault rates of 20% for home equity, 19% for prime mortgages, 16% for option ARMs and 33% for subprime mortgages. The favorable performance of the PCI option ARM modifications is the result of a targeted proactive program which fixed the borrower's payment to the amount at the point of modification. The cumulative redefault rates reflect the performance of modifications completed under both the U.S. Government's Home Affordable Modification Program ("HAMP") and the Firm's proprietary modification programs (primarily the Firm's modification program that was modeled after HAMP) from October 1, 2009, through December 31, 2015.

Certain loans that were modified under HAMP and the Firm's proprietary modification programs have interest rate reset provisions ("step-rate modifications"). Interest rates on these loans generally began to increase in 2014 by 1% per year and will continue to do so, until the rate reaches a specified cap, typically at a prevailing market interest rate for a fixed-rate loan as of the modification date. The

carrying value of non-PCI loans modified in step-rate modifications was $4 billion at December 31, 2015, with $447 million that experienced the initial interest rate increase in 2015 and $1 billion that is scheduled to experience the initial interest rate increase in each of 2016 and 2017. The unpaid principal balance of PCI loans modified in step-rate modifications was $10 billion at December 31, 2015, with $1 billion that experienced the initial interest rate increase in 2015, and $3 billion and $2 billion scheduled to experience the initial interest rate increase in 2016 and 2017, respectively. The Firm continues to monitor this risk exposure to ensure that it is appropriately considered in the allowance for loan losses.

The following table presents information as of December 31, 2015 and 2014, relating to modified retained residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as TDRs. For further information on modifications for the years ended December 31, 2015 and 2014, see Note 14.

Modified residential real estate loans

	2015		2014	
December 31, (in millions)	Retained loans	Nonaccrual retained loans[d]	Retained loans	Nonaccrual retained loans[d]
Modified residential real estate loans, excluding PCI loans[a][b]				
Home equity – senior lien	**$ 1,048**	**$ 581**	$ 1,101	$ 628
Home equity – junior lien	**1,310**	**639**	1,304	632
Prime mortgage, including option ARMs	**4,826**	**1,287**	6,145	1,559
Subprime mortgage	**1,864**	**670**	2,878	931
Total modified residential real estate loans, excluding PCI loans	**$ 9,048**	**$ 3,177**	$ 11,428	$ 3,750
Modified PCI loans[c]				
Home equity	**$ 2,526**	**NA**	$ 2,580	NA
Prime mortgage	**5,686**	**NA**	6,309	NA
Subprime mortgage	**3,242**	**NA**	3,647	NA
Option ARMs	**10,427**	**NA**	11,711	NA
Total modified PCI loans	**$ 21,881**	**NA**	$ 24,247	NA

(a) Amounts represent the carrying value of modified residential real estate loans.
(b) At December 31, 2015 and 2014, $3.8 billion and $4.9 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 16.
(c) Amounts represent the unpaid principal balance of modified PCI loans.
(d) As of December 31, 2015 and 2014, nonaccrual loans included $2.5 billion and $2.9 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 14.

Nonperforming assets

The following table presents information as of December 31, 2015 and 2014, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets[a]

December 31, (in millions)	2015	2014
Nonaccrual loans[b]		
Residential real estate	**$ 4,792**	$ 5,845
Other consumer	**621**	664
Total nonaccrual loans	**5,413**	6,509
Assets acquired in loan satisfactions		
Real estate owned	**277**	437
Other	**48**	36
Total assets acquired in loan satisfactions	**325**	473
Total nonperforming assets	**$ 5,738**	$ 6,982

(a) At December 31, 2015 and 2014, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of $6.3 billion and $7.8 billion, respectively, that are 90 or more days past due; (2) student loans insured by U.S. government agencies under the FFELP of $290 million and $367 million, respectively, that are 90 or more days past due; and (3) real estate owned insured by U.S. government agencies of $343 million and $462 million, respectively. These amounts have been excluded based upon the government guarantee.
(b) Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, each pool is considered to be performing.

Nonaccrual loans in the residential real estate portfolio totaled $4.8 billion and $5.8 billion at December 31, 2015, and 2014, respectively, of which 31% and 32%, respectively, were greater than 150 days past due. In the aggregate, the unpaid principal balance of residential real estate loans greater than 150 days past due was charged down by approximately 44% and 50% to the estimated net realizable value of the collateral at December 31, 2015 and 2014, respectively.

Active and suspended foreclosure: For information on loans that were in the process of active or suspended foreclosure, see Note 14.

Nonaccrual loans: The following table presents changes in the consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2015 and 2014.

Nonaccrual loans

Year ended December 31, (in millions)	2015	2014
Beginning balance	**$ 6,509**	$ 7,496
Additions	**3,662**	4,905
Reductions:		
Principal payments and other[a]	**1,668**	1,859
Charge-offs	**800**	1,306
Returned to performing status	**1,725**	2,083
Foreclosures and other liquidations	**565**	644
Total reductions	**4,758**	5,892
Net additions/(reductions)	**(1,096)**	(987)
Ending balance	**$ 5,413**	$ 6,509

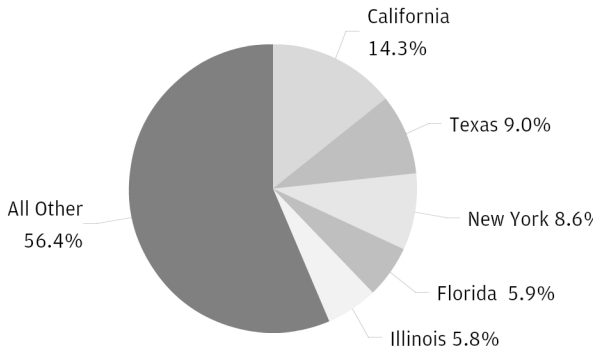
(a) Other reductions includes loan sales.

Credit Card

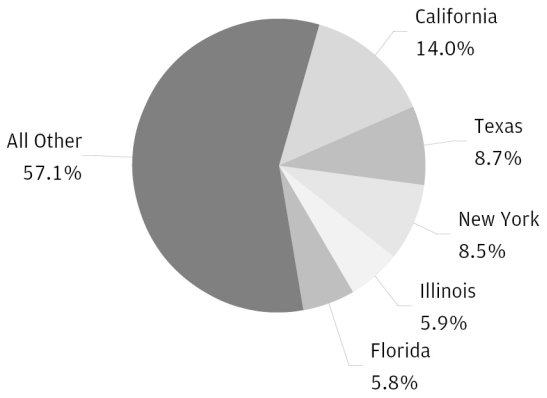
Total credit card loans increased from December 31, 2014 due to higher new account originations and increased credit card sales volume partially offset by sales of non-core loans and the transfer of commercial card loans to the CIB. The 30+ day delinquency rate decreased to 1.43% at December 31, 2015, from 1.44% at December 31, 2014. For the years ended December 31, 2015 and 2014, the net charge-off rates were 2.51% and 2.75%, respectively. The Credit Card 30+ day delinquency rate and net charge-off rate remain near historic lows. Charge-offs have improved compared to a year ago due to continued discipline in credit underwriting as well as improvement in the economy driven by lower unemployment. The credit card portfolio continues to reflect a well-seasoned, largely rewards-based portfolio that has good U.S. geographic diversification.

Loans outstanding in the top five states of California, Texas, New York, Florida and Illinois consisted of $57.5 billion in receivables, or 44% of the retained loan portfolio, at December 31, 2015, compared with $54.9 billion, or 43%, at December 31, 2014. The greatest geographic concentration of credit card retained loans is in California, which represented 14% of total retained loans at both December 31, 2015 and 2014, respectively. For further information on the geographic composition of the Firm's credit card loans, see Note 14.

Top 5 States Credit Card - Retained (at December 31, 2015)



Top 5 States Credit Card - Retained (at December 31, 2014)



Modifications of credit card loans

At December 31, 2015 and 2014, the Firm had $1.5 billion and $2.0 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms. The decrease in modified credit card loans outstanding from December 31, 2014, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued interest and fee income.

For additional information about loan modification programs to borrowers, see Note 14.

WHOLESALE CREDIT PORTFOLIO

The Firm's wholesale businesses are exposed to credit risk through underwriting, lending, market-making, and hedging activities with and for clients and counterparties, as well as through various operating services such as cash management and clearing activities. A portion of the loans originated or acquired by the Firm's wholesale businesses is generally retained on the balance sheet. The Firm distributes a significant percentage of the loans it originates into the market as part of its syndicated loan business and to manage portfolio concentrations and credit risk.

The wholesale credit portfolio, excluding Oil & Gas, continued to be generally stable throughout 2015, characterized by low levels of criticized exposure, nonaccrual loans and charge-offs. Growth in loans retained was driven by increased client activity, notably in commercial real estate. Discipline in underwriting across all areas of lending continues to remain a key point of focus. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of client credit quality and transaction structure, inclusive of collateral where applicable; and of industry, product and client concentrations.

Wholesale credit portfolio

December 31,	Credit exposure		Nonperforming[c]	
(in millions)	**2015**	2014	**2015**	2014
Loans retained	**$357,050**	$324,502	**$ 988**	$ 599
Loans held-for-sale	**1,104**	3,801	**3**	4
Loans at fair value	**2,861**	2,611	**25**	21
Loans – reported	**361,015**	330,914	**1,016**	624
Derivative receivables	**59,677**	78,975	**204**	275
Receivables from customers and other[a]	**13,372**	28,972	**–**	–
Total wholesale credit-related assets	**434,064**	438,861	**1,220**	899
Lending-related commitments	**366,399**	366,881	**193**	103
Total wholesale credit exposure	**$800,463**	$805,742	**$ 1,413**	$ 1,002
Credit derivatives used in credit portfolio management activities[b]	**$ (20,681)**	$ (26,703)	**$ (9)**	$ –
Liquid securities and other cash collateral held against derivatives	**(16,580)**	(19,604)	**NA**	NA

(a) Receivables from customers and other include $13.3 billion and $28.8 billion of margin loans at December 31, 2015 and 2014, respectively, to prime and retail brokerage customers; these are classified in accrued interest and accounts receivable on the Consolidated balance sheets.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. For additional information, see Credit derivatives on page 129, and Note 6.

(c) Excludes assets acquired in loan satisfactions.

The following tables present the maturity and ratings profiles of the wholesale credit portfolio as of December 31, 2015 and 2014. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's. For additional information on wholesale loan portfolio risk ratings, see Note 14.

Wholesale credit exposure – maturity and ratings profile

	Maturity profile[e]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2015 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	**Total**	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	**Total**	Total % of IG
Loans retained	**$ 110,348**	**$ 155,902**	**$ 90,800**	**$ 357,050**	**$ 267,736**	**$ 89,314**	**$ 357,050**	**75%**
Derivative receivables				**59,677**			**59,677**	
Less: Liquid securities and other cash collateral held against derivatives				**(16,580)**			**(16,580)**	
Total derivative receivables, net of all collateral	**11,399**	**12,836**	**18,862**	**43,097**	**34,773**	**8,324**	**43,097**	**81**
Lending-related commitments	**105,514**	**251,042**	**9,843**	**366,399**	**267,922**	**98,477**	**366,399**	**73**
Subtotal	**227,261**	**419,780**	**119,505**	**766,546**	**570,431**	**196,115**	**766,546**	**74**
Loans held-for-sale and loans at fair value[a]				**3,965**			**3,965**	
Receivables from customers and other				**13,372**			**13,372**	
Total exposure – net of liquid securities and other cash collateral held against derivatives				**$ 783,883**			**$ 783,883**	
Credit derivatives used in credit portfolio management activities by reference entity ratings profile[b][c][d]	**$ (808)**	**$ (14,427)**	**$ (5,446)**	**$ (20,681)**	**$ (17,754)**	**$ (2,927)**	**$ (20,681)**	**86%**

	Maturity profile[e]				Ratings profile			
					Investment-grade	Noninvestment-grade		
December 31, 2014 (in millions, except ratios)	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years	Total	AAA/Aaa to BBB-/Baa3	BB+/Ba1 & below	Total	Total % of IG
Loans retained	$ 112,411	$ 134,277	$ 77,814	$ 324,502	$ 241,666	$ 82,836	$ 324,502	74%
Derivative receivables				78,975			78,975	
Less: Liquid securities and other cash collateral held against derivatives				(19,604)			(19,604)	
Total derivative receivables, net of all collateral	20,032	16,130	23,209	59,371	50,815 [f]	8,556 [f]	59,371	86
Lending-related commitments	94,635	262,572	9,674	366,881	284,288	82,593	366,881	77
Subtotal	227,078	412,979	110,697	750,754	576,769	173,985	750,754	77
Loans held-for-sale and loans at fair value[a]				6,412			6,412	
Receivables from customers and other				28,972			28,972	
Total exposure – net of liquid securities and other cash collateral held against derivatives				$ 786,138			$ 786,138	
Credit derivatives used in credit portfolio management activities by reference entity ratings profile[b][c][d]	$ (2,050)	$ (18,653)	$ (6,000)	$ (26,703)	$ (23,571)	$ (3,132)	$ (26,703)	88%

(a) Represents loans held-for-sale, primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.
(b) These derivatives do not quality for hedge accounting under U.S. GAAP.
(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased.
(d) Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection, including Credit derivatives used in credit portfolio management activities, are executed with investment grade counterparties.
(e) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on remaining contractual maturity. Derivative contracts that are in a receivable position at December 31, 2015, may become a payable prior to maturity based on their cash flow profile or changes in market conditions.
(f) Prior period amounts have been revised to conform with current period presentation.

Wholesale credit exposure – industry exposures

The Firm focuses on the management and diversification of its industry exposures, paying particular attention to industries with actual or potential credit concerns. Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, was $14.6 billion at December 31, 2015, compared with $10.1 billion at December 31, 2014, driven by downgrades within the Oil & Gas portfolio.

Effective in the fourth quarter 2015, the Firm realigned its wholesale industry divisions in order to better monitor and manage industry concentrations. Included in this realignment is the combination of certain previous stand-alone industries (e.g. Consumer & Retail) as well as the creation of a new industry division, Financial Market Infrastructure, consisting of clearing houses, exchanges and related depositories. In the tables below, the prior period information has been revised to conform with the current period presentation.

Below are summaries of the Firm's exposures as of December 31, 2015 and 2014. For additional information on industry concentrations, see Note 5.

Wholesale credit exposure – industries[a]

			Noninvestment-grade			Selected metrics			
As of or for the year ended **December 31, 2015** (in millions)	Credit exposure[d]	Investment-grade	Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[e]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 116,857	$ 88,076	$ 27,087	$ 1,463	$ 231	$ 208	$ (14)	$ (54)	$ (47)
Consumer & Retail	85,460	53,647	29,659	1,947	207	18	13	(288)	(94)
Technology, Media & Telecommunications	57,382	29,205	26,925	1,208	44	5	(1)	(806)	(21)
Industrials	54,386	36,519	16,663	1,164	40	59	8	(386)	(39)
Healthcare	46,053	37,858	7,755	394	46	129	(7)	(24)	(245)
Banks & Finance Cos	43,398	35,071	7,654	610	63	17	(5)	(974)	(5,509)
Oil & Gas	42,077	24,379	13,158	4,263	277	22	13	(530)	(37)
Utilities	30,853	24,983	5,655	168	47	3	–	(190)	(289)
State & Municipal Govt[b]	29,114	28,307	745	7	55	55	(8)	(146)	(81)
Asset Managers	23,815	20,214	3,570	31	–	18	–	(6)	(4,453)
Transportation	19,227	13,258	5,801	167	1	15	3	(51)	(243)
Central Govt	17,968	17,871	97	–	–	7	–	(9,359)	(2,393)
Chemicals & Plastics	15,232	10,910	4,017	274	31	9	–	(17)	–
Metals & Mining	14,049	6,522	6,434	1,008	85	1	–	(449)	(4)
Automotive	13,864	9,182	4,580	101	1	4	(2)	(487)	(1)
Insurance	11,889	9,812	1,958	26	93	23	–	(157)	(1,410)
Financial Markets Infrastructure	7,973	7,304	669	–	–	–	–	–	(167)
Securities Firms	4,412	1,505	2,907	–	–	3	–	(102)	(256)
All other[c]	149,117	130,488	18,095	370	164	1,015	10	(6,655)	(1,291)
Subtotal	783,126	$ 585,111	$ 183,429	$ 13,201	$ 1,385	$ 1,611	$ 10	$ (20,681)	$ (16,580)
Loans held-for-sale and loans at fair value	3,965								
Receivables from customers and interests in purchased receivables	13,372								
Total	$ 800,463								

As of or for the year ended December 31, 2014 (in millions)	Credit exposure[e]	Investment-grade	Noninvestment-grade			Selected metrics			
			Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs/ (recoveries)	Credit derivative hedges[f]	Liquid securities and other cash collateral held against derivative receivables
Real Estate	$ 105,975	$ 78,996	$ 25,370	$ 1,356	$ 253	$ 309	$ (9)	$ (36)	$ (27)
Consumer & Retail	83,663	52,872	28,289	2,315	187	92	9	(81)	(26)
Technology, Media & Telecommunications	46,655	29,792	15,358	1,446	59	25	(5)	(1,107)	(13)
Industrials	47,859	29,246	17,483	1,117	13	58	(1)	(338)	(24)
Healthcare	56,516	48,402	7,584	488	42	193	16	(94)	(244)
Banks & Finance Cos	55,098	45,962	8,611	508	17	46	(4)	(1,232)	(9,369)
Oil & Gas	43,148	29,260	13,831	56	1	15	2	(144)	(161)
Utilities	27,441	23,533	3,653	255	–	198	(3)	(155)	(193)
State & Municipal Govt[b]	31,068	30,147	819	102	–	69	24	(148)	(130)
Asset Managers	27,488	24,054	3,376	57	1	38	(12)	(9)	(4,545)
Transportation	20,619	13,751	6,703	165	–	5	(12)	(42)	(279)
Central Govt	19,881	19,647	176	58	–	–	–	(11,342)	(1,161)
Chemicals & Plastics	12,612	9,256	3,327	29	–	1	(2)	(14)	–
Metals & Mining	14,969	8,304	6,161	504	–	–	18	(377)	(19)
Automotive	12,754	8,071	4,522	161	–	1	(1)	(140)	–
Insurance	13,350	10,550	2,558	80	162	–	–	(52)	(2,372)
Financial Markets Infrastructure	11,986	11,487	499	–	–	–	–	–	(4)
Securities Firms	4,801	2,491	2,245	10	55	20	4	(102)	(212)
All other[c]	134,475	118,639	15,214	435	187	1,231	(12)	(11,290)	(825)
Subtotal	$ 770,358	$ 594,460	$ 165,779	$ 9,142	$ 977	$ 2,301	$ 12	$ (26,703)	$ (19,604)
Loans held-for-sale and loans at fair value	6,412								
Receivables from customers and interests in purchased receivables	28,972								
Total[d]	$ 805,742								

(a) The industry rankings presented in the table as of December 31, 2014, are based on the industry rankings of the corresponding exposures at December 31, 2015, not actual rankings of such exposures at December 31, 2014.

(b) In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2015 and 2014, noted above, the Firm held: $7.6 billion and $10.6 billion, respectively, of trading securities; $33.6 billion and $30.1 billion, respectively, of available-for-sale ("AFS") securities; and $12.8 billion and $10.2 billion, respectively, of held-to-maturity ("HTM") securities, issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12.

(c) All other includes: individuals; SPEs; holding companies; and private education and civic organizations, representing approximately 54%, 37%, 5% and 4%, respectively, at December 31, 2015, and 55%, 33%, 6% and 6%, respectively, at December 31, 2014.

(d) Excludes cash placed with banks of $351.0 billion and $501.5 billion, at December 31, 2015 and 2014, respectively, placed with various central banks, predominantly Federal Reserve Banks.

(e) Credit exposure is net of risk participations and excludes the benefit of "Credit derivatives used in credit portfolio management activities" held against derivative receivables or loans and "Liquid securities and other cash collateral held against derivative receivables".

(f) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The All other category includes purchased credit protection on certain credit indices.

Presented below is a discussion of certain industries to which the Firm has significant exposure and/or present actual or potential credit concerns. For additional information, refer to the tables on the previous pages.

- **Real Estate:** Exposure to this industry increased by $10.9 billion, or 10%, in 2015 to $116.9 billion. The increase was largely driven by growth in multifamily exposure in Commercial Banking. The credit quality of this industry remained stable as the investment-grade portion of the exposures was 75% for 2015 and 2014. The ratio of nonaccrual retained loans to total retained loans decreased to 0.25% at December 31, 2015 from 0.32% at December 31, 2014. For further information on commercial real estate loans, see Note 14.
- **Oil & Gas:** Exposure to the Oil & Gas industry was approximately 5.3% and 5.4% of the Firm's total wholesale exposure as of December 31, 2015 and 2014, respectively. Exposure to this industry decreased by $1.1 billion in 2015 to $42.1 billion; of the $42.1 billion, $13.3 billion was drawn at year-end. As of December 31, 2015, approximately $24 billion of the exposure was investment-grade, of which $4 billion was drawn, and approximately $18 billion of the exposure was high yield, of which $9 billion was drawn. As of December 31, 2015, $23.5 billion of the portfolio was concentrated in the Exploration & Production and Oilfield Services sub-sectors, 36% of which exposure was drawn. Exposure to other sub-sectors, including Integrated oil and gas firms, Midstream/Oil Pipeline companies, and Refineries, is predominantly investment-grade. As of December 31, 2015, secured lending, which largely consists of reserve-based lending to the Oil & Gas industry, was $12.3 billion, 44% of which exposure was drawn.

  In addition to $42.1 billion in exposure classified as Oil & Gas, the Firm had $4.3 billion in exposure to Natural Gas Pipelines and related Distribution businesses, of which $893 million was drawn at year end and 63% was investment-grade, and $4.1 billion in exposure to commercial real estate in geographies sensitive to the Oil & Gas industry.

  The Firm continues to actively monitor and manage its exposure to the Oil & Gas industry in light of market conditions, and is also actively monitoring potential contagion effects on other related or dependent industries.
- **Metals & Mining:** Exposure to the Metals & Mining industry was approximately 1.8% and 1.9% of the Firm's total wholesale exposure as of December 31, 2015 and 2014, respectively. Exposure to the Metals & Mining industry decreased by $920 million in 2015 to $14.0 billion, of which $4.6 billion was drawn. The portfolio largely consists of exposure in North America, and 59% is concentrated in the Steel and Diversified Mining sub-sectors. Approximately 46% of the exposure in the Metals & Mining portfolio was investment-grade as of December 31, 2015, a decrease from 55% as of December 31, 2014, due to downgrades.

Loans

In the normal course of its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. The Firm actively manages its wholesale credit exposure. One way of managing credit risk is through secondary market sales of loans and lending-related commitments. For further discussion on loans, including information on credit quality indicators and sales of loans, see Note 14.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2015 and 2014.

Wholesale nonaccrual loan activity

Year ended December 31, (in millions)	**2015**	2014
Beginning balance	**$ 624**	$ 1,044
Additions	**1,307**	882
Reductions:		
Paydowns and other	**534**	756
Gross charge-offs	**87**	148
Returned to performing status	**286**	303
Sales	**8**	95
Total reductions	**915**	1,302
Net changes	**392**	(420)
Ending balance	**$ 1,016**	$ 624

The following table presents net charge-offs, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2015 and 2014. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

Wholesale net charge-offs

Year ended December 31, (in millions, except ratios)	**2015**	2014
Loans – reported		
Average loans retained	**$ 337,407**	$ 316,060
Gross charge-offs	**95**	151
Gross recoveries	**(85)**	(139)
Net charge-offs	**10**	12
Net charge-off rate	**–%**	–%

Receivables from customers

Receivables from customers primarily represent margin loans to prime and retail brokerage clients that are collateralized through a pledge of assets maintained in clients' brokerage accounts which are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's position may be liquidated by the Firm to meet the minimum collateral requirements.

Lending-related commitments

The Firm uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligations under these guarantees, and the counterparties subsequently fail to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's likely actual future credit exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was $212.4 billion and $216.5 billion as of December 31, 2015 and 2014, respectively.

Clearing services

The Firm provides clearing services for clients entering into securities and derivative transactions. Through the provision of these services the Firm is exposed to the risk of non-performance by its clients and may be required to share in losses incurred by central counterparties ("CCPs"). Where possible, the Firm seeks to mitigate its credit risk to its clients through the collection of adequate margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. For further discussion of Clearing services, see Note 29.

Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit and other market risk exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For OTC derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange-traded derivatives ("ETD"), such as futures and options and "cleared" over-the-counter ("OTC-cleared") derivatives, the Firm is generally exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative transactions through the use of legally enforceable master netting arrangements and collateral agreements. For further discussion of derivative contracts, counterparties and settlement types, see Note 6.

The following table summarizes the net derivative receivables for the periods presented.

Derivative receivables

December 31, (in millions)	**2015**	2014
Interest rate	**$ 26,363**	$ 33,725
Credit derivatives	**1,423**	1,838
Foreign exchange	**17,177**	21,253
Equity	**5,529**	8,177
Commodity	**9,185**	13,982
Total, net of cash collateral	**59,677**	78,975
Liquid securities and other cash collateral held against derivative receivables	**(16,580)**	(19,604)
Total, net of all collateral	**$ 43,097**	$ 59,371

Derivative receivables reported on the Consolidated balance sheets were $59.7 billion and $79.0 billion at December 31, 2015 and 2014, respectively. These amounts represent the fair value of the derivative contracts, after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other group of seven nations ("G7") government bonds) and other cash collateral held by the Firm aggregating $16.6 billion and $19.6 billion at December 31, 2015 and 2014, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor. The decrease in derivative receivables was predominantly driven by declines in interest rate derivatives, commodity derivatives, foreign exchange derivatives and equity derivatives due to market movements, maturities and settlements related to client-driven market-making activities in CIB.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (primarily cash; G7 government securities; other liquid government-agency and guaranteed securities; and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Although this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. As of December 31, 2015 and 2014, the Firm held $43.7 billion and $48.6 billion, respectively, of this additional collateral. The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 6.

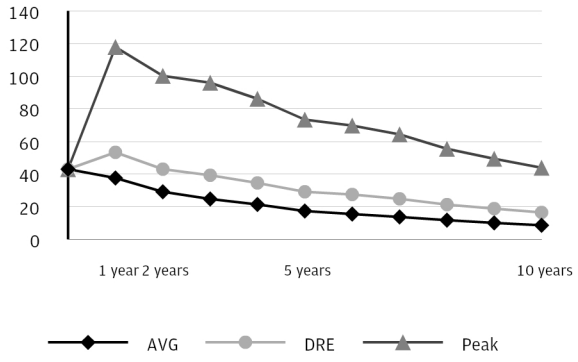
While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak represents a conservative measure of potential exposure to a counterparty calculated in a manner that is broadly equivalent to a 97.5% confidence level. Peak is the primary measure used by the Firm for setting of credit limits for derivative transactions, senior management reporting and derivatives exposure management. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. DRE is a less extreme measure of potential credit loss than Peak and is used for aggregating derivative credit risk exposures with loans and other credit risk. Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. The three year AVG exposure was $32.4 billion and $37.5 billion at December 31, 2015 and 2014, respectively, compared with derivative receivables, net of all collateral, of $43.1 billion and $59.4 billion at December 31, 2015 and 2014, respectively.

The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to the Firm's current derivatives portfolio over the next 10 years as calculated by the Peak, DRE and AVG metrics. The three measures generally show that exposure will decline after the first year, if no new trades are added to the portfolio.

Exposure profile of derivatives measures
December 31, 2015
(in billions)



The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of other liquid securities collateral, at the dates indicated. The ratings scale is based on the Firm's internal ratings, which generally correspond to the ratings as defined by S&P and Moody's.

Ratings profile of derivative receivables

Rating equivalent	**2015**		2014[a]	
December 31, (in millions, except ratios)	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral
AAA/Aaa to AA-/Aa3	**$ 10,371**	**24%**	$ 18,713	32%
A+/A1 to A-/A3	**10,595**	**25**	13,508	23
BBB+/Baa1 to BBB-/Baa3	**13,807**	**32**	18,594	31
BB+/Ba1 to B-/B3	**7,500**	**17**	7,735	13
CCC+/Caa1 and below	**824**	**2**	821	1
Total	**$ 43,097**	**100%**	$ 59,371	100%

(a) Prior period amounts have been revised to conform with current period presentation.

As previously noted, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements — excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity — was 87% as of December 31, 2015, largely unchanged compared with 88% as of December 31, 2014.

Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker, and second, as an end-user to manage the Firm's own credit risk associated with various exposures. For a detailed description of credit derivatives, see Credit derivatives in Note 6.

Credit portfolio management activities

Included in the Firm's end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below. For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 6.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain securities held in the Firm's market-making businesses. These credit derivatives are not included in credit portfolio management activities; for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a market-maker in credit derivatives, see Credit derivatives in Note 6.

Credit derivatives used in credit portfolio management activities

	Notional amount of protection purchased [a]	
December 31, (in millions)	**2015**	2014
Credit derivatives used to manage:		
Loans and lending-related commitments	**$ 2,289**	$ 2,047
Derivative receivables	**18,392**	24,656
Credit derivatives used in credit portfolio management activities	**$ 20,681**	$ 26,703

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of the Firm's credit default swap ("CDS") protection as a hedge of the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

ALLOWANCE FOR CREDIT LOSSES

JPMorgan Chase's allowance for loan losses covers both the consumer (primarily scored) portfolio and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and certain consumer lending-related commitments.

For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 165–169 and Note 15.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the DRPC and Audit Committee of the Firm's Board of Directors. As of December 31, 2015, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The consumer, excluding credit card, allowance for loan losses decreased from December 31, 2014, due to a reduction in the residential real estate portfolio allowance, reflecting continued improvement in home prices and delinquencies and increased granularity in the impairment estimates. For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 115–121 and Note 14.

The credit card allowance for loan losses was relatively unchanged from December 31, 2014, reflecting stable credit quality trends. For additional information about delinquencies in the credit card loan portfolio, see Consumer Credit Portfolio on pages 115–121 and Note 14.

The wholesale allowance for credit losses increased from December 31, 2014, reflecting the impact of downgrades in the Oil & Gas portfolio. Excluding Oil and Gas, the wholesale portfolio continued to experience generally stable credit quality trends and low charge-off rates.

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2015 Consumer, excluding credit card	2015 Credit card	2015 Wholesale	2015 Total	2014 Consumer, excluding credit card	2014 Credit card	2014 Wholesale	2014 Total
Allowance for loan losses								
Beginning balance at January 1,	**$ 7,050**	**$ 3,439**	**$ 3,696**	**$ 14,185**	$ 8,456	$ 3,795	$ 4,013	$ 16,264
Gross charge-offs	**1,658**	**3,488**	**95**	**5,241**	2,132	3,831	151	6,114
Gross recoveries	**(704)**	**(366)**	**(85)**	**(1,155)**	(814)	(402)	(139)	(1,355)
Net charge-offs	**954**	**3,122**	**10**	**4,086**	1,318	3,429	12	4,759
Write-offs of PCI loans[(a)]	**208**	**—**	**—**	**208**	533	—	—	533
Provision for loan losses	**(82)**	**3,122**	**623**	**3,663**	414	3,079	(269)	3,224
Other	**—**	**(5)**	**6**	**1**	31	(6)	(36)	(11)
Ending balance at December 31,	**$ 5,806**	**$ 3,434**	**$ 4,315**	**$ 13,555**	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Impairment methodology								
Asset-specific[(b)]	**$ 364**	**$ 460**	**$ 274**	**$ 1,098**	$ 539	$ 500	$ 87	$ 1,126
Formula-based	**2,700**	**2,974**	**4,041**	**9,715**	3,186	2,939	3,609	9,734
PCI	**2,742**	**—**	**—**	**2,742**	3,325	—	—	3,325
Total allowance for loan losses	**$ 5,806**	**$ 3,434**	**$ 4,315**	**$ 13,555**	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Allowance for lending-related commitments								
Beginning balance at January 1,	**$ 13**	**$ —**	**$ 609**	**$ 622**	$ 8	$ —	$ 697	$ 705
Provision for lending-related commitments	**1**	**—**	**163**	**164**	5	—	(90)	(85)
Other	**—**	**—**	**—**	**—**	—	—	2	2
Ending balance at December 31,	**$ 14**	**$ —**	**$ 772**	**$ 786**	$ 13	$ —	$ 609	$ 622
Impairment methodology								
Asset-specific	**$ —**	**$ —**	**$ 73**	**$ 73**	$ —	$ —	$ 60	$ 60
Formula-based	**14**	**—**	**699**	**713**	13	—	549	562
Total allowance for lending-related commitments[(c)]	**$ 14**	**$ —**	**$ 772**	**$ 786**	$ 13	$ —	$ 609	$ 622
Total allowance for credit losses	**$ 5,820**	**$ 3,434**	**$ 5,087**	**$ 14,341**	$ 7,063	$ 3,439	$ 4,305	$ 14,807
Memo:								
Retained loans, end of period	**$ 344,355**	**$ 131,387**	**$ 357,050**	**$ 832,792**	$ 294,979	$ 128,027	$ 324,502	$ 747,508
Retained loans, average	**318,612**	**124,274**	**337,407**	**780,293**	289,212	124,604	316,060	729,876
PCI loans, end of period	**40,998**	**—**	**4**	**41,002**	46,696	—	4	46,700
Credit ratios								
Allowance for loan losses to retained loans	**1.69%**	**2.61%**	**1.21%**	**1.63%**	2.39%	2.69%	1.14%	1.90%
Allowance for loan losses to retained nonaccrual loans[(d)]	**109**	**NM**	**437**	**215**	110	NM	617	202
Allowance for loan losses to retained nonaccrual loans excluding credit card	**109**	**NM**	**437**	**161**	110	NM	617	153
Net charge-off rates	**0.30**	**2.51**	**—**	**0.52**	0.46	2.75	—	0.65
Credit ratios, excluding residential real estate PCI loans								
Allowance for loan losses to retained loans	**1.01**	**2.61**	**1.21**	**1.37**	1.50	2.69	1.14	1.55
Allowance for loan losses to retained nonaccrual loans[(d)]	**58**	**NM**	**437**	**172**	58	NM	617	155
Allowance for loan losses to retained nonaccrual loans excluding credit card	**58**	**NM**	**437**	**117**	58	NM	617	106
Net charge-off rates	**0.35%**	**2.51%**	**—%**	**0.55%**	0.55%	2.75%	—%	0.70%

Note: In the table above, the financial measures which exclude the impact of PCI loans are non-GAAP financial measures. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82.

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR. The asset-specific credit card allowance for loan losses modified in a TDR is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(c) The allowance for lending-related commitments is reported in other liabilities on the Consolidated balance sheets.

(d) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Provision for credit losses

For the year ended December 31, 2015, the provision for credit losses was $3.8 billion, compared with $3.1 billion for the year ended December 31, 2014.

The total consumer provision for credit losses for the year ended December 31, 2015 reflected lower net charge-offs due to continued discipline in credit underwriting as well as improvement in the economy driven by increasing home prices and lower unemployment, partially offset by a lower reduction in the allowance for loan loss compared with December 31, 2014.

The wholesale provision for credit losses for the year ended December 31, 2015 reflected the impact of downgrades in the Oil & Gas portfolio.

Year ended December 31,	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
(in millions)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Consumer, excluding credit card	**$ (82)**	$ 414	$ (1,872)	**$ 1**	$ 5	$ 1	**$ (81)**	$ 419	$ (1,871)
Credit card	**3,122**	3,079	2,179	**–**	–	–	**3,122**	3,079	2,179
Total consumer	**3,040**	3,493	307	**1**	5	1	**3,041**	3,498	308
Wholesale	**623**	(269)	(119)	**163**	(90)	36	**786**	(359)	(83)
Total	**$ 3,663**	$ 3,224	$ 188	**$ 164**	$ (85)	$ 37	**$ 3,827**	$ 3,139	$ 225

Market risk is the potential for adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

Market risk management

Market Risk management, part of the independent risk management function, is responsible for identifying and monitoring market risks throughout the Firm and defines market risk policies and procedures. The Market Risk function reports to the Firm's CRO.

Market Risk seeks to control risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Risk identification and classification

Each line of business is responsible for the management of the market risks within its units. The independent risk management group responsible for overseeing each line of business is charged with ensuring that all material market risks are appropriately identified, measured, monitored and managed in accordance with the risk policy framework set out by Market Risk.

Risk measurement

Tools used to measure risk

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- VaR
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Profit and loss drawdowns
- Earnings-at-risk

Risk monitoring and control

Market risk is controlled primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business and management experience. The Firm maintains different levels of limits. Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Limits may also be set within the lines of business, as well at the portfolio or legal entity level.

Limits are set by Market Risk and are regularly reviewed and updated as appropriate, with any changes approved by line of business management and Market Risk. Senior management, including the Firm's CEO and CRO, are responsible for reviewing and approving certain of these risk limits on an ongoing basis. All limits that have not been reviewed within specified time periods by Market Risk are escalated to senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner to limit approvers, Market Risk and senior management. In the event of a breach, Market Risk consults with Firm senior management and the line of business senior management to determine the appropriate course of action required to return to compliance, which may include a reduction in risk in order to remedy the breach. Certain Firm or line of business-level limits that have been breached for three business days or longer, or by more than 30%, are escalated to senior management and the Firmwide Risk Committee.

The following table summarizes by LOB the predominant business activities that give rise to market risk, and the market risk management tools utilized to manage those risks; CB is not presented in the table below as it does not give rise to significant market risk.

Risk identification and classification for business activities

LOB	Predominant business activities and related market risks	Positions included in Risk Management VaR	Positions included in other risk measures *(Not included in Risk Management VaR)*
CIB	• Makes markets and services clients across fixed income, foreign exchange, equities and commodities • Market risk arising from changes in market prices (e.g. rates and credit spreads) resulting in a potential decline in net income	• Market risk[(a)] related to: • Trading assets/liabilities – debt and equity instruments, and derivatives, including hedges of the retained loan portfolio • Certain securities purchased under resale agreements and securities borrowed • Certain securities loaned or sold under repurchase agreements • Structured notes • Derivative CVA and associated hedges	• Principal investing activities • Retained loan portfolio • Deposits • DVA and FVA on derivatives and structured notes
CCB	• Originates and services mortgage loans • Complex, non-linear interest rate and basis risk • Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing • Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates	*Mortgage Banking* • Mortgage pipeline loans, classified as derivatives • Warehouse loans, classified as trading assets – debt instruments • MSRs • Hedges of pipeline loans, warehouse loans and MSRs, classified as derivatives. • Interest-only securities, classified as trading assets, and related hedges, classified as derivatives	• Retained loan portfolio • Deposits • Principal investing activities
Corporate	• Manages the Firm's liquidity, funding, structural interest rate and foreign exchange risks arising from activities undertaken by the Firm's four major reportable business segments	*Treasury and CIO* • Primarily derivative positions measured at fair value through earnings, classified as derivatives	• Principal investing activities • Investment securities portfolio and related hedges • Deposits • Long-term debt and related hedges
AM	• Market risk arising from the Firm's initial capital investments in products, such as mutual funds, managed by AM	• Initial seed capital investments and related hedges, classified as derivatives	• Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AM (i.e., co-investments) • Retained loan portfolio • Deposits

(a) Market risk measurement for derivatives generally incorporates the impact of DVA and FVA; market risk measurement for structured notes generally excludes the impact of FVA and DVA.

Value-at-risk

JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment. The Firm has a single VaR framework used as a basis for calculating Risk Management VaR and Regulatory VaR.

The framework is employed across the Firm using historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a stable measure of VaR that closely aligns to the day-to-day risk management decisions made by the lines of business, and provides the necessary and appropriate information needed to respond to risk events on a daily basis.

Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks across businesses and monitoring limits. These VaR results are reported to senior management, the Board of Directors and regulators.

Under the Firm's Risk Management VaR methodology, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "band breaks," defined as losses greater than that predicted by VaR estimates, not more than five times every 100 trading days. The number of VaR band breaks observed can differ from the statistically expected number of band breaks if the current level of market volatility is materially different from the level of market volatility during the 12 months of historical data used in the VaR calculation.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

For certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data for these products. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented.

In addition, data sources used in VaR models may not be the same as those used for financial statement valuations. In cases where market prices are not observable, or where proxies are used in VaR historical time series, the sources may differ. The daily market data used in VaR models may be different than the independent third-party data collected for VCG price testing in VCG's monthly valuation process (see Valuation process in Note 3 for further information on the Firm's valuation process). VaR model calculations require daily data and a consistent source for valuation and therefore it is not practical to use the data collected in the VCG monthly valuation process.

Since VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions. The Firm therefore considers other measures in addition to VaR, such as stress testing, to capture and manage its market risk positions.

The Firm's VaR model calculations are periodically evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques and other factors. Such changes may also affect historical comparisons of VaR results. Model changes undergo a review and approval process by the Model Review Group prior to implementation into the operating environment. For further information, see Model risk on page 142.

The Firm calculates separately a daily aggregated VaR in accordance with regulatory rules ("Regulatory VaR"), which is used to derive the Firm's regulatory VaR-based capital requirements under Basel III. This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to "covered" positions as defined by Basel III, which may be different than the positions included in the Firm's Risk Management VaR. For example, credit derivative hedges of accrual loans are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. In addition, in contrast to the Firm's Risk Management VaR, Regulatory VaR currently excludes the diversification benefit for certain VaR models.

For additional information on Regulatory VaR and the other components of market risk regulatory capital (e.g. VaR-based measure, stressed VaR-based measure and the respective backtesting) for the Firm, see JPMorgan Chase's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm).

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

As of or for the year ended December 31,	2015			2014			At December 31,	
(in millions)	Avg.	Min	Max	Avg.	Min	Max	**2015**	2014
CIB trading VaR by risk type								
Fixed income	**$ 42**	**$ 31**	**$ 60**	$ 34	$ 23	$ 45	**$ 37**	$ 34
Foreign exchange	**9**	**6**	**16**	8	4	25	**6**	8
Equities	**18**	**11**	**26**	15	10	23	**21**	22
Commodities and other	**10**	**6**	**14**	8	5	14	**10**	6
Diversification benefit to CIB trading VaR	**(35)** [a]	**NM** [b]	**NM** [b]	(30) [a]	NM [b]	NM [b]	**(28)** [a]	(32) [a]
CIB trading VaR	**44**	**27**	**68**	35	24	49	**46**	38
Credit portfolio VaR	**14**	**10**	**20**	13	8	18	**10**	16
Diversification benefit to CIB VaR	**(9)** [a]	**NM** [b]	**NM** [b]	(8) [a]	NM [b]	NM [b]	**(10)** [a]	(9) [a]
CIB VaR	**49**	**34**	**71**	40	29	56	**46**	45
Mortgage Banking VaR	**4**	**2**	**8**	7	2	28	**4**	3
Treasury and CIO VaR	**4**	**3**	**7**	4	3	6	**5**	4
Asset Management VaR	**3**	**2**	**4**	3	2	4	**3**	2
Diversification benefit to other VaR	**(3)** [a]	**NM** [b]	**NM** [b]	(4) [a]	NM [b]	NM [b]	**(4)** [a]	(3) [a]
Other VaR	**8**	**5**	**12**	10	5	27	**8**	6
Diversification benefit to CIB and other VaR	**(10)** [a]	**NM** [b]	**NM** [b]	(7) [a]	NM [b]	NM [b]	**(9)** [a]	(5) [a]
Total VaR	**$ 47**	**$ 34**	**$ 67**	$ 43	$ 30	$ 70	**$ 45**	$ 46

(a) Average portfolio VaR and period-end portfolio VaR were less than the sum of the VaR of the components described above, which is due to portfolio diversification. The diversification effect reflects the fact that risks are not perfectly correlated.
(b) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for distinct risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

As presented in the table above, average Total VaR and average CIB VaR increased during 2015 when compared with 2014. The increase in Total VaR was primarily due to higher volatility in the CIB in the historical one-year look-back period during 2015 versus 2014.

Average CIB trading VaR increased during 2015 primarily due to higher VaR in the Fixed Income and Equities risk factors reflecting a combination of higher market volatility and increased exposure.

Average Mortgage Banking VaR decreased from the prior year. Average Mortgage Banking VaR was elevated late in the second quarter of 2014 due to a change in the MSR hedge position made in advance of an anticipated update to certain MSR model assumptions; when such updates were implemented, the MSR VaR decreased to levels more consistent with prior periods.

The Firm continues to enhance the VaR model calculations and time series inputs related to certain asset-backed products.

The Firm's average Total VaR diversification benefit was $10 million or 21% of the sum for 2015, compared with $7 million or 16% of the sum for 2014. In general, over the course of the year, VaR exposure can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

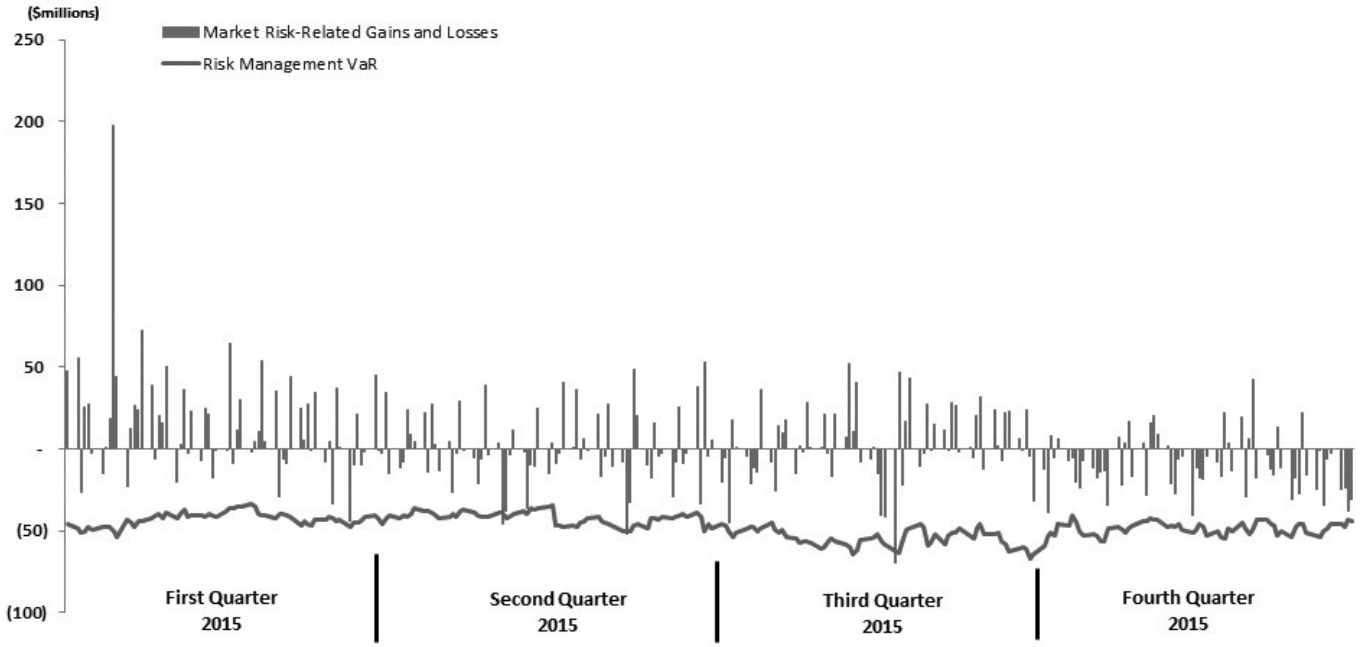
VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses recognized on market-risk related revenue.

The Firm's definition of market risk-related gains and losses is consistent with the definition used by the banking regulators under Basel III. Under this definition market risk-related gains and losses are defined as: gains and losses on the positions included in the Firm's Risk Management VaR, excluding fees, commissions, certain valuation adjustments (e.g., liquidity and DVA), net interest income, and gains and losses arising from intraday trading.

The following chart compares the daily market risk-related gains and losses with the Firm's Risk Management VaR for the year ended December 31, 2015. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of back-testing disclosed in the Market Risk section of the Firm's Basel III Pillar 3 Regulatory Capital Disclosures reports, which are based on Regulatory VaR applied to covered positions. The chart shows that for the year ended December 31, 2015, the Firm observed three VaR band breaks and posted Market risk-related gains on 117 of the 260 days in this period.

Daily Market Risk-Related Gains and Losses vs. Risk Management VaR (1-day, 95% Confidence level)
Twelve months ended December 31, 2015



Other risk measures

Economic-value stress testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates or commodity prices.

The Firm uses a number of standard scenarios that capture different risk factors across asset classes including geographical factors, specific idiosyncratic factors and extreme tail events. The stress framework calculates multiple magnitudes of potential stress for both market rallies and market sell-offs for each risk factor and combines them in multiple ways to capture different market scenarios. For example, certain scenarios assess the potential loss arising from current exposures held by the Firm due to a broad sell off in bond markets or an extreme widening in corporate credit spreads. The flexibility of the stress testing framework allows risk managers to construct new, specific scenarios that can be used to form decisions about future possible stress events.

Stress testing complements VaR by allowing risk managers to shock current market prices to more extreme levels relative to those historically realized, and to stress test the relationships between market prices under extreme scenarios.

Stress-test results, trends and qualitative explanations based on current market risk positions are reported to the respective LOB's and the Firm's senior management to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency. In addition, results are reported to the Board of Directors.

Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant LOB Risk Committees and may be redefined on a periodic basis to reflect current market conditions.

The Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's Comprehensive Capital Analysis and Review ("CCAR") and

Internal Capital Adequacy Assessment Process ("ICAAP") processes. In addition, the results are incorporated into the quarterly assessment of the Firm's Risk Appetite Framework and are also presented to the DRPC.

Nonstatistical risk measures
Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line of business and by risk type, and are also used for monitoring internal market risk limits.

Loss advisories and profit and loss drawdowns
Loss advisories and profit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

Earnings-at-risk
The VaR and stress-test measures described above illustrate the economic sensitivity of the Firm's Consolidated balance sheets to changes in market variables. The effect of interest rate exposure on the Firm's reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's net interest income and interest rate-sensitive fees. Earnings-at-risk excludes the impact of CIB's markets-based activities and MSRs, as these sensitivities are captured under VaR.

The CIO, Treasury and Corporate ("CTC") Risk Committee establishes the Firm's structural interest rate risk policies and market risk limits, which are subject to approval by the DRPC. The CIO, working in partnership with the lines of business, calculates the Firm's structural interest rate risk profile and reviews it with senior management including the CTC Risk Committee and the Firm's ALCO. In addition, oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight and governance around assumptions and establishing and monitoring limits for structural interest rate risk. The Firm manages structural interest rate risk generally through its investment securities portfolio and interest rate derivatives.

Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve)
- The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, firmwide basis. Business units transfer their interest rate risk to Treasury and CIO through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

The Firm generates a net interest income baseline, and then conducts simulations of changes for interest rate-sensitive assets and liabilities denominated in U.S. dollar and other currencies ("non-U.S. dollar" currencies). Earnings-at-risk scenarios estimate the potential change in this net interest income baseline, excluding CIB's markets-based activities and MSRs, over the following 12 months, utilizing multiple assumptions. These scenarios may consider the impact on exposures as a result of changes in interest rates from baseline rates, as well as pricing sensitivities of deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as modeled prepayment and reinvestment behavior, but do not include assumptions about actions which could be taken by the Firm in response to any such instantaneous rate changes. For example, mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience. The Firm's earnings-at-risk scenarios are periodically evaluated and enhanced in response to changes in the composition of the Firm's balance sheet, changes in market conditions, improvements in the Firm's simulation and other factors.

Effective January 1, 2015, the Firm conducts earnings-at-risk simulations for assets and liabilities denominated in U.S. dollars separately from assets and liabilities denominated in non-U.S. dollar currencies in order to enhance the Firm's ability to monitor structural interest rate risk from non-U.S. dollar exposures.

The Firm's U.S. dollar sensitivity is presented in the table below. The result of the non-U.S. dollar sensitivity scenarios were not material to the Firm's earnings-at-risk at December 31, 2015.

JPMorgan Chase's 12-month pretax net interest income sensitivity profiles

(Excludes the impact of CIB's markets-based activities and MSRs)

(in billions)	Instantaneous change in rates			
December 31, 2015	+200 bps	+100 bps	-100 bps	-200 bps
U.S. dollar	**$ 5.2**	**$ 3.1**	**NM** [(a)]	**NM** [(a)]

(a) Downward 100- and 200-basis-points parallel shocks result in a federal funds target rate of zero and negative three- and six-month U.S. Treasury rates. The earnings-at-risk results of such a low probability scenario are not meaningful.

The Firm's benefit to rising rates on U.S. dollar assets and liabilities is largely a result of reinvesting at higher yields and assets repricing at a faster pace than deposits. The Firm's net U.S. dollar sensitivity profile at December 31, 2015 was not materially different than December 31, 2014.

Separately, another U.S. dollar interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month pretax benefit to net interest income, excluding CIB's markets-based activities and MSRs, of approximately $700 million. The increase in net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged. The result of the comparable non-U.S. dollar scenario was not material to the Firm.

Non-U.S. dollar FX Risk

Non-U.S. dollar FX risk is the risk that changes in foreign exchange rates affect the value of the Firm's assets or liabilities or future results. The Firm has structural non-U.S. dollar FX exposures arising from capital investments, forecasted expense and revenue, the investment securities portfolio and issuing debt in denominations other than the U.S. dollar. Treasury and CIO, working in partnership with the lines of business, primarily manage these risks on behalf of the Firm. Treasury and CIO may hedge certain of these risks using derivatives within risk limits governed by the CTC Risk Committee.

COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers or adversely affects markets related to a particular country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in the Firm. The Country Risk Management group is responsible for developing guidelines and policies for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the various portfolios giving rise to country risk to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

Country risk organization

The Country Risk Management group, part of the independent risk management function, works in close partnership with other risk functions to identify and monitor country risk within the Firm. The Firmwide Risk Executive for Country Risk reports to the Firm's CRO.

Country Risk Management is responsible for the following functions:

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools for early identification of potential country risk concerns
- Providing country risk scenario analysis

Country risk identification and measurement

The Firm is exposed to country risk through its lending, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal country risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) or country of incorporation of the obligor, counterparty, issuer or guarantor. Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery. Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain tranched credit derivatives. Different measurement approaches or assumptions would affect the amount of reported country exposure.

Under the Firm's internal country risk measurement framework:

- Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received
- Securities financing exposures are measured at their receivable balance, net of collateral received
- Debt and equity securities are measured at the fair value of all positions, including both long and short positions
- Counterparty exposure on derivative receivables is measured at the derivative's fair value, net of the fair value of the related collateral. Counterparty exposure on derivatives can change significantly because of market movements
- Credit derivatives protection purchased and sold is reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities is measured on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity; this reflects the manner in which the Firm manages these exposures

The Firm also has indirect exposures to country risk (for example, related to the collateral received on securities financing receivables or related to client clearing activities). These indirect exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through Country Risk Management.

The Firm's internal country risk reporting differs from the reporting provided under the FFIEC bank regulatory requirements. For further information on the FFIEC's reporting methodology, see Cross-border outstandings on page 327.

Country risk stress testing

The country risk stress framework aims to identify potential losses arising from a country crisis by capturing the impact of large asset price movements in a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically defines and runs ad hoc stress scenarios for individual countries in response to specific market events and sector performance concerns.

Country risk monitoring and control

The Country Risk Management group establishes guidelines for sovereign ratings reviews and limit management. Country stress and nominal exposures are measured under a comprehensive country limit framework. Country ratings and limits are actively monitored and reported on a regular basis. Country limit requirements are reviewed and approved by senior management as often as necessary, but at least annually. In addition, the Country Risk Management group uses surveillance tools, such as signaling models and ratings indicators, for early identification of potential country risk concerns.

Country risk reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.) as of December 31, 2015. The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions. Country exposures may fluctuate from period to period due to normal client activity and market flows.

Top 20 country exposures

	December 31, 2015			
(in billions)	Lending[a]	Trading and investing[b][c]	Other[d]	Total exposure
United Kingdom	$ 23.8	$ 21.8	$ 1.1	$ 46.7
Germany	13.8	16.7	0.2	30.7
France	14.2	11.9	0.1	26.2
Japan	12.9	7.8	0.4	21.1
China	10.3	7.2	1.0	18.5
Canada	13.9	2.9	0.3	17.1
Australia	7.7	5.9	–	13.6
Netherlands	5.0	6.0	1.4	12.4
India	6.1	5.6	0.4	12.1
Brazil	6.2	4.9	–	11.1
Switzerland	6.7	0.9	1.9	9.5
Korea	4.3	3.3	0.1	7.7
Hong Kong	2.8	2.6	1.4	6.8
Italy	2.8	3.8	0.2	6.8
Luxembourg	6.4	0.1	–	6.5
Spain	3.2	2.1	0.1	5.4
Singapore	2.4	1.3	0.7	4.4
Sweden	1.7	2.5	–	4.2
Mexico	2.9	1.3	–	4.2
Belgium	1.7	2.3	–	4.0

(a) Lending includes loans and accrued interest receivable (net of collateral and the allowance for loan losses), deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and unused commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.
(b) Includes market-making inventory, AFS securities, counterparty exposure on derivative and securities financings net of collateral and hedging.
(c) Includes single reference entity ("single-name"), index and tranched credit derivatives for which one or more of the underlying reference entities is in a country listed in the above table.
(d) Includes capital invested in local entities and physical commodity inventory.

Model risk

Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports.

The Firm uses models for many purposes including the valuation of positions and the measurement of risk. Valuation models are employed by the Firm to value certain financial instruments for which quoted prices may not be readily available. Valuation models may be employed as inputs into risk measurement models including VaR, regulatory capital, estimation of stress loss and the allowance for credit losses.

Models are owned by various functions within the Firm based on the specific purposes of such models. For example, VaR models and certain regulatory capital models are owned by the line of business-aligned risk management functions. Owners of models are responsible for the development, implementation and testing of their models, as well as referral of models to the Model Risk function for review and approval. Once models have been approved, model owners are responsible for the maintenance of a robust operating environment and must monitor and evaluate the performance of the models on an ongoing basis. Model owners may seek to enhance models in response to changes in the portfolios and in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities.

The Model Risk review and governance functions review and approve a wide range of models, including risk management, valuation, and regulatory capital models used by the Firm. Independent of the model owners, the Model Risk review and governance functions are part of the Firm's Model Risk unit, and the Firmwide Model Risk Executive reports to the Firm's CRO.

Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of the Model Risk function. A model review conducted by the Model Risk function considers the model's suitability for the specific uses to which it will be put. The factors considered in reviewing a model include whether the model accurately reflects the characteristics of the product and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant tier of the model.

Under the Firm's Model Risk Policy, the Model Risk function reviews and approves new models, as well as material changes to existing models, prior to implementation in the operating environment. In certain circumstances, the head of the Model Risk function may grant exceptions to the Firm's model risk policy to allow a model to be used prior to review or approval. The Model Risk function may also require the owner to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity.

For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm and Note 3.

Principal investments are predominantly privately-held financial assets and instruments, typically representing an ownership or junior capital position, that have unique risks due to their illiquidity or for which there is less observable market or valuation data. Such investing activities are typically intended to be held over extended investment periods and, accordingly, the Firm has no expectation for short-term gain with respect to these investments. Principal investments cover multiple asset classes and are made either in stand-alone investing businesses or as part of a broader business platform. Asset classes include tax-oriented investments (e.g., affordable housing and alternative energy investments), private equity and various debt investments.

The Firm's principal investments are managed under various lines of business and are captured within the respective LOB's financial results. The Firm's approach to managing principal risk is consistent with the Firm's general risk governance structure. A Firmwide risk policy framework exists for all principal investing activities. All investments are approved by investment committees that include executives who are independent from the investing businesses. The Firm's independent control functions are responsible for reviewing the appropriateness of the carrying value of principal investments in accordance with relevant policies. Approved levels for such investments are established for each relevant business in order to manage the overall size of the portfolios. Industry, geographic, and position level concentration limits are in place and are intended to ensure diversification of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or due to external events that are neither market- nor credit-related. Operational risk is inherent in the Firm's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, inappropriate behavior of employees, failure to comply with applicable laws and regulations or failure of vendors to perform in accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damage to the Firm. The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject.

Overview

To monitor and control operational risk, the Firm maintains an Operational Risk Management Framework ("ORMF") designed to enable the Firm to maintain a sound and well-controlled operational environment. The four main components of the ORMF include: governance, risk identification and assessment, monitoring and reporting, and measurement.

Risk Management is responsible for prescribing the ORMF to the lines of business and corporate functions and for providing independent oversight of its implementation. The lines of business and corporate functions are responsible for implementing the ORMF. The Firmwide Oversight and Control Group ("O&C"), which consists of dedicated control officers within each of the lines of business and corporate functional areas, as well as a central oversight team, is responsible for day to day execution of the ORMF.

Operational risk management framework

The components of the Operational Risk Management Framework are:

Governance

The Firm's operational risk governance function reports to the Firm's CRO and is responsible for defining the ORMF and establishing the firmwide operational risk management governance structure, policies and standards. The Firmwide Risk Executive for Operational Risk Governance, a direct report of the CRO, works with the line of business CROs to provide independent oversight of the implementation of the ORMF across the Firm. Operational Risk Officers ("OROs"), who report to the LOB Chief Risk Officers or to the Firmwide Risk Executive for Operational Risk Governance, are independent of the lines of business and corporate functions, and O&C. The OROs provide oversight of the implementation of the ORMF within in each line of business and corporate function.

Line of business, corporate function and regional control committees oversee the operational risk and control environments of their respective businesses, functions or regions. These committees escalate operational risk issues to the FCC, as appropriate. For additional information on the Firmwide Control Committee, see Enterprise Risk Management on pages 107–111.

Risk Identification and Self-Assessment

In order to evaluate and monitor operational risk, the lines of business and corporate functions utilize several processes to identify, assess, mitigate and manage operational risk. Firmwide standards are in place for each of these processes and set the minimum requirements for how they must be applied.

The Firm's risk and control self-assessment ("RCSA") process and supporting architecture requires management to identify material inherent operational risks, assess the design and operating effectiveness of relevant controls in place to mitigate such risks, and evaluate residual risk. Action plans are developed for control issues that are identified, and businesses are held accountable for tracking and resolving issues on a timely basis. Risk Management performs an independent challenge of the RCSA program including residual risk results.

The Firm also tracks and monitors operational risk events which are analyzed by the responsible businesses and corporate functions. This enables identification of the root causes of the operational risk events and evaluation of the associated controls.

Furthermore, lines of business and corporate functions establish key risk indicators to manage and monitor operational risk and the control environment. These assist in the early detection and timely escalation of issues or events.

Risk monitoring and reporting

Operational risk management and control reports provide information, including actual operational loss levels, self-assessment results and the status of issue resolution to the lines of business and senior management. In addition, key control indicators and operating metrics are monitored against targets and thresholds. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and functions.

Measurement
Two standard forms of operational risk measurement include operational risk capital and operational risk losses under baseline and stressed conditions.

The Firm's operational risk capital methodology incorporates the four required elements of the Advanced Measurement Approach under the Basel III framework:

- Internal losses,
- External losses,
- Scenario analysis, and
- Business environment and internal control factors.

The primary component of the operational risk capital estimate is the result of a statistical model, the Loss Distribution Approach ("LDA"), which simulates the frequency and severity of future operational risk losses based on historical data. The LDA model is used to estimate an aggregate operational risk loss over a one-year time horizon, at a 99.9% confidence level. The LDA model incorporates actual internal operational risk losses in the quarter following the period in which those losses were realized, and the calculation generally continues to reflect such losses even after the issues or business activities giving rise to the losses have been remediated or reduced.

The calculation is supplemented by external loss data as needed, as well as both management's view of plausible tail risk, which is captured as part of the Scenario Analysis process, and evaluation of key LOB internal control metrics (BEICF). The Firm may further supplement such analysis to incorporate feedback from its bank regulators.

The Firm considers the impact of stressed economic conditions on operational risk losses and a forward looking view of material operational risk events that may occur in a stressed environment. The Firm's operational risk stress testing framework is utilized in calculating results for the Firm's CCAR, ICAAP and Risk Appetite processes.

For information related to operational risk RWA, CCAR or ICAAP, see Capital Management section, pages 149–158.

Insurance
One of the ways operational loss may be mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations (e.g., workers compensation), as well as to serve other needs (e.g., property loss and public liability). Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

Cybersecurity
The Firm devotes significant resources maintaining and regularly updating its systems and processes that are designed to protect the security of the Firm's computer systems, software, networks and other technology assets against attempts by unauthorized parties to obtain access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. Third parties with which the Firm does business or that facilitate the Firm's business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecurity risk to the Firm, including with respect to breakdowns or failures of their systems, misconduct by the employees of such parties, or cyberattacks which could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients. In addition, customers with which or whom the Firm does business can also be sources of cybersecurity risk to the Firm, particularly when their activities and systems are beyond the Firm's own security and control systems. Customers will generally be responsible for losses incurred due to their own failure to maintain the security of their own systems and processes.

The Firm and several other U.S. financial institutions have experienced significant distributed denial-of-service attacks from technically sophisticated and well-resourced unauthorized parties which are intended to disrupt online banking services. The Firm and its clients are also regularly targeted by unauthorized parties using malicious code and viruses. On September 10, 2014, the Firm disclosed that a cyberattack against the Firm had occurred. The cyberattacks experienced to date have not resulted in any material disruption to the Firm's operations nor have they had a material adverse effect on the Firm's results of operations. The Firm's Board of Directors and the Audit Committee are regularly apprised regarding the cybersecurity policies and practices of the Firm as well as the Firm's efforts regarding significant cybersecurity events.

Cybersecurity attacks, like the one experienced by the Firm, highlight the need for continued and increased cooperation among businesses and the government, and the Firm continues to work to strengthen its partnerships with the appropriate government and law enforcement agencies and other businesses, including the Firm's third-party service providers, in order to understand the full spectrum of cybersecurity risks in the environment, enhance defenses and improve resiliency against cybersecurity threats.

The Firm has established, and continues to establish, defenses to mitigate other possible future attacks. To enhance its defense capabilities, the Firm increased cybersecurity spending from approximately $250 million in 2014, to approximately $500 million in 2015, and expects the spending to increase to more than $600 million in 2016. Enhancements include more robust testing, advanced analytics, improved technology coverage, strengthened access management and controls and a program to increase employee awareness about cybersecurity risks and best practices.

Business and technology resiliency
JPMorgan Chase's global resiliency and crisis management program is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a

business interruption, and to remain in compliance with global laws and regulations as they relate to resiliency risk. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives aimed to ensure that risks are properly identified, assessed, and managed.

The Firm has established comprehensive tracking and reporting of resiliency plans in order to proactively anticipate and manage various potential disruptive circumstances such as severe weather and flooding, technology and communications outages, cyber incidents, mass transit shutdowns and terrorist threats, among others. The resiliency measures utilized by the Firm include backup infrastructure for data centers, a geographically distributed workforce, dedicated recovery facilities, providing technological capabilities to support remote work capacity for displaced staff and accommodation of employees at alternate locations. JPMorgan Chase continues to coordinate its global resiliency program across the Firm and mitigate business continuity risks by reviewing and testing recovery procedures. The strength and proficiency of the Firm's global resiliency program has played an integral role in maintaining the Firm's business operations during and quickly after various events in 2015 that have resulted in business interruptions, such as severe winter weather and flooding in the U.S. and various global protest-related activities.

LEGAL RISK MANAGEMENT

Legal risk is the risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which the Firm is subject.

Overview

In addition to providing legal services and advice to the Firm, and communicating and helping the lines of business adjust to the legal and regulatory changes they face, including the heightened scrutiny and expectations of the Firm's regulators, the global Legal function is responsible for working with the businesses and corporate functions to fully understand and assess their adherence to laws and regulations. In particular, Legal assists Oversight & Control, Risk, Finance, Compliance and Internal Audit in their efforts to ensure compliance with all applicable laws and regulations and the Firm's corporate standards for doing business. The Firm's lawyers also advise the Firm on potential legal exposures on key litigation and transactional matters, and perform a significant defense and advocacy role by defending the Firm against claims and potential claims and, when needed, pursuing claims against others.

Governance and oversight

The Firm's General Counsel reports to the CEO and is a member of the Operating Committee, the Firmwide Risk Committee and the Firmwide Control Committee. The General Counsel's leadership team includes a General Counsel for each line of business, the heads of the Litigation and Corporate & Regulatory practices, as well as the Firm's Corporate Secretary. Each region (e.g., Latin America, Asia Pacific) has a General Counsel who is responsible for managing legal risk across all lines of business and functions in the region.

Legal works with various committees (including new business initiative and reputation risk committees) and the Firm's businesses to protect the Firm's reputation beyond any particular legal requirements. In addition, it advises the Firm's Conflicts Office which reviews the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

COMPLIANCE RISK MANAGEMENT

Compliance risk is the risk of failure to comply with applicable laws, rules, and regulations.

Overview

Each line of business is accountable for managing its compliance risk. The Firm's Compliance Organization ("Compliance"), which is independent of the lines of business, works closely with the Operating Committee and management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the offering of the Firm's products and services to clients and customers.

These compliance risks relate to a wide variety of legal and regulatory obligations, depending on the line of business and the jurisdiction, and include those related to products and services, relationships and interactions with clients and customers, and employee activities.

For example, one compliance risk, fiduciary risk, is the failure to exercise the applicable high standard of care, to act in the best interests of clients or to treat clients fairly, as required under applicable law or regulation. Other specific compliance risks include those associated with anti-money laundering compliance, trading activities, market conduct, and complying with the rules and regulations related to the offering of products and services across jurisdictional borders, among others.

Compliance implements various practices designed to identify and mitigate compliance risk by implementing policies, testing and monitoring, training and providing guidance.

In recent years, the Firm has experienced heightened scrutiny by its regulators of its compliance with regulations, and with respect to its controls and operational processes. In certain instances, the Firm has entered into Consent Orders with its regulators requiring the Firm to take certain specified actions to remediate compliance with regulations and improve its controls. The Firm expects that such regulatory scrutiny will continue.

Governance and oversight

Compliance is led by the Firms' Chief Compliance Officer ("CCO") who reports directly to the Firm's COO. The Firm maintains oversight and coordination in its Compliance Risk Management practices globally through the Firm's CCO, lines of business CCOs and regional CCOs to implement the Compliance program across the lines of business and regions. The Firm's CCO is a member of the Firmwide Control Committee and the Firmwide Risk Committee. The Firm's CCO also provides regular updates to the Audit Committee and DRPC. In addition, from time to time, special committees of the Board have been established to oversee the Firm's compliance with regulatory Consent Orders.

The Firm has in place a Code of Conduct (the "Code"), and each employee is given annual training in respect of the Code and is required annually to affirm his or her compliance with the Code. The Code sets forth the Firm's core principles and fundamental values, including that no employee should ever sacrifice integrity - or give the impression that he or she has. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's employees, customers, suppliers, contract workers, business partners, or agents. Specified employees are specially trained and designated as "code specialists" who act as a resource to employees on Code of Conduct matters. In addition, concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code. The Code and the associated employee compliance program are focused on the regular assessment of certain key aspects of the Firm's culture and conduct initiatives.

REPUTATION RISK MANAGEMENT

Reputation risk is the risk that an action, transaction, investment or event will reduce trust in the Firm's integrity or competence by our various constituents, including clients, counterparties, investors, regulators, employees and the broader public. Maintaining the Firm's reputation is the responsibility of each individual employee of the Firm. The Firm's Reputation Risk Governance policy explicitly vests each employee with the responsibility to consider the reputation of the Firm when engaging in any activity. Since the types of events that could harm the Firm's reputation are so varied across the Firm's lines of business, each line of business has a separate reputation risk governance infrastructure in place, which consists of three key elements: clear, documented escalation criteria appropriate to the business; a designated primary discussion forum — in most cases, one or more dedicated reputation risk committees; and a list of designated contacts, to whom questions relating to reputation risk should be referred. Line of business reputation risk governance is overseen by a Firmwide Reputation Risk Governance function, which provides oversight of the governance infrastructure and process to support the consistent identification, escalation, management and reporting of reputation risk issues firmwide.

CAPITAL MANAGEMENT

Capital risk is the risk the Firm has an insufficient level and composition of capital to support the Firm's business activities and associated risks during normal economic environments and stressed conditions.

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment. Prior to making any decisions on future business activities, senior management considers the implications on the Firm's capital. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative by the Firm's Board of Directors, CEO and Operating Committee. The Firm's balance sheet philosophy focuses on risk-adjusted returns, strong capital and reserves, and robust liquidity.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status and meet regulatory capital requirements;
- Retain flexibility to take advantage of future investment opportunities;
- Maintain sufficient capital in order to continue to build and invest in its businesses through the cycle and in stressed environments; and
- Distribute excess capital to shareholders while balancing the other objectives stated above.

These objectives are achieved through ongoing monitoring and management of the Firm's capital position, regular stress testing, and a capital governance framework. Capital management is intended to be flexible in order to react to a range of potential events. JPMorgan Chase has firmwide and LOB processes for ongoing monitoring and active management of its capital position.

The following tables present the Firm's Transitional and Fully Phased-In risk-based and leverage-based capital metrics under both Basel III Standardized and Advanced approaches. The Firm's Basel III CET1 ratio exceeds the regulatory minimum as of December 31, 2015. For further discussion of these capital metrics and the Standardized and Advanced approaches refer to Monitoring and management of capital on pages 151–155.

	Transitional			Fully Phased-In		
December 31, 2015 (in millions, except ratios)	Standardized	Advanced	Minimum capital ratios [c]	Standardized	Advanced	Minimum capital ratios [d]
Risk-based capital metrics:						
CET1 capital	**$ 175,398**	**$ 175,398**		**$ 173,189**	**$ 173,189**	
Tier 1 capital	**200,482**	**200,482**		**199,047**	**199,047**	
Total capital	**234,413**	**224,616**		**229,976**	**220,179**	
Risk-weighted assets	**1,465,262** [b]	**1,485,336**		**1,474,870**	**1,495,520**	
CET1 capital ratio	**12.0%**	**11.8%**	4.5%	**11.7%**	**11.6%**	10.5%
Tier 1 capital ratio	**13.7**	**13.5**	6.0	**13.5**	**13.3**	12.0
Total capital ratio	**16.0**	**15.1**	8.0	**15.6**	**14.7**	14.0
Leverage-based capital metrics:						
Adjusted average assets	**2,361,177**	**2,361,177**		**2,360,499**	**2,360,499**	
Tier 1 leverage ratio[a]	**8.5%**	**8.5%**	4.0	**8.4%**	**8.4%**	4.0
SLR leverage exposure	**NA**	**$ 3,079,797**		**NA**	**$ 3,079,119**	
SLR	**NA**	**6.5%**	NA	**NA**	**6.5%**	5.0 [e]

	Transitional			Fully Phased-In		
December 31, 2014 (in millions, except ratios)	Standardized	Advanced	Minimum capital ratios [c]	Standardized	Advanced	Minimum capital ratios [d]
Risk-based capital metrics:						
CET1 capital	$ 164,426	$ 164,426		$ 164,514	$ 164,514	
Tier 1 capital	186,263	186,263		184,572	184,572	
Total capital	221,117	210,576		216,719	206,179	
Risk-weighted assets	1,472,602 [b]	1,608,240		1,561,145	1,619,287	
CET1 capital ratio	11.2%	10.2%	4.5%	10.5%	10.2%	9.5%
Tier 1 capital ratio	12.6	11.6	6.0	11.8	11.4	11.0
Total capital ratio	15.0	13.1	8.0	13.9	12.7	13.0
Leverage-based capital metrics:						
Adjusted average assets	2,464,915	2,464,915		2,463,902	2,463,902	
Tier 1 leverage ratio[a]	7.6%	7.6%	4.0	7.5%	7.5%	4.0
SLR leverage exposure	NA	NA		NA	$ 3,320,404	
SLR	NA	NA	NA	NA	5.6%	5.0 [e]

Note: As of December 31, 2015 and 2014, the lower of the Standardized or Advanced capital ratios under each of the transitional and fully phased in approaches in the table above represents the Firm's Collins Floor, as discussed in Monitoring and management of Capital on page 151.

(a) The Tier 1 leverage ratio is not a risk-based measure of capital. This ratio is calculated by dividing Tier 1 capital by adjusted average assets.
(b) Effective January 1, 2015, the Basel III Standardized RWA is calculated under the Basel III definition of the Standardized approach. Prior periods were based on Basel I (inclusive of Basel 2.5).
(c) Represents the transitional minimum capital ratios applicable to the Firm under Basel III as of December 31, 2015 and 2014.
(d) Represents the minimum capital ratios applicable to the Firm on a fully phased-in Basel III basis. At December 31, 2015, the ratios include the Firm's estimate of its Fully Phased-In U.S. GSIB surcharge of 3.5%, based on the final U.S. GSIB rule published by the Federal Reserve on July 20, 2015. At December 31, 2014, the ratios included the Firm's GSIB surcharge of 2.5% which was published in November 2014 by the Financial Stability Board and calculated under the Basel Committee on Banking Supervisions Final GSIB rule. The minimum capital ratios will be fully phased-in effective January 1, 2019. For additional information on the GSIB surcharge, see page 152.
(e) In the case of the SLR, the fully phased-in minimum ratio is effective beginning January 1, 2018.

Strategy and governance
The Firm's CEO, in conjunction with the Board of Directors, establishes principles and guidelines for capital planning, issuance, usage and distributions, and establishes capital targets for the level and composition of capital in both business-as-usual and highly stressed environments.

The Firm's senior management recognizes the importance of a capital management function that supports strategic decision-making. The Capital Governance Committee and the Regulatory Capital Management Office ("RCMO") are key components in support of this objective. The Capital Governance Committee is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams, and ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses. RCMO, which reports to the Firm's CFO, is responsible for reviewing, approving and monitoring the implementation of the Firm's capital policies and strategies, as well as its capital adequacy assessment process. The review assesses the effectiveness of the capital adequacy process, the appropriateness of the risk tolerance levels, and the strength of the control infrastructure. The DRPC oversees the Firm's capital adequacy process and its components. The Basel Independent Review function ("BIR"), which reports to the RCMO and the Capital Governance Committee, conducts independent assessments of the Firm's regulatory capital framework to ensure compliance with the applicable U.S. Basel rules in support of the DRPC's and senior management's oversight of the Firm's capital processes. For additional discussion on the DRPC, see Enterprise-wide Risk Management on pages 107–111.

Monitoring and management of capital
In its monitoring and management of capital, the Firm takes into consideration an assessment of economic risk and all regulatory capital requirements to determine the level of capital needed to meet and maintain the objectives discussed above, as well as to support the framework for allocating capital to its business segments. While economic risk is considered prior to making decisions on future business activities, in most cases, the Firm considers risk-based regulatory capital to be a proxy for economic risk capital.

Regulatory capital
The Federal Reserve establishes capital requirements, including well capitalized standards, for the consolidated financial holding company. The OCC establishes similar minimum capital requirements for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

The U.S. capital requirements generally follow the Capital Accord of the Basel Committee, as amended from time to time. Prior to January 1, 2014, the Firm and its banking subsidiaries were subject to the capital requirements of Basel I and Basel 2.5. Effective January 1, 2014, the Firm became subject to Basel III (which incorporates Basel 2.5).

Basel III overview
Basel III capital rules, for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution ("IDI") subsidiaries, revised, among other things, the definition of capital and introduced a new CET1 capital requirement. Basel III presents two comprehensive methodologies for calculating RWA, a general (Standardized) approach, which replaced Basel I RWA effective January 1, 2015 ("Basel III Standardized") and an advanced approach, which replaced Basel II RWA ("Basel III Advanced"); and sets out minimum capital ratios and overall capital adequacy standards. Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

The capital adequacy of the Firm and its national bank subsidiaries is evaluated against the Basel III approach (Standardized or Advanced) which results in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

Basel III establishes capital requirements for calculating credit risk and market risk RWA, and in the case of Basel III Advanced, operational risk RWA. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5. In addition to the RWA calculated under these methodologies, the Firm may supplement such amounts to incorporate management judgment and feedback from its bank regulators.

Basel III also includes a requirement for Advanced Approach banking organizations, including the Firm, to calculate a Supplementary Leverage Ratio ("SLR"). For additional information on SLR, see page 155.

Basel III Fully Phased-In
Basel III capital rules will become fully phased-in on January 1, 2019, at which point the Firm will continue to calculate its capital ratios under both the Basel III Standardized and Advanced Approaches. While the Firm has imposed Basel III Standardized Fully Phased-In RWA limits on its lines of business, the Firm continues to manage each of the businesses (including line of business equity allocations), as well as the corporate functions, primarily on a Basel III Advanced Fully Phased-In basis.

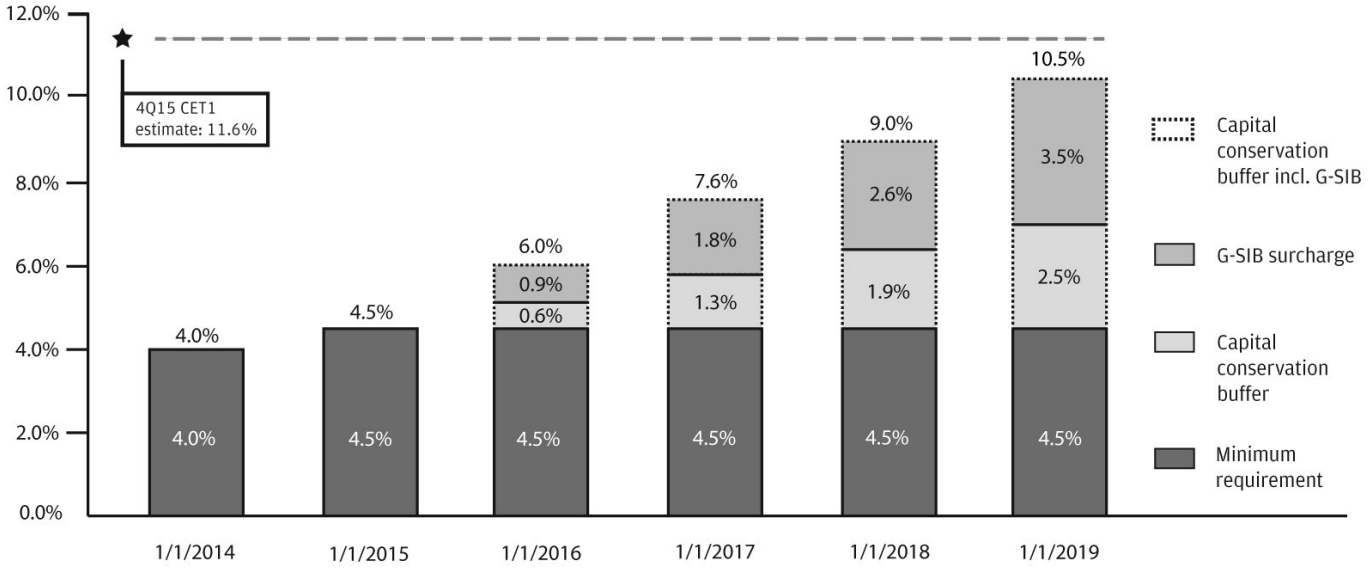
The Firm's capital, RWA and capital ratios that are presented under Basel III Standardized and Advanced Fully Phased-In rules and the Firm's and JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s SLRs calculated under the Basel III Advanced Fully Phased-In rules are non-GAAP financial measures. However, such measures are used by banking regulators, investors and analysts to assess the

Firm's capital position and to compare the Firm's capital to that of other financial services companies.

The Firm's estimates of its Basel III Standardized and Advanced Fully Phased-In capital, RWA and capital ratios and of the Firm's, JPMorgan Chase Bank, N.A.'s, and Chase Bank USA, N.A.'s SLRs reflect management's current understanding of the U.S. Basel III rules based on the current published rules and on the application of such rules to the Firm's businesses as currently conducted. The actual impact on the Firm's capital ratios and SLR as of the effective date of the rules may differ from the Firm's current estimates depending on changes the Firm may make to its businesses in the future, further implementation guidance from the regulators, and regulatory approval of certain of the Firm's internal risk models (or, alternatively, regulatory disapproval of the Firm's internal risk models that have previously been conditionally approved).

Risk-based capital regulatory minimums

The following chart presents the Basel III minimum CET1 capital ratio during the transitional periods and on a fully phased-in basis under the Basel III rules currently in effect.



At December 31, 2015 and 2014, JPMorgan Chase maintained Basel III Standardized Transitional and Basel III Advanced Transitional capital ratios in excess of the well-capitalized standards established by the Federal Reserve. Additional information regarding the Firm's capital ratios, as well as the U.S. federal regulatory capital standards to which the Firm is subject, is presented in Note 28. For further information on the Firm's Basel III measures, see the Firm's Pillar 3 Regulatory Capital Disclosures reports, which are available on the Firm's website (http://investor.shareholder.com/jpmorganchase/basel.cfm).

All banking institutions are currently required to have a minimum capital ratio of 4.5% of CET1 capital. Certain banking organizations, including the Firm, will be required to hold additional amounts of capital to serve as a "capital conservation buffer." The capital conservation buffer is intended to be used to absorb potential losses in times of financial or economic stress. If not maintained, the Firm could be limited in the amount of capital that may be distributed, including dividends and common equity repurchases. The capital conservation buffer is to be phased-in over time, beginning January 1, 2016 through January 1, 2019.

When fully phased-in, the capital conservation buffer requires an additional 2.5% of CET1 capital, as well as additional levels of capital in the form of a GSIB surcharge and the recently implemented countercyclical capital buffer. On July 20, 2015, the Federal Reserve issued a final rule requiring GSIBs to calculate their GSIB surcharge, on an annual basis, under two separately prescribed methods, and to be subject to the higher of the two. The first method ("Method 1") reflects the GSIB surcharge as prescribed by Basel rules, and is calculated across five criteria: size, cross-jurisdictional activity, interconnectedness, complexity and substitutability. The second method ("Method 2") modifies the requirements to include a measure of short-term wholesale funding in place of substitutability, and introduces a GSIB score "multiplication factor." Based upon data as of December 31, 2015, the Firm estimates its fully phased-in GSIB surcharge would be 2% of CET1 capital under Method 1 and 3.5% under Method 2. On July 20, 2015, the date of the last published estimate, the Federal Reserve had estimated the Firm's GSIB surcharge to be 2.5% under Method 1 and 4.5% under Method 2 as of December 31, 2014.

The countercyclical capital buffer is a potential expansion of the capital conservation buffer that takes into account the macro financial environment in which large, internationally active banks function. As of December 31, 2015 the Federal Reserve reaffirmed setting the U.S. countercyclical capital buffer at 0%, and stated that it will review the amount at least annually. The countercyclical capital buffer can be increased if the Federal Reserve, FDIC and OCC determine that credit growth in the economy has become excessive and can be set at up to an additional 2.5% of RWA. On December 21, 2015, the Federal Reserve, in conjunction with the FDIC and OCC, requested public comment, due March 21, 2016, on a proposed policy statement detailing the framework that would be followed in setting the U.S. Basel III countercyclical capital buffer.

Based on the Firm's most recent estimate of its GSIB surcharge and the current countercyclical buffer being set at 0%, the Firm estimates its fully phased-in capital conservation buffer would be 6%.

As well as meeting the capital ratio requirements of Basel III, the Firm must, in order to be "well-capitalized", maintain a minimum 6% Tier 1 and a 10% Total capital requirement. Each of the Firm's IDI subsidiaries must maintain a minimum 5% Tier 1 leverage, 6.5% CET1, 8% Tier 1 and 10% Total capital standard to meet the definition of "well-capitalized" under the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA") for IDI subsidiaries. The PCA standards for IDI subsidiaries were effective January 1, 2015.

A reconciliation of total stockholders' equity to Basel III Standardized and Advanced Fully Phased-In CET1 capital, Tier 1 capital and Total capital is presented in the table below. Beginning July 21, 2015, the Volcker Rule provisions regarding the prohibitions against proprietary trading and holding ownership interests in or sponsoring "covered funds" became effective. The deduction from Basel III Tier 1 capital associated with the permissible holdings of covered funds acquired after December 31, 2013 was not material as of December 31, 2015. For additional information on the components of regulatory capital, see Note 28.

Capital components

(in millions)		December 31, 2015
Total stockholders' equity	**$**	**247,573**
Less: Preferred stock		26,068
Common stockholders' equity		**221,505**
Less:		
Goodwill		47,325
Other intangible assets		1,015
Add:		
Deferred tax liabilities[(a)]		3,148
Less: Other CET1 capital adjustments		3,124
Standardized/Advanced CET1 capital		**173,189**
Preferred stock		26,068
Less:		
Other Tier 1 adjustments		210
Standardized/Advanced Tier 1 capital	**$**	**199,047**
Long-term debt and other instruments qualifying as Tier 2 capital	$	16,679
Qualifying allowance for credit losses		14,341
Other		(91)
Standardized Fully Phased-In Tier 2 capital	**$**	**30,929**
Standardized Fully Phased-in Total capital	**$**	**229,976**
Adjustment in qualifying allowance for credit losses for Advanced Tier 2 capital		(9,797)
Advanced Fully Phased-In Tier 2 capital	**$**	**21,132**
Advanced Fully Phased-In Total capital	**$**	**220,179**

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

The following table presents a reconciliation of the Firm's Basel III Transitional CET1 capital to the Firm's estimated Basel III Fully Phased-In CET1 capital as of December 31, 2015.

(in millions)	December 31, 2015
Transitional CET1 capital	**$ 175,398**
AOCI phase-in[(a)]	427
CET1 capital deduction phase-in[(b)]	(2,005)
Intangible assets deduction phase-in[(c)]	(546)
Other adjustments to CET1 capital[(d)]	(85)
Fully Phased-In CET1 capital	**$ 173,189**

(a) Includes the remaining balance of AOCI related to AFS debt securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans that will qualify as Basel III CET1 capital upon full phase-in.
(b) Predominantly includes regulatory adjustments related to changes in FVA/DVA, as well as CET1 deductions for defined benefit pension plan assets and deferred tax assets related to net operating loss and tax credit carryforwards.
(c) Relates to intangible assets, other than goodwill and MSRs, that are required to be deducted from CET1 capital upon full phase-in.
(d) Includes minority interest and the Firm's investments in its own CET1 capital instruments.

Capital rollforward

The following table presents the changes in Basel III Fully Phased-In CET1 capital, Tier 1 capital and Tier 2 capital for the year ended December 31, 2015.

Year Ended December 31, (in millions)	2015
Standardized/Advanced CET1 capital at December 31, 2014	$ 164,514
Net income applicable to common equity	22,927
Dividends declared on common stock	(6,484)
Net purchase of treasury stock	(3,835)
Changes in additional paid-in capital	(770)
Changes related to AOCI	(2,116)
Adjustment related to FVA/DVA	(454)
Other	(593)
Increase in Standardized/Advanced CET1 capital	8,675
Standardized/Advanced CET1 capital at December 31, 2015	**$ 173,189**
Standardized/Advanced Tier 1 capital at December 31, 2014	$ 184,572
Change in CET1 capital	8,675
Net issuance of noncumulative perpetual preferred stock	6,005
Other	(205)
Increase in Standardized/Advanced Tier 1 capital	14,475
Standardized/Advanced Tier 1 capital at December 31, 2015	**$ 199,047**
Standardized Tier 2 capital at December 31, 2014	$ 32,147
Change in long-term debt and other instruments qualifying as Tier 2	(748)
Change in qualifying allowance for credit losses	(466)
Other	(4)
Increase in Standardized Tier 2 capital	(1,218)
Standardized Tier 2 capital at December 31, 2015	**$ 30,929**
Standardized Total capital at December 31, 2015	**$ 229,976**
Advanced Tier 2 capital at December 31, 2014	$ 21,607
Change in long-term debt and other instruments qualifying as Tier 2	(748)
Change in qualifying allowance for credit losses	277
Other	(4)
Increase in Advanced Tier 2 capital	(475)
Advanced Tier 2 capital at December 31, 2015	**$ 21,132**
Advanced Total capital at December 31, 2015	**$ 220,179**

RWA rollforward

The following table presents changes in the components of RWA under Basel III Standardized and Advanced Fully Phased-In for the year ended December 31, 2015. The amounts in the rollforward categories are estimates, based on the predominant driver of the change.

	Standardized			Advanced			
Year ended December 31, 2015 (in billions)	Credit risk RWA	Market risk RWA	**Total RWA**	Credit risk RWA	Market risk RWA	Operational risk RWA	**Total RWA**
December 31, 2014	$ 1,381	$ 180	**$ 1,561**	$ 1,040	$ 179	$ 400	**$ 1,619**
Model & data changes[a]	(17)	(15)	**(32)**	(38)	(15)	–	**(53)**
Portfolio runoff[b]	(13)	(8)	**(21)**	(21)	(8)	–	**(29)**
Movement in portfolio levels[c]	(18)	(15)	**(33)**	(27)	(14)	–	**(41)**
Changes in RWA	(48)	(38)	**(86)**	(86)	(37)	–	**(123)**
December 31, 2015	**$ 1,333**	**$ 142**	**$ 1,475**	**$ 954**	**$ 142**	**$ 400**	**$ 1,496**

(a) Model & data changes refer to movements in levels of RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).

(b) Portfolio runoff for credit risk RWA reflects reduced risk from position rolloffs in legacy portfolios in Mortgage Banking, (primarily under the Advanced framework) and Broker Dealer Services (primarily under the Standardized framework); and for market risk RWA reflects reduced risk from position rolloffs in legacy portfolios in the wholesale businesses.

(c) Movement in portfolio levels for credit risk RWA refers to changes in book size, composition, credit quality, and market movements; and for market risk RWA refers to changes in position and market movements.

Supplementary leverage ratio

The SLR is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives potential future exposure.

On September 3, 2014, the U.S. banking regulators adopted a final rule for the calculation of the SLR. The U.S. final rule requires public disclosure of the SLR beginning with the first quarter of 2015, and also requires U.S. bank holding companies, including the Firm, to have a minimum SLR of 5% and IDI subsidiaries, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., to have a minimum SLR of 6%, both beginning January 1, 2018. As of December 31, 2015, the Firm estimates that JPMorgan Chase Bank, N.A.'s and Chase Bank USA, N.A.'s Fully Phased-In SLRs are approximately 6.6% and 8.3%, respectively.

The following table presents the components of the Firm's Fully Phased-In SLR, a non-GAAP financial measure, as of December 31, 2015.

(in millions, except ratio)	December 31, 2015
Fully Phased-in Tier 1 Capital	**$ 199,047**
Total average assets	2,408,253
Less: amounts deducted from Tier 1 capital	47,754
Total adjusted average assets[a]	2,360,499
Off-balance sheet exposures[b]	718,620
SLR leverage exposure	**$ 3,079,119**
SLR	**6.5%**

(a) Adjusted average assets, for purposes of calculating the SLR, includes total quarterly average assets adjusted for on-balance sheet assets that are subject to deduction from Tier 1 capital, predominantly goodwill and other intangible assets.

(b) Off-balance sheet exposures are calculated as the average of the three month-end spot balances in the reporting quarter.

Planning and stress testing

Comprehensive Capital Analysis and Review

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act stress test processes to ensure that large bank holding companies have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each bank holding company's ("BHC") unique risks to enable them to have the ability to absorb losses under certain stress scenarios. Through the CCAR, the Federal Reserve evaluates each BHC's capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

On March 11, 2015, the Federal Reserve informed the Firm that it did not object, on either a quantitative or qualitative basis, to the Firm's 2015 capital plan. For information on actions taken by the Firm's Board of Directors following the 2015 CCAR results, see Capital actions on page 157.

For 2016, the Federal Reserve revised the capital plan cycle for the CCAR process. Under the revised time line, the Firm is required to submit its 2016 capital plan to the Federal Reserve by April 5, 2016. The Federal Reserve has indicated that it expects to respond to the capital plan submissions of bank holding companies by June 30, 2016.

The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process, as discussed below.

Internal Capital Adequacy Assessment Process
Semiannually, the Firm completes the ICAAP, which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Board of Directors.

Line of business equity

The Firm's framework for allocating capital to its business segments (line of business equity) is based on the following objectives:

- Integrate firmwide and line of business capital management activities;
- Measure performance consistently across all lines of business; and
- Provide comparability with peer firms for each of the lines of business.

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In) and economic risk. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

Line of business equity Year ended December 31, (in billions)	Yearly average		
	2015	2014	2013
Consumer & Community Banking	**$ 51.0**	$ 51.0	$ 46.0
Corporate & Investment Bank	**62.0**	61.0	56.5
Commercial Banking	**14.0**	14.0	13.5
Asset Management	**9.0**	9.0	9.0
Corporate	**79.7**	72.4	71.4
Total common stockholders' equity	**$ 215.7**	$ 207.4	$ 196.4

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital. The line of business equity allocations are updated as refinements are implemented. The table below reflects the Firm's assessed level of capital required for each line of business as of the dates indicated.

Line of business equity (in billions)	**January 1, 2016**	December 31, 2015	December 31, 2014
Consumer & Community Banking	**$ 51.0**	$ 51.0	$ 51.0
Corporate & Investment Bank	**64.0**	62.0	61.0
Commercial Banking	**16.0**	14.0	14.0
Asset Management	**9.0**	9.0	9.0
Corporate	**81.5**	85.5	76.7
Total common stockholders' equity	**$ 221.5**	$ 221.5	$ 211.7

Other capital requirements

Minimum Total Loss Absorbing Capacity
In November 2015, the Financial Stability Board ("FSB") finalized the TLAC standard for GSIBs, which establishes the criteria for TLAC eligible debt and capital instruments and defines the minimum requirements for amounts of loss absorbing and recapitalization capacity. This amount and type of debt and capital instruments is intended to effectively absorb losses, as necessary, upon the failure of a GSIB, without imposing such losses on taxpayers of the relevant jurisdiction or causing severe systemic disruptions, and thereby ensuring the continuity of the GSIB's critical functions. The final standard will require GSIBs to meet a common minimum TLAC requirement of 16% of the financial institution's RWA, effective January 1, 2019, and at least 18% effective January 1, 2022. The minimum TLAC must also be at least 6% of a financial institution's Basel III leverage ratio denominator, effective January 1, 2019, and at least 6.75% effective January 1, 2022.

On October 30, 2015, the Federal Reserve issued proposed rules that would require the top-tier holding companies of eight U.S. global systemically important bank holding companies, including the Firm, among other things, to maintain minimum levels of eligible TLAC and long-term debt satisfying certain eligibility criteria ("eligible LTD") commencing January 1, 2019. Under the proposal, these eight U.S GSIBs would be required to maintain minimum TLAC of no less than 18% of the financial institution's RWA or 9.5% of its leverage exposure (as defined by the rules), plus in the case of the RWA-based measure, a TLAC buffer that is equal to 2.5% of the financial institution's CET1, any applicable countercyclical buffer and the financial institution's GSIB surcharge as calculated under method 1. The minimum level of eligible LTD that would be required to be maintained by these eight U.S. GSIBs would be equal to the greater of (A) 6% of the financial institution's RWA, plus the higher of the method 1 or method 2 GSIB surcharge applicable to the institution and (B) 4.5% of its leverage exposure (as defined by the rules). These proposed TLAC Rules would disqualify from eligible LTD, among other instruments, senior debt securities that permit acceleration for reasons other than insolvency or payment default, as well as structured notes and debt securities not governed by U.S. law. The Firm is currently evaluating the impact of the proposal.

Capital actions

Dividends

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities. Following receipt on March 11, 2015, of the Federal Reserve's non-objection to the Firm's 2015 capital plan submitted under its CCAR, the Firm announced that its Board of Directors increased the quarterly common stock dividend to $0.44 per share, effective with the dividend paid on July 31, 2015. The Firm's dividends are subject to the Board of Directors' approval at the customary times those dividends are declared.

For information regarding dividend restrictions, see Note 22 and Note 27.

The following table shows the common dividend payout ratio based on reported net income.

Year ended December 31,	**2015**	2014	2013
Common dividend payout ratio	28%	29%	33%

Common equity

During the year ended December 31, 2015, warrant holders exercised their right to purchase 12.4 million shares of the Firm's common stock. The Firm issued 4.7 million shares of its common stock as a result of these exercises. As of December 31, 2015, 47.4 million warrants remained outstanding, compared with 59.8 million outstanding as of December 31, 2014.

On March 11, 2015, in conjunction with the Federal Reserve's release of its 2015 CCAR results, the Firm's Board of Directors authorized a $6.4 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2015, $2.7 billion (on a settlement-date basis) of authorized repurchase capacity remained under the program. This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2015, 2014 and 2013, on a settlement-date basis. There were no warrants repurchased during the years ended December 31, 2015, 2014, and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
Total number of shares of common stock repurchased	**89.8**	82.3	96.1
Aggregate purchase price of common stock repurchases	**$ 5,616**	$ 4,760	$ 4,789

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity — for example, during internal trading "blackout periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information.

The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilize Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities on page 20.

Preferred stock

During the year ended December 31, 2015, the Firm issued $6.0 billion of noncumulative preferred stock. Preferred stock dividends declared were $1.5 billion for the year ended December 31, 2015. Assuming all preferred stock issuances were outstanding for the entire year and quarterly dividends were declared on such issuances, preferred stock dividends would have been $1.6 billion for the year ended December 31, 2015. For additional information on the Firm's preferred stock, see Note 22.

Redemption of outstanding trust preferred securities

On April 2, 2015, the Firm redeemed $1.5 billion, or 100% of the liquidation amount, of JPMorgan Chase Capital XXIX trust preferred securities. On May 8, 2013, the Firm redeemed approximately $5.0 billion, or 100% of the liquidation amount, of the following eight series of trust preferred securities: JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX, XXIV, and BANK ONE Capital VI. For a further discussion of trust preferred securities, see Note 21.

Broker-dealer regulatory capital

JPMorgan Chase's principal U.S. broker-dealer subsidiaries are JPMorgan Securities and J.P. Morgan Clearing Corp. ("JPMorgan Clearing"). JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the "Net Capital Rule"). JPMorgan Securities and JPMorgan Clearing are also each registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission ("CFTC").

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the "Alternative Net Capital Requirements" of the Net Capital Rule. At December 31, 2015, JPMorgan Securities' net capital, as defined by the Net Capital Rule, was $14.2 billion, exceeding the minimum requirement by $11.9 billion, and JPMorgan Clearing's net capital was $7.7 billion, exceeding the minimum requirement by $6.2 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of $1.0 billion and is also required to notify the Securities and Exchange Commission ("SEC") in the event that tentative net capital is less than $5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2015, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

J.P. Morgan Securities plc is a wholly owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm's principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated by the U.K. Prudential Regulation Authority ("PRA") and Financial Conduct Authority ("FCA"). Commencing January 1, 2014, J.P. Morgan Securities plc became subject to the U.K. Basel III capital rules.

At December 31, 2015, J.P. Morgan Securities plc had estimated total capital of $33.9 billion; its estimated CET1 capital ratio was 15.4% and its estimated Total capital ratio was 19.6%. Both capital ratios exceeded the minimum standards of 4.5% and 8.0%, respectively, under the transitional requirements of the European Union's ("EU") Basel III Capital Requirements Directive and Regulation, as well as the additional capital requirements specified by the PRA.

Liquidity risk is the risk that the Firm will be unable to meet its contractual and contingent obligations or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets.

Liquidity risk oversight

The Firm has a liquidity risk oversight function whose primary objective is to provide assessment, measurement, monitoring, and control of liquidity risk across the Firm. Liquidity risk oversight is managed through a dedicated firmwide Liquidity Risk Oversight group. The CTC CRO, as part of the independent risk management function, has responsibility for firmwide Liquidity Risk Oversight. Liquidity Risk Oversight's responsibilities include but are not limited to:

- Establishing and monitoring limits, indicators, and thresholds, including liquidity appetite tolerances;
- Defining, monitoring, and reporting internal firmwide and legal entity stress tests, and monitoring and reporting regulatory defined stress testing;
- Monitoring and reporting liquidity positions, balance sheet variances and funding activities;
- Conducting ad hoc analysis to identify potential emerging liquidity risks.

Risk governance and measurement

Specific committees responsible for liquidity governance include firmwide ALCO as well as line of business and regional ALCOs, and the CTC Risk Committee. For further discussion of the risk and risk-related committees, see Enterprise-wide Risk Management on pages 107–111.

Internal Stress testing

Liquidity stress tests are intended to ensure sufficient liquidity for the Firm under a variety of adverse scenarios. Results of stress tests are therefore considered in the formulation of the Firm's funding plan and assessment of its liquidity position. Liquidity outflow assumptions are modeled across a range of time horizons and contemplate both market and idiosyncratic stress. Standard stress tests are performed on a regular basis and ad hoc stress tests are performed in response to specific market events or concerns. Stress scenarios are produced for JPMorgan Chase & Co. ("Parent Company") and the Firm's major subsidiaries.

Liquidity stress tests assume all of the Firm's contractual obligations are met and then take into consideration varying levels of access to unsecured and secured funding markets. Additionally, assumptions with respect to potential non-contractual and contingent outflows are contemplated.

Liquidity management

Treasury is responsible for liquidity management. The primary objectives of effective liquidity management are to ensure that the Firm's core businesses are able to operate in support of client needs, meet contractual and contingent obligations through normal economic cycles as well as during stress events, and to manage optimal funding mix, and availability of liquidity sources. The Firm manages liquidity and funding using a centralized, global approach in order to optimize liquidity sources and uses.

In the context of the Firm's liquidity management, Treasury is responsible for:

- Analyzing and understanding the liquidity characteristics of the Firm, lines of business and legal entities' assets and liabilities, taking into account legal, regulatory, and operational restrictions;
- Defining and monitoring firmwide and legal entity liquidity strategies, policies, guidelines, and contingency funding plans;
- Managing liquidity within approved liquidity risk appetite tolerances and limits;
- Setting transfer pricing in accordance with underlying liquidity characteristics of balance sheet assets and liabilities as well as certain off-balance sheet items.

Contingency funding plan

The Firm's contingency funding plan ("CFP"), which is reviewed by ALCO and approved by the DRPC, is a compilation of procedures and action plans for managing liquidity through stress events. The CFP incorporates the limits and indicators set by the Liquidity Risk Oversight group. These limits and indicators are reviewed regularly to identify the emergence of risks or vulnerabilities in the Firm's liquidity position. The CFP identifies the alternative contingent liquidity resources available to the Firm in a stress event.

Parent Company and subsidiary funding

The Parent Company acts as a source of funding to its subsidiaries. The Firm's liquidity management is intended to maintain liquidity at the Parent Company, in addition to funding and liquidity raised at the subsidiary operating level, at levels sufficient to fund the operations of the Parent Company and its subsidiaries for an extended period of time in a stress environment where access to normal funding sources is disrupted. The Parent Company currently holds sufficient liquidity to withstand peak outflows over a one year liquidity stress horizon, assuming no access to wholesale funding markets.

LCR and NSFR

The Firm must comply with the U.S. LCR rule, which is intended to measure the amount of HQLA held by the Firm in relation to estimated net cash outflows within a 30-day period during an acute stress event. The LCR is required to be 80% at January 1, 2015, increasing by 10% each year until reaching the 100% minimum by January 1, 2017. At December 31, 2015, the Firm was compliant with the fully phased-in U.S. LCR.

On October 31, 2014, the Basel Committee issued the final standard for the net stable funding ratio ("NSFR") — which is intended to measure the "available" amount of stable funding relative to the "required" amount of stable funding over a one-year horizon. NSFR will become a minimum standard by January 1, 2018 and requires that this ratio be equal to at least 100% on an ongoing basis. At December 31, 2015, the Firm was compliant with the NSFR based on its current understanding of the final Basel rule. The U.S. banking regulators are expected to issue an NPR that would outline requirements specific to U.S. banks.

HQLA

HQLA is the amount of assets that qualify for inclusion in the U.S. LCR. HQLA primarily consists of cash and certain unencumbered high quality liquid assets as defined in the final rule.

As of December 31, 2015, the Firm's HQLA was $496 billion, compared with $600 billion as of December 31, 2014. The decrease in HQLA was due to lower cash balances largely driven by lower non-operating deposit balances; however, the Firm remains LCR-compliant given the corresponding reduction in estimated net cash outflows associated with those deposits. HQLA may fluctuate from period to period primarily due to normal flows from client activity.

The following table presents the estimated HQLA included in the LCR broken out by HQLA-eligible cash and securities as of December 31, 2015.

(in billions)	December 31, 2015
HQLA	
Eligible cash[(a)]	$ 304
Eligible securities[(b)]	192
Total HQLA	$ 496

(a) Cash on deposit at central banks.
(b) Predominantly includes U.S. agency mortgage-backed securities, U.S. Treasuries, and sovereign bonds net of applicable haircuts under U.S. LCR rules.

In addition to HQLA, as of December 31, 2015, the Firm has approximately $249 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required. Furthermore, the Firm maintains borrowing capacity at various Federal Home Loan Banks ("FHLBs"), the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although available, the Firm does not view the borrowing capacity at the Federal Reserve Bank discount window and the various other central banks as a primary source of liquidity. As of December 31, 2015, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately $183 billion. This remaining borrowing capacity excludes the benefit of securities included above in HQLA or other unencumbered securities currently held at the Federal Reserve Bank discount window for which the Firm has not drawn liquidity.

Funding

Sources of funds

Management believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio ($837.3 billion at December 31, 2015), is funded with a portion of the Firm's deposits ($1,279.7 billion at December 31, 2015) and through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the FHLBs. Deposits in excess of the amount utilized to fund loans are primarily invested in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity risk characteristics. Securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments are primarily funded by the Firm's securities loaned or sold under agreements to repurchase, trading liabilities–debt and equity instruments, and a portion of the Firm's long-term debt and stockholders' equity. In addition to funding securities borrowed or purchased under resale agreements and trading assets-debt and equity instruments, proceeds from the Firm's debt and equity issuances are used to fund certain loans and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. See the discussion below for additional information relating to Deposits, Short-term funding, and Long-term funding and issuance.

Deposits

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. As of December 31, 2015, the Firm's loans-to-deposits ratio was 65%, compared with 56% at December 31, 2014.

As of December 31, 2015, total deposits for the Firm were $1,279.7 billion, compared with $1,363.4 billion at December 31, 2014 (61% and 58% of total liabilities at December 31, 2015 and 2014, respectively). The decrease was attributable to lower wholesale non-operating deposits, partially offset by higher consumer deposits. For further information, see Consolidated Balance Sheet Analysis on pages 75–76.

The Firm has typically experienced higher customer deposit inflows at quarter-ends. Therefore, the Firm believes average deposit balances are generally more representative of deposit trends. The table below summarizes, by line of business, the period-end and average deposit balances as of and for the years ended December 31, 2015 and 2014.

Deposits			Year ended December 31,	
As of or for the period ended December 31,			Average	
(in millions)	**2015**	2014	**2015**	2014
Consumer & Community Banking	**$ 557,645**	$ 502,520	**$ 530,938**	$ 486,919
Corporate & Investment Bank	**395,228**	468,423	**414,064**	417,517
Commercial Banking	**172,470**	213,682	**184,132**	190,425
Asset Management	**146,766**	155,247	**149,525**	150,121
Corporate	**7,606**	23,555	**17,129**	19,319
Total Firm	**$ 1,279,715**	$ 1,363,427	**$ 1,295,788**	$ 1,264,301

A significant portion of the Firm's deposits are consumer deposits, which are considered a stable source of liquidity. Additionally, the majority of the Firm's wholesale operating deposits are also considered to be stable sources of liquidity because they are generated from customers that maintain operating service relationships with the Firm. Wholesale non-operating deposits, including a portion of balances previously reported as commercial paper sweep liabilities, decreased by approximately $200 billion from December 31, 2014 to December 31, 2015, predominantly driven by the Firm's actions to reduce such deposits. The reduction has not had a significant impact on the Firm's liquidity position as discussed under LCR and HQLA above. For further discussions of deposit and liability balance trends, see the discussion of the Firm's business segments results and the Consolidated Balance Sheet Analysis on pages 83–106 and pages 75–76, respectively.

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2015 and 2014, and average balances for the years ended December 31, 2015 and 2014. For additional information, see the Consolidated Balance Sheet Analysis on pages 75–76 and Note 21.

Sources of funds (excluding deposits)

As of or for the year ended December 31, (in millions)	2015	2014	Average 2015	Average 2014
Commercial paper:				
Wholesale funding	**$ 15,562**	$ 24,052	**$ 19,340**	$ 19,442
Client cash management	**–**	42,292	**18,800**	40,474
Total commercial paper	**$ 15,562**	$ 66,344	**$ 38,140**	$ 59,916
Obligations of Firm-administered multi-seller conduits[(a)]	**$ 8,724**	$ 12,047	**$ 11,961**	$ 10,427
Other borrowed funds	**$ 21,105**	$ 30,222	**$ 28,816**	$ 31,721
Securities loaned or sold under agreements to repurchase:				
Securities sold under agreements to repurchase	**$ 129,598**	$ 167,077	**$ 168,163**	$ 181,186
Securities loaned	**18,174**	21,798	**19,493**	22,586
Total securities loaned or sold under agreements to repurchase[(b)(c)(d)]	**$ 147,772**	$ 188,875	**$ 187,656**	$ 203,772
Senior notes	**$ 149,964**	$ 142,169	**$ 147,498**	$ 139,388
Trust preferred securities	**3,969**	5,435	**4,341**	5,408
Subordinated debt	**25,027**	29,387	**27,310**	29,009
Structured notes	**32,813**	30,021	**31,309**	30,311
Total long-term unsecured funding	**$ 211,773**	$ 207,012	**$ 210,458**	$ 204,116
Credit card securitization[(a)]	**27,906**	31,197	**30,382**	28,892
Other securitizations[(e)]	**1,760**	2,008	**1,909**	2,734
FHLB advances	**71,581**	64,994	**70,150**	60,667
Other long-term secured funding[(f)]	**5,297**	4,373	**4,332**	5,031
Total long-term secured funding	**$ 106,544**	$ 102,572	**$ 106,773**	$ 97,324
Preferred stock[(g)]	**$ 26,068**	$ 20,063	**24,040**	$ 17,018
Common stockholders' equity[(g)]	**$ 221,505**	$ 211,664	**215,690**	$ 207,400

(a) Included in beneficial interests issued by consolidated variable interest entities on the Firm's Consolidated balance sheets.
(b) Excludes federal funds purchased.
(c) Excluded long-term structured repurchase agreements of $4.2 billion and $2.7 billion as of December 31, 2015 and 2014, respectively, and average balances of $3.9 billion and $4.2 billion for the years ended December 31, 2015 and 2014, respectively.
(d) Excluded average long-term securities loaned of $24 million as of December 31, 2014. There was no balance for the other periods presented.
(e) Other securitizations includes securitizations of residential mortgages and student loans. The Firm's wholesale businesses also securitize loans for client-driven transactions, which are not considered to be a source of funding for the Firm and are not included in the table.
(f) Includes long-term structured notes which are secured.
(g) For additional information on preferred stock and common stockholders' equity see Capital Management on pages 149–158, Consolidated statements of changes in stockholders' equity, Note 22 and Note 23.

Short-term funding

During the third quarter of 2015 the Firm completed the discontinuation of its commercial paper customer sweep cash management program. This change has not had a significant impact on the Firm's liquidity as the majority of these customer funds remain as deposits at the Firm.

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. Securities loaned or sold under agreements to repurchase are secured predominantly by high-quality securities collateral, including government-issued debt and agency MBS, and constitute a significant portion of the federal funds purchased and securities loaned or sold under repurchase agreements on the Consolidated balance sheets. The decrease in securities loaned or sold under agreements to repurchase at December 31, 2015, compared with the balance at December 31, 2014 (as well as the average balances for the full year 2015, compared with the prior year) was due to a decline in secured financing of trading assets-debt and equity instruments in CIB. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment securities and market-making portfolios); and other market and portfolio factors.

Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven by expected client activity, liquidity considerations, and regulatory requirements. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding costs, as well as maintaining a certain level of liquidity at the Parent Company. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The significant majority of the Firm's long-term unsecured funding is issued by the Parent Company to provide maximum flexibility in support of both bank and nonbank subsidiary funding. The following table summarizes long-term unsecured issuance and maturities or redemptions for the years ended December 31, 2015 and 2014. For additional information, see Note 21.

Long-term unsecured funding

Year ended December 31, (in millions)	**2015**	2014
Issuance		
Senior notes issued in the U.S. market	**$ 19,212**	$ 16,322
Senior notes issued in non-U.S. markets	**10,188**	11,193
Total senior notes	**29,400**	27,515
Subordinated debt	**3,210**	4,956
Structured notes	**22,165**	19,806
Total long-term unsecured funding – issuance	**$ 54,775**	$ 52,277
Maturities/redemptions		
Senior notes	**$ 18,454**	$ 21,169
Trust preferred securities	**1,500**	–
Subordinated debt	**6,908**	4,487
Structured notes	**18,099**	18,554
Total long-term unsecured funding – maturities/redemptions	**$ 44,961**	$ 44,210

The Firm raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs.

The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemption for the years ended December 31, 2015 and 2014.

Long-term secured funding

Year ended December 31,	Issuance		Maturities/Redemptions	
(in millions)	**2015**	2014	**2015**	2014
Credit card securitization	**$ 6,807**	$ 8,327	**$ 10,130**	$ 3,774
Other securitizations[(a)]	**–**	–	**248**	309
FHLB advances	**16,550**	15,200	**9,960**	12,079
Other long-term secured funding	**1,105**	802	**383**	3,076
Total long-term secured funding	**$ 24,462**	$ 24,329	**$ 20,721**	$ 19,238

(a) Other securitizations includes securitizations of residential mortgages and student loans.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 16.

Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 77, and credit risk, liquidity risk and credit-related contingent features in Note 6.

The credit ratings of the Parent Company and the Firm's principal bank and nonbank subsidiaries as of December 31, 2015, were as follows.

	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC		
December 31, 2015	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investors Service	A3	P-2	Stable	Aa3	P-1	Stable	Aa3	P-1	Stable
Standard & Poor's	A-	A-2	Stable	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	A+	F1	Stable	AA-	F1+	Stable	AA-	F1+	Stable

Downgrades of the Firm's long-term ratings by one or two notches could result in an increase in its cost of funds, and access to certain funding markets could be reduced as noted above. The nature and magnitude of the impact of ratings downgrades depends on numerous contractual and behavioral factors (which the Firm believes are incorporated in its liquidity risk and stress testing metrics). The Firm believes that it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, future profitability, risk management practices, and litigation matters, as well as their broader ratings methodologies. Changes in any of these factors could lead to changes in the Firm's credit ratings.

In May 2015, Moody's published its new bank rating methodology. As part of this action, the Firm's preferred stock, deposits and bank subordinated debt ratings were upgraded by one notch. Additionally in May 2015, Fitch changed its bank ratings methodology, implementing ratings differentiation between bank holding companies and their bank subsidiaries. This resulted in a one notch upgrade to the issuer ratings, senior debt ratings and long-term deposit ratings of JPMorgan Chase Bank, N.A., and certain other subsidiaries. In December 2015, S&P removed from its ratings for U.S. GSIBs the uplift assumption due to extraordinary government support. As a result, the Firm's short-term and long-term senior unsecured debt ratings and its subordinated unsecured debt ratings were lowered by one notch.

Although the Firm closely monitors and endeavors to manage, to the extent it is able, factors influencing its credit ratings, there is no assurance that its credit ratings will not be changed in the future.

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the appropriate carrying value of assets and liabilities. The Firm has established policies and control procedures intended to ensure that estimation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. The methods used and judgments made reflect, among other factors, the nature of the assets or liabilities and the related business and risk management strategies, which may vary across the Firm's businesses and portfolios. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the carrying value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant judgments.

Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's wholesale and certain consumer lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters, as discussed below. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 15.

Asset-specific component

The asset-specific allowance for loan losses for each of the Firm's portfolio segments is generally measured as the difference between the recorded investment in the impaired loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections rely upon estimates such as redefault rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are, in turn, dependent on factors such as the level of future home prices, the duration of current overall economic conditions, and other macroeconomic and portfolio-specific factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Formula-based component — Consumer loans and lending-related commitments, excluding PCI loans

The formula-based allowance for credit losses for the consumer portfolio, including credit card, is calculated by applying statistical credit loss factors to outstanding principal balances over an estimated loss emergence period to arrive at an estimate of incurred credit losses in the portfolio. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate the total incurred credit losses in the portfolio. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. However, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, the potential impact of payment recasts within the HELOC portfolio, and other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties. For example, the performance of a HELOC that experiences a payment recast may be affected by both the quality of underwriting standards applied in originating the loan and the general economic conditions in effect at the time of the payment recast. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses for the consumer credit portfolio.

Overall, the allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment (e.g., unemployment rates), delinquency rates, the realizable value of collateral (e.g., housing prices), FICO scores, borrower behavior and other risk factors. While all of these factors are important determinants of overall allowance levels, changes in the various factors may not occur at the same time or at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in these factors would ultimately affect the frequency of losses, the severity of losses or both.

PCI loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain PCI loans, which are accounted for as described in Note 14. The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates (including redefault rates on modified loans), loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home price declines, and the duration of current overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

Formula-based component — Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments involves the early identification of credits that are deteriorating. The formula-based component of the allowance calculation for wholesale loans and lending-related components is the product of an estimated PD and estimated LGD. These factors are determined based on the credit quality and specific attributes of the Firm's loans and lending-related commitments to each obligor.

The Firm assesses the credit quality of its borrower or counterparty and assigns a risk rating. Risk ratings are assigned at origination or acquisition, and if necessary, adjusted for changes in credit quality over the life of the exposure. In assessing the risk rating of a particular loan or lending-related commitment, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Determining risk ratings involves significant judgment; emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm.

PD estimates are based on observable external through-the-cycle data, using credit rating agency default statistics. A LGD estimate is assigned to each loan or lending-related commitment. The estimate represents the amount of economic loss if the obligor were to default. The type of obligor, quality of collateral, and the seniority of the Firm's lending exposure in the obligor's capital structure affect LGD. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle. Changes to the time period used for PD and LGD estimates (for example, point-in-time loss versus longer views of the credit cycle) could also affect the allowance for credit losses.

The Firm applies judgment in estimating PD and LGD used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances, but differences in characteristics between the Firm's specific loans or lending-related commitments and those reflected in external and Firm-specific historical data could affect loss estimates. Estimates of PD and LGD are subject to periodic refinement based on any changes to underlying external and Firm-specific historical data. The use of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the modeled loss estimates, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both LGD and PD are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

Allowance for credit losses sensitivity

As noted above, the Firm's allowance for credit losses is sensitive to numerous factors, which may differ depending on the portfolio. Changes in economic conditions or in the Firm's assumptions and estimates could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. The Firm uses its best judgment to assess these economic conditions and loss data in estimating the allowance for credit losses and these estimates are subject to periodic refinement based on any changes to underlying external and Firm-specific historical data. In many cases, the use of alternate estimates (for example, the effect of home prices and unemployment rates

on consumer delinquency, or the calibration between the Firm's wholesale loan risk ratings and external credit ratings) or data sources (for example, external PD and LGD factors that incorporate industry-wide information, versus Firm-specific history) would result in a different estimated allowance for credit losses. To illustrate the potential magnitude of certain alternate judgments, the Firm estimates that changes in the following inputs would have the following effects on the Firm's modeled loss estimates as of December 31, 2015, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

- For PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment rates from current levels could imply an increase to modeled credit loss estimates of approximately $700 million.
- For the residential real estate portfolio, excluding PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment rates from current levels could imply an increase to modeled annual loss estimates of approximately $125 million.
- A 50 basis point deterioration in forecasted credit card loss rates could imply an increase to modeled annualized credit card loan loss estimates of approximately $600 million.
- An increase in PD factors consistent with a one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $2.1 billion.
- A 100 basis point increase in estimated LGD for the Firm's entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately $175 million.

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors. In addition, these analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then-current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the overall allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows and the judgments made in evaluating the risk factors related to its loss estimates, management believes that its current estimate of the allowance for credit losses is appropriate.

Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 3.

December 31, 2015 (in billions, except ratio data)	Total assets at fair value	Total level 3 assets
Trading debt and equity instruments	$ 284.1	$ 11.9
Derivative receivables[(a)]	59.7	7.9
Trading assets	343.8	19.8
AFS securities	241.8	0.8
Loans	2.9	1.5
MSRs	6.6	6.6
Private equity investments[(b)]	1.9	1.7
Other	28.0	0.8
Total assets measured at fair value on a recurring basis	625.0	31.2
Total assets measured at fair value on a nonrecurring basis	1.7	1.0
Total assets measured at fair value	$ 626.7	$ 32.2
Total Firm assets	$ 2,351.7	
Level 3 assets as a percentage of total Firm assets[(a)]		1.4%
Level 3 assets as a percentage of total Firm assets at fair value[(a)]		5.1%

Note: Effective April 1, 2015, the Firm adopted new accounting guidance for certain investments where the Firm measures fair value using the net asset value per share (or its equivalent) as a practical expedient and has excluded these investments from the fair value hierarchy. For further information, see Note 3.

(a) For purposes of table above, the derivative receivables total reflects the impact of netting adjustments; however, the $7.9 billion of derivative receivables classified as level 3 does not reflect the netting adjustment as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables balance would be $546 million at December 31, 2015; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.

(b) Private equity instruments represent investments within the Corporate line of business.

Valuation

Details of the Firm's processes for determining fair value are set out in Note 3. Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's credit-worthiness, market funding rates, liquidity considerations, unobservable parameters, and for portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole. For further discussion of valuation adjustments applied by the Firm see Note 3.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 3.

Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, such as the Dodd-Frank Act, (b) long-term growth rates and (c) the relevant cost of equity. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

Based upon the updated valuations for all of its reporting units, the Firm concluded that the goodwill allocated to its reporting units was not impaired at December 31, 2015. The fair values of these reporting units exceeded their carrying values by approximately 10% - 180% for all reporting units and did not indicate a significant risk of goodwill impairment based on current projections and valuations.

The goodwill of $101 million remaining as of December 31, 2014 associated with the Private Equity business was disposed of as part of the Private Equity sale completed in January 2015. For further information on the Private Equity sale, see Note 2.

The projections for all of the Firm's reporting units are consistent with management's short-term business outlook assumptions, and in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns on equity of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, adverse estimates of regulatory or legislative changes or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 17.

Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain net operating losses ("NOLs") and tax credits. The Firm performs regular reviews to ascertain whether its deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize NOLs before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2015, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

JPMorgan Chase does not record U.S. federal income taxes on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Changes to the income tax rates applicable to these non-U.S. subsidiaries may have a material impact on the effective tax rate in a future period if such changes were to occur.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective income tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 26.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 31.

ACCOUNTING AND REPORTING DEVELOPMENTS

Financial Accounting Standards Board ("FASB") Standards Adopted during 2015

Standard	Summary of guidance	Effects on financial statements
Simplifying the presentation of debt issuance costs	• Requires that unamortized debt issuance costs be presented as a reduction of the applicable liability rather than as an asset. • Does not impact the amortization method for these costs.	• Adopted October 1, 2015. • There was no material impact on the Firm's Consolidated balance sheets, and no impact on the Firm's Consolidated results of operations. • For further information, see Note 1.[(a)]
Disclosures for investments in certain entities that calculate net asset value per share (or its equivalent)	• Removes the requirement to categorize investments measured under the net asset value ("NAV") practical expedient from the fair value hierarchy. • Limits disclosures required for investments that are eligible to be measured using the NAV practical expedient to investments for which the entity has elected the practical expedient.	• Adopted April 1, 2015. • The application of this guidance only affected the disclosures related to these investments and had no impact on the Firm's Consolidated balance sheets or results of operations. • For further information, see Note 3.[(a)]
Repurchase agreements and similar transactions	• Amends the accounting for certain secured financing transactions. • Requires enhanced disclosures with respect to transactions recognized as sales in which exposure to the derecognized assets is retained through a separate agreement with the counterparty. • Requires enhanced disclosures with respect to the types of financial assets pledged in secured financing transactions and the remaining contractual maturity of the secured financing transactions.	• Accounting amendments adopted January 1, 2015. • Disclosure enhancements adopted April 1, 2015. • There was no material impact on the Firm's Consolidated Financial Statements. • For further information, see Note 6 and Note 13.
Reporting discontinued operations and disclosures of disposals of components of an entity	• Changes the criteria for determining whether a disposition qualifies for discontinued operations presentation. • Requires enhanced disclosures about discontinued operations and significant dispositions that do not qualify to be presented as discontinued operations.	• Adopted January 1, 2015. • There was no material impact on the Firm's Consolidated Financial Statements.
Investments in qualified affordable housing projects	• Applies to accounting for investments in affordable housing projects that qualify for the low-income housing tax credit. • Replaces the effective yield method and allows companies to make an accounting policy election to amortize the initial cost of its investments in proportion to the tax credits and other benefits received if certain criteria are met, and to present the amortization as a component of income tax expense.	• Adopted January 1, 2015. • For further information, see Note 1.[(a)]

(a) The guidance was required to be applied retrospectively and accordingly, certain prior period amounts have been revised to conform with the current period presentation.

FASB Standards Issued but not yet Adopted

Standard	Summary of guidance	Effects on financial statements
Amendments to the consolidation analysis *Issued February 2015*	• Eliminates the deferral issued by the FASB in February 2010 of certain VIE-related accounting requirements for certain investment funds, including mutual funds, private equity funds and hedge funds. • Amends the evaluation of fees paid to a decision maker or a service provider, and exempts certain money market funds from consolidation.	• Required effective date January 1, 2016. • Will not have a material impact on the Firm's Consolidated Financial Statements.
Measuring the financial assets and financial liabilities of a consolidated collateralized financing entity *Issued August 2014*	• Provides an alternative for consolidated financing VIEs to elect: (1) to measure their financial assets and liabilities separately under existing U.S. GAAP for fair value measurement with any differences in such fair values reflected in earnings; or (2) to measure both their financial assets and liabilities using the more observable of the fair value of the financial assets or the fair value of the financial liabilities.	• Required effective date January 1, 2016. • Will not have a material impact on the Firm's Consolidated Financial Statements.
Revenue recognition – revenue from contracts with customers *Issued May 2014*	• Requires that revenue from contracts with customers be recognized upon transfer of control of a good or service in the amount of consideration expected to be received. • Changes the accounting for certain contract costs, including whether they may be offset against revenue in the statements of income, and requires additional disclosures about revenue and contract costs. • May be adopted using a full retrospective approach or a modified, cumulative effect-type approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date.	• Required effective date January 1, 2018.[(a)] • Because the guidance does not apply to revenue associated with financial instruments, including loans and securities that are accounted for under other U.S. GAAP, the Firm does not expect the new revenue recognition guidance to have a material impact on the elements of its statements of income most closely associated with financial instruments, including Securities Gains, Interest Income and Interest Expense. • The Firm plans to adopt the revenue recognition guidance in the first quarter of 2018 and is currently evaluating the potential impact on the Consolidated Financial statements and its selection of transition method.
Recognition and measurement of financial assets and financial liabilities *Issued January 2016*	• Requires that certain equity instruments be measured at fair value, with changes in fair value recognized in earnings. • For financial liabilities where the fair value option has been elected, the portion of the total change in fair value caused by changes in Firm's own credit risk is required to be presented separately in Other comprehensive income ("OCI"). • Generally requires a cumulative-effective adjustment to its retained earnings as of the beginning of the reporting period of adoption.	• Required effective date January 1, 2018.[(b)] • Adoption of the DVA guidance as of January 1, 2016, would result in a reclassification from retained earnings to AOCI, reflecting the cumulative change in value to change in the Firm's credit spread subsequent to the issuance of each liability. The amount of this reclassification would be immaterial as of January 1, 2016. • The Firm is evaluating the potential impact of the remaining guidance on the Consolidated Financial Statements.

(a) Early adoption is permitted.
(b) Early adoption is permitted for the requirement to report changes in fair value due to the Firm's own credit risk in OCI, and the Firm is planning to early adopt this guidance during 2016.

NONEXCHANGE-TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2015.

Year ended December 31, 2015 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2015	$ 9,826	$ 13,926
Effect of legally enforceable master netting agreements	14,327	13,211
Gross fair value of contracts outstanding at January 1, 2015	24,153	27,137
Contracts realized or otherwise settled	(13,419)	(12,583)
Fair value of new contracts	3,704	5,027
Changes in fair values attributable to changes in valuation techniques and assumptions	–	–
Other changes in fair value	1,428	(1,300)
Gross fair value of contracts outstanding at December 31, 2015	15,866	18,281
Effect of legally enforceable master netting agreements	(6,772)	(6,256)
Net fair value of contracts outstanding at December 31, 2015	$ 9,094	$ 12,025

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2015.

December 31, 2015 (in millions)	Asset position	Liability position
Maturity less than 1 year	$ 8,487	$ 9,242
Maturity 1–3 years	5,636	6,148
Maturity 4–5 years	1,122	1,931
Maturity in excess of 5 years	621	960
Gross fair value of contracts outstanding at December 31, 2015	15,866	18,281
Effect of legally enforceable master netting agreements	(6,772)	(6,256)
Net fair value of contracts outstanding at December 31, 2015	$ 9,094	$ 12,025

FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as “anticipate,” “target,” “expect,” “estimate,” “intend,” “plan,” “goal,” “believe,” or other words of similar meaning. Forward-looking statements provide JPMorgan Chase’s current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase’s disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission. In addition, the Firm’s senior management may make forward-looking statements orally to investors, analysts, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm’s control. JPMorgan Chase’s actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and global business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements, including capital and liquidity requirements;
- Changes in trade, monetary and fiscal policies and laws;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm’s reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- The success of the Firm’s business simplification initiatives and the effectiveness of its control agenda;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Ability of the Firm to address enhanced regulatory requirements affecting its businesses;
- Acceptance of the Firm’s new and existing products and services by the marketplace and the ability of the Firm to innovate and to increase market share;
- Ability of the Firm to attract and retain qualified employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm’s customers and counterparties;
- Adequacy of the Firm’s risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts and the Firm’s ability to deal effectively with disruptions caused by the foregoing;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operating systems and facilities; and
- Ability of the Firm to effectively defend itself against cyberattacks and other attempts by unauthorized parties to access information of the Firm or its customers or to disrupt the Firm’s systems; and
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm’s Annual Report on Form 10-K for the year ended December 31, 2015.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

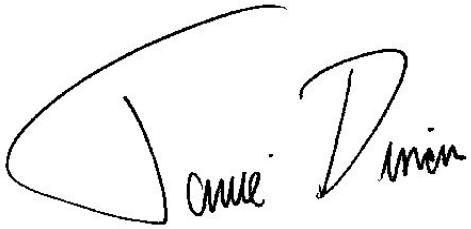
Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2015. In making the assessment, management used the "Internal Control — Integrated Framework" ("COSO 2013") promulgated by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

Based upon the assessment performed, management concluded that as of December 31, 2015, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 2013 framework. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2015.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2015, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.



James Dimon
Chairman and Chief Executive Officer

Marianne Lake
Executive Vice President and Chief Financial Officer

February 23, 2016

To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2015 and 2014 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015 based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting". Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

February 23, 2016

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2015	2014	2013
Revenue			
Investment banking fees	**$ 6,751**	$ 6,542	$ 6,354
Principal transactions	**10,408**	10,531	10,141
Lending- and deposit-related fees	**5,694**	5,801	5,945
Asset management, administration and commissions	**15,509**	15,931	15,106
Securities gains[(a)]	**202**	77	667
Mortgage fees and related income	**2,513**	3,563	5,205
Card income	**5,924**	6,020	6,022
Other income	**3,032**	3,013	4,608
Noninterest revenue	**50,033**	51,478	54,048
Interest income	**50,973**	51,531	52,669
Interest expense	**7,463**	7,897	9,350
Net interest income	**43,510**	43,634	43,319
Total net revenue	**93,543**	95,112	97,367
Provision for credit losses	**3,827**	3,139	225
Noninterest expense			
Compensation expense	**29,750**	30,160	30,810
Occupancy expense	**3,768**	3,909	3,693
Technology, communications and equipment expense	**6,193**	5,804	5,425
Professional and outside services	**7,002**	7,705	7,641
Marketing	**2,708**	2,550	2,500
Other expense	**9,593**	11,146	20,398
Total noninterest expense	**59,014**	61,274	70,467
Income before income tax expense	**30,702**	30,699	26,675
Income tax expense	**6,260**	8,954	8,789
Net income	**$ 24,442**	$ 21,745	$ 17,886
Net income applicable to common stockholders	**$ 22,406**	$ 20,077	$ 16,557
Net income per common share data			
Basic earnings per share	**$ 6.05**	$ 5.33	$ 4.38
Diluted earnings per share	**6.00**	5.29	4.34
Weighted-average basic shares	**3,700.4**	3,763.5	3,782.4
Weighted-average diluted shares	**3,732.8**	3,797.5	3,814.9
Cash dividends declared per common share	**$ 1.72**	$ 1.58	$ 1.44

(a) The Firm recognized other-than-temporary impairment ("OTTI") losses of $22 million, $4 million, and $21 million for the years ended December 31, 2015, 2014 and 2013, respectively.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2015	2014	2013
Net income	**$ 24,442**	$ 21,745	$ 17,886
Other comprehensive income/(loss), after-tax			
Unrealized gains/(losses) on investment securities	**(2,144)**	1,975	(4,070)
Translation adjustments, net of hedges	**(15)**	(11)	(41)
Cash flow hedges	**51**	44	(259)
Defined benefit pension and OPEB plans	**111**	(1,018)	1,467
Total other comprehensive income/(loss), after-tax	**(1,997)**	990	(2,903)
Comprehensive income	**$ 22,445**	$ 22,735	$ 14,983

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2015	2014
Assets		
Cash and due from banks	**$ 20,490**	$ 27,831
Deposits with banks	**340,015**	484,477
Federal funds sold and securities purchased under resale agreements (included **$23,141** and $28,585 at fair value)	**212,575**	215,803
Securities borrowed (included **$395** and $992 at fair value)	**98,721**	110,435
Trading assets (included assets pledged of **$115,284** and $125,034)	**343,839**	398,988
Securities (included **$241,754** and $298,752 at fair value and assets pledged of **$14,883** and $24,912)	**290,827**	348,004
Loans (included **$2,861** and $2,611 at fair value)	**837,299**	757,336
Allowance for loan losses	**(13,555)**	(14,185)
Loans, net of allowance for loan losses	**823,744**	743,151
Accrued interest and accounts receivable	**46,605**	70,079
Premises and equipment	**14,362**	15,133
Goodwill	**47,325**	47,647
Mortgage servicing rights	**6,608**	7,436
Other intangible assets	**1,015**	1,192
Other assets (included **$7,604** and $11,909 at fair value and assets pledged of **$1,286** and $1,399)	**105,572**	102,098
Total assets[(a)]	**$ 2,351,698**	$ 2,572,274
Liabilities		
Deposits (included **$12,516** and $8,807 at fair value)	**$ 1,279,715**	$ 1,363,427
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$3,526** and $2,979 at fair value)	**152,678**	192,101
Commercial paper	**15,562**	66,344
Other borrowed funds (included **$9,911** and $14,739 at fair value)	**21,105**	30,222
Trading liabilities	**126,897**	152,815
Accounts payable and other liabilities (included **$4,401** and $4,155 at fair value)	**177,638**	206,939
Beneficial interests issued by consolidated variable interest entities (included **$787** and $2,162 at fair value)	**41,879**	52,320
Long-term debt (included **$33,065** and $30,226 at fair value)	**288,651**	276,379
Total liabilities[(a)]	**2,104,125**	2,340,547
Commitments and contingencies (see Notes 29, 30 and 31)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **2,606,750** and 2,006,250 shares)	**26,068**	20,063
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**92,500**	93,270
Retained earnings	**146,420**	129,977
Accumulated other comprehensive income	**192**	2,189
Shares held in restricted stock units ("RSU") trust, at cost (**472,953** shares)	**(21)**	(21)
Treasury stock, at cost (**441,459,392** and 390,144,630 shares)	**(21,691)**	(17,856)
Total stockholders' equity	**247,573**	231,727
Total liabilities and stockholders' equity	**$ 2,351,698**	$ 2,572,274

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2015 and 2014. The difference between total VIE assets and liabilities represents the Firm's interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2015	2014
Assets		
Trading assets	**$ 3,736**	$ 9,090
Loans	**75,104**	68,880
All other assets	**2,765**	1,815
Total assets	**$ 81,605**	$ 79,785
Liabilities		
Beneficial interests issued by consolidated variable interest entities	**$ 41,879**	$ 52,320
All other liabilities	**809**	949
Total liabilities	**$ 42,688**	$ 53,269

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At both December 31, 2015 and 2014, the Firm provided limited program-wide credit enhancement of $2.0 billion, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16.

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	**2015**	2014	2013
Preferred stock			
Balance at January 1	**$ 20,063**	$ 11,158	$ 9,058
Issuance of preferred stock	**6,005**	8,905	3,900
Redemption of preferred stock	**–**	–	(1,800)
Balance at December 31	**26,068**	20,063	11,158
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Additional paid-in capital			
Balance at January 1	**93,270**	93,828	94,604
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	**(436)**	(508)	(752)
Other	**(334)**	(50)	(24)
Balance at December 31	**92,500**	93,270	93,828
Retained earnings			
Balance at January 1	**129,977**	115,435	104,223
Cumulative effect of change in accounting principle	**–**	–	(284)
Balance at beginning of year, adjusted	**129,977**	115,435	103,939
Net income	**24,442**	21,745	17,886
Dividends declared:			
Preferred stock	**(1,515)**	(1,125)	(805)
Common stock (**$1.72**, $1.58 and $1.44 per share for 2015, 2014 and 2013, respectively)	**(6,484)**	(6,078)	(5,585)
Balance at December 31	**146,420**	129,977	115,435
Accumulated other comprehensive income			
Balance at January 1	**2,189**	1,199	4,102
Other comprehensive income/(loss)	**(1,997)**	990	(2,903)
Balance at December 31	**192**	2,189	1,199
Shares held in RSU Trust, at cost			
Balance at January 1 and December 31	**(21)**	(21)	(21)
Treasury stock, at cost			
Balance at January 1	**(17,856)**	(14,847)	(12,002)
Purchase of treasury stock	**(5,616)**	(4,760)	(4,789)
Reissuance from treasury stock	**1,781**	1,751	1,944
Balance at December 31	**(21,691)**	(17,856)	(14,847)
Total stockholders' equity	**$ 247,573**	$ 231,727	$ 210,857

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2015	2014	2013
Operating activities			
Net income	**$ 24,442**	$ 21,745	$ 17,886
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	**3,827**	3,139	225
Depreciation and amortization	**4,940**	4,759	5,306
Deferred tax expense	**1,333**	4,362	8,139
Other	**1,785**	2,113	1,552
Originations and purchases of loans held-for-sale	**(48,109)**	(67,525)	(75,928)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**49,363**	71,407	73,566
Net change in:			
Trading assets	**62,212**	(24,814)	89,110
Securities borrowed	**12,165**	1,020	7,562
Accrued interest and accounts receivable	**22,664**	(3,637)	(2,340)
Other assets	**(3,701)**	(9,166)	526
Trading liabilities	**(28,972)**	26,818	(9,772)
Accounts payable and other liabilities	**(23,361)**	6,058	(5,750)
Other operating adjustments	**(5,122)**	314	(2,129)
Net cash provided by operating activities	**73,466**	36,593	107,953
Investing activities			
Net change in:			
Deposits with banks	**144,462**	(168,426)	(194,363)
Federal funds sold and securities purchased under resale agreements	**3,190**	30,848	47,726
Held-to-maturity securities:			
Proceeds from paydowns and maturities	**6,099**	4,169	189
Purchases	**(6,204)**	(10,345)	(24,214)
Available-for-sale securities:			
Proceeds from paydowns and maturities	**76,448**	90,664	89,631
Proceeds from sales	**40,444**	38,411	73,312
Purchases	**(70,804)**	(121,504)	(130,266)
Proceeds from sales and securitizations of loans held-for-investment	**18,604**	20,115	12,033
Other changes in loans, net	**(108,962)**	(51,749)	(23,721)
All other investing activities, net	**3,703**	2,181	(828)
Net cash provided by/(used in) investing activities	**106,980**	(165,636)	(150,501)
Financing activities			
Net change in:			
Deposits	**(88,678)**	89,346	81,476
Federal funds purchased and securities loaned or sold under repurchase agreements	**(39,415)**	10,905	(58,867)
Commercial paper and other borrowed funds	**(57,828)**	9,242	2,784
Beneficial interests issued by consolidated variable interest entities	**(5,632)**	(834)	(10,433)
Proceeds from long-term borrowings	**79,611**	78,515	83,546
Payments of long-term borrowings	**(67,247)**	(65,275)	(60,497)
Proceeds from issuance of preferred stock	**5,893**	8,847	3,873
Redemption of preferred stock	**—**	—	(1,800)
Treasury stock and warrants repurchased	**(5,616)**	(4,760)	(4,789)
Dividends paid	**(7,873)**	(6,990)	(6,056)
All other financing activities, net	**(726)**	(768)	(913)
Net cash provided by/(used in) financing activities	**(187,511)**	118,228	28,324
Effect of exchange rate changes on cash and due from banks	**(276)**	(1,125)	272
Net decrease in cash and due from banks	**(7,341)**	(11,940)	(13,952)
Cash and due from banks at the beginning of the period	**27,831**	39,771	53,723
Cash and due from banks at the end of the period	**$ 20,490**	$ 27,831	$ 39,771
Cash interest paid	**$ 7,220**	$ 8,194	$ 9,573
Cash income taxes paid, net	**9,423**	1,392	3,502

The Notes to Consolidated Financial Statements are an integral part of these statements.

Note 1 – Basis of presentation

JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm"), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing and asset management. For a discussion of the Firm's business segments, see Note 33.

The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the U.S. ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated balance sheets.

The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Firm's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause (i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the nonaffiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm's investment companies have investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated balance sheets at fair value, and are recorded in other assets.

Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those

activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivatives or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm.

The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

In February 2010, the Financial Accounting Standards Board ("FASB") issued an amendment which deferred the requirements of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds to which the deferral applies, the Firm continues to apply other existing authoritative accounting guidance to determine whether such funds should be consolidated.

Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) ("OCI") within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated statements of income.

Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated balance sheets when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances when the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivatives transactions, repurchase and reverse repurchase agreements, and securities borrowed and loaned agreements. A master netting agreement is a single contract with a counterparty that permits multiple transactions governed by that contract to be terminated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due after expiration of any grace period). Upon the exercise of termination rights by the non-defaulting party (i) all transactions are terminated, (ii) all transactions are valued and the positive value or "in the money" transactions are netted against the negative value or "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of repurchase agreement and securities loan default rights in general (i) all transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in, or title transfer of, securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty.

For further discussion of the Firm's derivative instruments, see Note 6. For further discussion of the Firm's repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 13.

Simplifying the presentation of debt issuance costs
Effective October 1, 2015, the Firm early adopted new accounting guidance that simplifies the presentation of debt issuance costs, by requiring that unamortized debt issuance costs be presented as a reduction of the applicable liability rather than as an asset. The adoption of this guidance had no material impact on the Firm's Consolidated balance sheets, and no impact on the Firm's consolidated results of operations. The guidance was required to be applied retrospectively, and accordingly, certain prior period amounts have been revised to conform with the current period presentation.

Investments in qualified affordable housing projects
Effective January 1, 2015, the Firm adopted new accounting guidance for investments in affordable housing projects that qualify for the low-income housing tax credit, which impacted the Corporate & Investment Bank ("CIB"). As a result of the adoption of this new guidance, the Firm made an accounting policy election to amortize the initial cost of its qualifying investments in proportion to the tax credits and other benefits received, and to present the amortization as a component of income tax expense; previously such amounts were predominantly presented in other income. The guidance was required to be applied retrospectively, and accordingly, certain prior period amounts have been revised to conform with the current period presentation. The cumulative effect on retained earnings was a reduction of $284 million as of January 1, 2013. The adoption of this accounting guidance resulted in an increase of $907 million and $924 million in other income and income tax expense, respectively, for the year ended December 31, 2014 and $761 million and $798 million, respectively, for the year ended December 2013, which led to an increase of approximately 2% in the effective tax rate for the year ended December 31, 2014 and 2013. The impact on net income and earnings per share in the periods affected was not material. For further information, see Note 26.

Statements of cash flows
For JPMorgan Chase's Consolidated statements of cash flows, cash is defined as those amounts included in cash and due from banks.

Significant accounting policies
The following table identifies JPMorgan Chase's other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Fair value measurement	Note 3	Page 184
Fair value option	Note 4	Page 203
Derivative instruments	Note 6	Page 208
Noninterest revenue	Note 7	Page 221
Interest income and interest expense	Note 8	Page 223
Pension and other postretirement employee benefit plans	Note 9	Page 223
Employee stock-based incentives	Note 10	Page 231
Securities	Note 12	Page 233
Securities financing activities	Note 13	Page 238
Loans	Note 14	Page 242
Allowance for credit losses	Note 15	Page 262
Variable interest entities	Note 16	Page 266
Goodwill and other intangible assets	Note 17	Page 274
Premises and equipment	Note 18	Page 278
Long-term debt	Note 21	Page 279
Income taxes	Note 26	Page 285
Off-balance sheet lending-related financial instruments, guarantees and other commitments	Note 29	Page 290
Litigation	Note 31	Page 297

Note 2 – Business changes and developments

Private Equity sale
As part of the Firm's business simplification agenda, the sale of a portion of the Private Equity Business ("Private Equity sale") was completed on January 9, 2015. Concurrent with the sale, a new independent management company was formed by the former One Equity Partners investment professionals. The new management company provides investment management services to the acquirer of the investments sold in the Private Equity sale and to the Firm for the portion of the private equity investments that were retained by the Firm. The sale of the investments did not have a material impact on the Firm's Consolidated balance sheets or its results of operations.

Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated balance sheets). Certain assets (e.g., certain mortgage, home equity and other loans where the carrying value is based on the fair value of the underlying collateral), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions by other market participants compared with those used by the Firm could result in a different estimate of fair value at the reporting date.

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated balance sheets at fair value. The Firm's valuation control function, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. In addition, the firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the Firmwide head of the valuation control function (under the direction of the Firm's Chief Financial Officer ("CFO")), and includes sub-forums covering the Corporate & Investment Bank, Consumer & Community Banking ("CCB"), Commercial Banking, Asset Management and certain corporate functions including Treasury and Chief Investment Office ("CIO").

The valuation control function verifies fair value estimates provided by the risk-taking functions by leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, additional review is performed by the valuation control function to ensure the reasonableness of the estimates. The review may include evaluating the limited market activity including client unwinds, benchmarking of valuation inputs to those for similar instruments, decomposing the valuation of structured instruments into individual components, comparing expected to actual cash flows, reviewing profit and loss trends, and reviewing trends in collateral valuation. There are also additional levels of management review for more significant or complex positions.

The valuation control function determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied to the quoted market price for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

- Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are applied and determined based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position, including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.

- Unobservable parameter valuation adjustments may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the resulting valuation estimate.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality, the Firm's own creditworthiness and the impact of funding, utilizing a consistent framework across the Firm. For more information on such adjustments see Credit and funding adjustments on page 200 of this Note.

Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

The Model Risk function is independent of the model owners. It reviews and approves a wide range of models, including risk management, valuation and regulatory capital models used by the Firm. The Model Risk review and governance functions are part of the Firm's Model Risk unit, and the Firmwide Model Risk Executive reports to the Firm's Chief Risk Officer ("CRO"). When reviewing a model, the Model Risk function analyzes and challenges the model methodology, and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes.

New valuation models, as well as material changes to existing valuation models, are reviewed and approved prior to implementation except where specified conditions are met, including the approval of an exception granted by the head of the Model Risk function. The Model Risk function performs an annual status assessment that considers developments in the product or market to determine whether valuation models which have already been reviewed need to be, on a full or partial basis, reviewed and approved again.

Valuation hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following table describes the valuation methodologies generally used by the Firm to measure its significant products/instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features: for further information refer to the discussion of derivatives below. • Market rates for the respective maturity • Collateral	Level 2
Loans and lending-related commitments — wholesale		
Trading portfolio	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are infrequent) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Credit spreads derived from the cost of credit default swaps ("CDS"); or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed	Level 2 or 3
Loans held for investment and associated lending-related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating • Prepayment speed Lending-related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Loans — consumer		
Held for investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Expected lifetime credit losses -considering expected and current default rates, and loss severity • Prepayment speed • Discount rates • Servicing costs For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Held for investment credit card receivables	Valuations are based on discounted cash flows, which consider: • Credit costs — allowance for loan losses is considered a reasonable proxy for the credit cost • Projected interest income, late-fee revenue and loan repayment rates • Discount rates • Servicing costs	Level 3
Trading loans — conforming residential mortgage loans expected to be sold	Fair value is based upon observable prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.	Predominantly level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Investment and trading securities	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: *Mortgage- and asset-backed securities specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity *Collateralized loan obligations ("CLOs"), specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 2 or 3
Physical commodities	Valued using observable market prices or data	Predominantly Level 1 and 2
Derivatives	Exchange-traded derivatives that are actively traded and valued using the exchange price.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g., plain vanilla options and interest rate and credit default swaps). Inputs include: • Contractual terms including the period to maturity • Readily observable parameters including interest rates and volatility • Credit quality of the counterparty and of the Firm • Market funding levels • Correlation levels In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs: *Structured credit derivatives specific inputs include:* • CDS spreads and recovery rates • Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices) • Actual transactions, where available, are used to regularly recalibrate unobservable parameters *Certain long-dated equity option specific inputs include:* • Long-dated equity volatilities *Certain interest rate and foreign exchange ("FX") exotic options specific inputs include:* • Interest rate correlation • Interest rate spread volatility • Foreign exchange correlation • Correlation between interest rates and foreign exchange rates • Parameters describing the evolution of underlying interest rates *Certain commodity derivatives specific inputs include:* • Commodity volatility • Forward commodity price Additionally, adjustments are made to reflect counterparty credit quality (credit valuation adjustments or "CVA"), the Firm's own creditworthiness (debit valuation adjustments or "DVA"), and funding valuation adjustment ("FVA") to incorporate the impact of funding. See page 200 of this Note.	Level 2 or 3

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights ("MSRs")	See Mortgage servicing rights in Note 17.	Level 3
Private equity direct investments	*Private equity direct investments* Fair value is estimated using all available information and considering the range of potential inputs, including: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Additional available inputs relevant to the investment • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity	Level 2 or 3
	Public investments held in the Private Equity portfolio • Valued using observable market prices less adjustments for relevant restrictions, where applicable	Level 1 or 2
Fund investments (i.e., mutual/ collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value ("NAV") • NAV is validated by sufficient level of observable activity (i.e., purchases and sales)	Level 1
	• Adjustments to the NAV as required, for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited	Level 2 or 3[(a)]
Beneficial interests issued by consolidated VIEs	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity • The Firm's own creditworthiness (DVA). See page 200 of this Note.	Predominantly level 2
Structured notes (included in deposits, other borrowed funds and long-term debt)	• Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note. • The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivative valuation. Adjustments are then made to this base valuation to reflect the Firm's own creditworthiness (DVA) and to incorporate the impact of funding (FVA). See page 200 of this Note.	Level 2 or 3

(a) Excludes certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient.

The following table presents the asset and liabilities reported at fair value as of December 31, 2015 and 2014, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2015 (in millions)	Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 23,141	$ –	$ –	$ 23,141
Securities borrowed	–	395	–	–	395
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	6	31,815	715	–	32,536
Residential – nonagency	–	1,299	194	–	1,493
Commercial – nonagency	–	1,080	115	–	1,195
Total mortgage-backed securities	6	34,194	1,024	–	35,224
U.S. Treasury and government agencies[a]	12,036	6,985	–	–	19,021
Obligations of U.S. states and municipalities	–	6,986	651	–	7,637
Certificates of deposit, bankers' acceptances and commercial paper	–	1,042	–	–	1,042
Non-U.S. government debt securities	27,974	25,064	74	–	53,112
Corporate debt securities	–	22,807	736	–	23,543
Loans[b]	–	22,211	6,604	–	28,815
Asset-backed securities	–	2,392	1,832	–	4,224
Total debt instruments	40,016	121,681	10,921	–	172,618
Equity securities	94,059	606	265	–	94,930
Physical commodities[c]	3,593	1,064	–	–	4,657
Other	–	11,152	744	–	11,896
Total debt and equity instruments[d]	137,668	134,503	11,930	–	284,101
Derivative receivables:					
Interest rate	354	666,491	2,766	(643,248)	26,363
Credit	–	48,850	2,618	(50,045)	1,423
Foreign exchange	734	177,525	1,616	(162,698)	17,177
Equity	–	35,150	709	(30,330)	5,529
Commodity	108	24,720	237	(15,880)	9,185
Total derivative receivables[e]	1,196	952,736	7,946	(902,201)	59,677
Total trading assets	138,864	1,087,239	19,876	(902,201)	343,778
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	55,066	–	–	55,066
Residential – nonagency	–	27,618	1	–	27,619
Commercial – nonagency	–	22,897	–	–	22,897
Total mortgage-backed securities	–	105,581	1	–	105,582
U.S. Treasury and government agencies[a]	10,998	38	–	–	11,036
Obligations of U.S. states and municipalities	–	33,550	–	–	33,550
Certificates of deposit	–	283	–	–	283
Non-U.S. government debt securities	23,199	13,477	–	–	36,676
Corporate debt securities	–	12,436	–	–	12,436
Asset-backed securities:					
Collateralized loan obligations	–	30,248	759	–	31,007
Other	–	9,033	64	–	9,097
Equity securities	2,087	–	–	–	2,087
Total available-for-sale securities	36,284	204,646	824	–	241,754
Loans	–	1,343	1,518	–	2,861
Mortgage servicing rights	–	–	6,608	–	6,608
Other assets:					
Private equity investments[f]	102	101	1,657	–	1,860
All other	3,815	28	744	–	4,587
Total other assets	3,917	129	2,401	–	6,447
Total assets measured at fair value on a recurring basis	$ 179,065	$ 1,316,893[g]	$ 31,227[g]	$ (902,201)	$ 624,984
Deposits	$ –	$ 9,566	$ 2,950	$ –	$ 12,516
Federal funds purchased and securities loaned or sold under repurchase agreements	–	3,526	–	–	3,526
Other borrowed funds	–	9,272	639	–	9,911
Trading liabilities:					
Debt and equity instruments[d]	53,845	20,199	63	–	74,107
Derivative payables:					
Interest rate	216	633,060	1,890	(624,945)	10,221
Credit	–	48,460	2,069	(48,988)	1,541
Foreign exchange	669	187,890	2,341	(171,131)	19,769
Equity	–	36,440	2,223	(29,480)	9,183
Commodity	52	26,430	1,172	(15,578)	12,076
Total derivative payables[e]	937	932,280	9,695	(890,122)	52,790
Total trading liabilities	54,782	952,479	9,758	(890,122)	126,897
Accounts payable and other liabilities	4,382	–	19	–	4,401
Beneficial interests issued by consolidated VIEs	–	238	549	–	787
Long-term debt	–	21,452	11,613	–	33,065
Total liabilities measured at fair value on a recurring basis	$ 59,164	$ 996,533	$ 25,528	$ (890,122)	$ 191,103

December 31, 2014 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ –	$ 28,585	$ –	$ –	$ 28,585
Securities borrowed	–	992	–	–	992
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	14	31,904	922	–	32,840
Residential – nonagency	–	1,381	663	–	2,044
Commercial – nonagency	–	927	306	–	1,233
Total mortgage-backed securities	14	34,212	1,891	–	36,117
U.S. Treasury and government agencies[a]	17,816	8,460	–	–	26,276
Obligations of U.S. states and municipalities	–	9,298	1,273	–	10,571
Certificates of deposit, bankers' acceptances and commercial paper	–	1,429	–	–	1,429
Non-U.S. government debt securities	25,854	27,294	302	–	53,450
Corporate debt securities	–	28,099	2,989	–	31,088
Loans[b]	–	23,080	13,287	–	36,367
Asset-backed securities	–	3,088	1,264	–	4,352
Total debt instruments	43,684	134,960	21,006	–	199,650
Equity securities	104,890	624	431	–	105,945
Physical commodities[c]	2,739	1,741	2	–	4,482
Other	–	8,762	1,050	–	9,812
Total debt and equity instruments[d]	151,313	146,087	22,489	–	319,889
Derivative receivables:					
Interest rate	473	945,635 [g]	4,149	(916,532) [g]	33,725
Credit	–	73,853	2,989	(75,004)	1,838
Foreign exchange	758	212,153 [g]	2,276	(193,934) [g]	21,253
Equity	–	39,937 [g]	2,552	(34,312) [g]	8,177
Commodity	247	42,807	599	(29,671)	13,982
Total derivative receivables[e]	1,478	1,314,385 [g]	12,565	(1,249,453) [g]	78,975
Total trading assets	152,791	1,460,472 [g]	35,054	(1,249,453) [g]	398,864
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	–	65,319	–	–	65,319
Residential – nonagency	–	50,865	30	–	50,895
Commercial – nonagency	–	21,009	99	–	21,108
Total mortgage-backed securities	–	137,193	129	–	137,322
U.S. Treasury and government agencies[a]	13,591	54	–	–	13,645
Obligations of U.S. states and municipalities	–	30,068	–	–	30,068
Certificates of deposit	–	1,103	–	–	1,103
Non-U.S. government debt securities	24,074	28,669	–	–	52,743
Corporate debt securities	–	18,532	–	–	18,532
Asset-backed securities:					
Collateralized loan obligations	–	29,402	792	–	30,194
Other	–	12,499	116	–	12,615
Equity securities	2,530	–	–	–	2,530
Total available-for-sale securities	40,195	257,520	1,037	–	298,752
Loans	–	70	2,541	–	2,611
Mortgage servicing rights	–	–	7,436	–	7,436
Other assets:					
Private equity investments[f]	648	2,624	2,225	–	5,497
All other	4,018	17	959	–	4,994
Total other assets	4,666	2,641	3,184	–	10,491
Total assets measured at fair value on a recurring basis	$ 197,652	$ 1,750,280 [g]	$ 49,252	$ (1,249,453) [g]	$ 747,731
Deposits	$ –	$ 5,948	$ 2,859	$ –	$ 8,807
Federal funds purchased and securities loaned or sold under repurchase agreements	–	2,979	–	–	2,979
Other borrowed funds	–	13,286	1,453	–	14,739
Trading liabilities:					
Debt and equity instruments[d]	62,914	18,713	72	–	81,699
Derivative payables:					
Interest rate	499	914,357 [g]	3,523	(900,634) [g]	17,745
Credit	–	73,095	2,800	(74,302)	1,593
Foreign exchange	746	221,066 [g]	2,802	(201,644) [g]	22,970
Equity	–	41,925 [g]	4,337	(34,522) [g]	11,740
Commodity	141	44,318	1,164	(28,555)	17,068
Total derivative payables[e]	1,386	1,294,761 [g]	14,626	(1,239,657) [g]	71,116
Total trading liabilities	64,300	1,313,474 [g]	14,698	(1,239,657) [g]	152,815
Accounts payable and other liabilities [g]	4,129	–	26	–	4,155
Beneficial interests issued by consolidated VIEs	–	1,016	1,146	–	2,162
Long-term debt	–	18,349	11,877	–	30,226
Total liabilities measured at fair value on a recurring basis	$ 68,429	$ 1,355,052 [g]	$ 32,059	$ (1,239,657) [g]	$ 215,883

Note: Effective April 1, 2015, the Firm adopted new accounting guidance for investments in certain entities that calculate net asset value per share (or its equivalent). As a result of the adoption of this new guidance, certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy. At December 31, 2015 and 2014, the fair values of these investments, which include certain hedge funds, private equity funds, real estate and other funds, were $1.2 billion and $1.5 billion, respectively, of which $337 million and $1.2 billion had been previously classified in level 2 and level 3, respectively, at December 31, 2014. Included on the Firm's balance sheet at December 31, 2015 and 2014, were trading assets of $61 million and $124 million, respectively, and other assets of $1.2 billion and $1.4 billion, respectively. The guidance was required to be applied retrospectively, and accordingly, prior period amounts have been revised to conform with the current period presentation.

(a) At December 31, 2015 and 2014, included total U.S. government-sponsored enterprise obligations of $67.0 billion and $84.1 billion, respectively, which were predominantly mortgage-related.
(b) At December 31, 2015 and 2014, included within trading loans were $11.8 billion and $17.0 billion, respectively, of residential first-lien mortgages, and $4.3 billion and $5.8 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $5.3 billion and $7.7 billion, respectively, and reverse mortgages of $2.5 billion and $3.4 billion, respectively.
(c) Physical commodities inventories are generally accounted for at the lower of cost or market. "Market" is a term defined in U.S. GAAP as not exceeding fair value less costs to sell ("transaction costs"). Transaction costs for the Firm's physical commodities inventories are either not applicable or immaterial to the value of the inventory. Therefore, market approximates fair value for the Firm's physical commodities inventories. When fair value hedging has been applied (or when market is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm's hedge accounting relationships, see Note 6. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.
(d) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).
(e) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables and payables balances would be $546 million and $2.5 billion at December 31, 2015 and 2014, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.
(f) Private equity instruments represent investments within the Corporate line of business. The cost basis of the private equity investment portfolio totaled $3.5 billion and $6.0 billion at December 31, 2015 and 2014, respectively.
(g) Certain prior period amounts (including the corresponding fair value parenthetical disclosure for accounts payable and other liabilities on the Consolidated balance sheets) were revised to conform with the current period presentation.

Transfers between levels for instruments carried at fair value on a recurring basis

For the years ended December 31, 2015 and 2014, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2015, transfers from level 3 to level 2 and from level 2 to level 3 included the following:

- $3.1 billion of long-term debt and $1.0 billion of deposits driven by an increase in observability on certain structured notes with embedded interest rate and FX derivatives and a reduction of the significance in the unobservable inputs for certain structured notes with embedded equity derivatives
- $2.1 billion of gross equity derivatives for both receivables and payables as a result of an increase in observability and a decrease in the significance in unobservable inputs; partially offset by transfers into level 3 resulting in net transfers of approximately $1.2 billion for both receivables and payables
- $2.8 billion of trading loans driven by an increase in observability of certain collateralized financing transactions; and $2.4 billion of corporate debt driven by a decrease in the significance in the unobservable inputs and an increase in observability for certain structured products

During the year ended December 31, 2014, transfers from level 3 to level 2 included the following:

- $4.3 billion and $4.4 billion of gross equity derivative receivables and payables, respectively, due to increased observability of certain equity option valuation inputs
- $2.7 billion of trading loans, $2.6 billion of margin loans, $2.3 billion of private equity investments, $2.0 billion of corporate debt, and $1.3 billion of long-term debt, based on increased liquidity and price transparency

Transfers from level 2 into level 3 included $1.1 billion of other borrowed funds, $1.1 billion of trading loans and $1.0 billion of long-term debt, based on a decrease in observability of valuation inputs and price transparency.

During the year ended December 31, 2013, transfers from level 3 to level 2 included the following:

- Certain highly rated CLOs, including $27.4 billion held in the Firm's available-for-sale ("AFS") securities portfolio and $1.4 billion held in the trading portfolio, based on increased liquidity and price transparency;
- $1.3 billion of long-term debt, largely driven by an increase in observability of certain equity structured notes.

Transfers from level 2 to level 3 included $1.4 billion of corporate debt securities in the trading portfolio largely driven by a decrease in observability for certain credit instruments.

All transfers are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 valuations

The Firm has established well-documented processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 185–188 of this Note.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs including, but not limited to, transaction details, yield

curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-to-period and parameter-to-parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

For the Firm's derivatives and structured notes positions classified within level 3 at December 31, 2015, interest rate correlation inputs used in estimating fair value were concentrated towards the upper end of the range presented; equities correlation inputs were concentrated at the lower end of the range; the credit correlation inputs were distributed across the range presented; and the foreign exchange correlation inputs were concentrated at the top end of the range presented. In addition, the interest rate volatility inputs and the foreign exchange correlation inputs used in estimating fair value were each concentrated at the upper end of the range presented. The equity volatilities are concentrated in the lower half end of the range. The forward commodity prices used in estimating the fair value of commodity derivatives were concentrated within the lower end of the range presented.

Level 3 inputs[a]

December 31, 2015 (in millions, except for ratios and basis points)

Product/Instrument	Fair value	Principal valuation technique	Unobservable inputs	Range of input values	Weighted average
Residential mortgage-backed securities and loans	$ 5,212	Discounted cash flows	Yield	3% - 26%	6%
			Prepayment speed	0% - 20%	6%
			Conditional default rate	0% - 33%	2%
			Loss severity	0% - 100%	28%
Commercial mortgage-backed securities and loans[b]	2,844	Discounted cash flows	Yield	1% - 25%	6%
			Conditional default rate	0% - 91%	29%
			Loss severity	40%	40%
Corporate debt securities, obligations of U.S. states and municipalities, and other[c]	3,277	Discounted cash flows	Credit spread	60 bps - 225 bps	146 bps
			Yield	1% - 20%	5%
	2,740	Market comparables	Price	$ – - $168	$89
Net interest rate derivatives	876	Option pricing	Interest rate correlation	(52)% - 99%	
			Interest rate spread volatility	3% - 38%	
Net credit derivatives[b][c]	549	Discounted cash flows	Credit correlation	35% - 90%	
Net foreign exchange derivatives	(725)	Option pricing	Foreign exchange correlation	0% - 60%	
Net equity derivatives	(1,514)	Option pricing	Equity volatility	20% - 65%	
Net commodity derivatives	(935)	Discounted cash flows	Forward commodity price	$ 22 - $46 per barrel	
Collateralized loan obligations	759	Discounted cash flows	Credit spread	354 bps - 550 bps	396 bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	40%	40%
	180	Market comparables	Price	$ – - $99	$69
Mortgage servicing rights	6,608	Discounted cash flows	Refer to Note 17		
Private equity investments	1,657	Market comparables	EBITDA multiple	7.2x - 10.4x	8.5x
			Liquidity adjustment	0% - 13%	8%
Long-term debt, other borrowed funds, and deposits[d]	14,707	Option pricing	Interest rate correlation	(52)% - 99%	
			Interest rate spread volatility	3% - 38%	
			Foreign exchange correlation	0% - 60%	
			Equity correlation	(50)% - 80%	
	495	Discounted cash flows	Credit correlation	35% - 90%	
Beneficial interests issued by consolidated VIEs[e]	549	Discounted cash flows	Yield	4% - 28%	4%
			Prepayment Speed	1% - 12%	6%
			Conditional default rate	2% - 15%	2%
			Loss severity	30% - 100%	31%

(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated balance sheets.

(b) The unobservable inputs and associated input ranges for approximately $349 million of credit derivative receivables and $310 million of credit derivative payables with underlying commercial mortgage risk have been included in the inputs and ranges provided for commercial mortgage-backed securities and loans.

(c) The unobservable inputs and associated input ranges for approximately $434 million of credit derivative receivables and $401 million of credit derivative payables with underlying asset-backed securities risk have been included in the inputs and ranges provided for corporate debt securities, obligations of U.S. states and municipalities and other.

(d) Long-term debt, other borrowed funds and deposits include structured notes issued by the Firm that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of structured notes is predominantly based on the derivative features embedded within the instruments. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

(e) The parameters are related to residential mortgage-backed securities.

Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent as a change in one unobservable input may give rise to a change in another unobservable input; where relationships exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline); such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

In addition, the following discussion provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

Credit spread – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, loan-to-value ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

Prepayment speed – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral has high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security investment depends on factors relating to the underlying mortgages, including the loan-to-value ratio, the nature of the lender's lien on the property and other instrument-specific factors.

Correlation – Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. The range of correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

EBITDA multiple – EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization ("EBITDA") of a company in order to estimate the company's value. An increase in the EBITDA multiple, in isolation, net of adjustments, would result in an increase in a fair value measurement.

Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated balance sheets amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2015, 2014 and 2013. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

Year ended December 31, 2015 (in millions)	Fair value at January 1, 2015	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2015	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2015
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 922	$ (28)	$ 327	$ (303)	$ (132)	$ (71)	$ 715	$ (27)
Residential – nonagency	663	130	253	(611)	(23)	(218)	194	4
Commercial – nonagency	306	(14)	246	(262)	(22)	(139)	115	(5)
Total mortgage-backed securities	1,891	88	826	(1,176)	(177)	(428)	1,024	(28)
Obligations of U.S. states and municipalities	1,273	14	352	(133)	(27)	(828)	651	(1)
Non-U.S. government debt securities	302	9	205	(123)	(64)	(255)	74	(16)
Corporate debt securities	2,989	(77)	1,171	(1,038)	(125)	(2,184)	736	2
Loans	13,287	(174)	3,532	(4,661)	(3,112)	(2,268)	6,604	(181)
Asset-backed securities	1,264	(41)	1,920	(1,229)	(35)	(47)	1,832	(32)
Total debt instruments	21,006	(181)	8,006	(8,360)	(3,540)	(6,010)	10,921	(256)
Equity securities	431	96	89	(193)	(26)	(132)	265	82
Physical commodities	2	(2)	–	–	–	–	–	–
Other	1,050	119	1,581	(1,313)	192	(885)	744	85
Total trading assets – debt and equity instruments	22,489	32 [c]	9,676	(9,866)	(3,374)	(7,027)	11,930	(89) [c]
Net derivative receivables:[a]								
Interest rate	626	962	513	(173)	(732)	(320)	876	263
Credit	189	118	129	(136)	165	84	549	260
Foreign exchange	(526)	657	19	(149)	(296)	(430)	(725)	49
Equity	(1,785)	731	890	(1,262)	(158)	70	(1,514)	5
Commodity	(565)	(856)	1	(24)	512	(3)	(935)	(41)
Total net derivative receivables	(2,061)	1,612 [c]	1,552	(1,744)	(509)	(599)	(1,749)	536 [c]
Available-for-sale securities:								
Asset-backed securities	908	(32)	51	(43)	(61)	–	823	(28)
Other	129	–	–	–	(29)	(99)	1	–
Total available-for-sale securities	1,037	(32) [d]	51	(43)	(90)	(99)	824	(28) [d]
Loans	2,541	(133) [c]	1,290	(92)	(1,241)	(847)	1,518	(32) [c]
Mortgage servicing rights	7,436	(405) [e]	985	(486)	(922)	–	6,608	(405) [e]
Other assets:								
Private equity investments	2,225	(120) [c]	281	(362)	(187)	(180)	1,657	(304) [c]
All other	959	91 [f]	65	(147)	(224)	–	744	15 [f]

Year ended December 31, 2015 (in millions)	Fair value at January 1, 2015	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2015	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2015
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 2,859	$ (39) [c]	$ –	$ –	$ 1,993	$ (850)	$ (1,013)	$ 2,950	$ (29) [c]
Other borrowed funds	1,453	(697) [c]	–	–	3,334	(2,963)	(488)	639	(57) [c]
Trading liabilities – debt and equity instruments	72	15 [c]	(163)	160	–	(17)	(4)	63	(4) [c]
Accounts payable and other liabilities	26	–	–	–	–	(7)	–	19	–
Beneficial interests issued by consolidated VIEs	1,146	(82) [c]	–	–	286	(574)	(227)	549	(63) [c]
Long-term debt	11,877	(480) [c]	(58)	–	9,359	(6,299)	(2,786)	11,613	385 [c]

Year ended December 31, 2014 (in millions)	Fair value at January 1, 2014	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2014	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2014
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 1,005	$ (97)	$ 351	$ (186)	$ (121)	$ (30)	$ 922	$ (92)
Residential – nonagency	726	66	827	(761)	(41)	(154)	663	(15)
Commercial – nonagency	432	17	980	(914)	(60)	(149)	306	(12)
Total mortgage-backed securities	2,163	(14)	2,158	(1,861)	(222)	(333)	1,891	(119)
Obligations of U.S. states and municipalities	1,382	90	298	(358)	(139)	–	1,273	(27)
Non-U.S. government debt securities	143	24	719	(617)	(3)	36	302	10
Corporate debt securities	5,920	210	5,854	(3,372)	(4,531)	(1,092)	2,989	379
Loans	13,455	387	13,551	(7,917)	(4,623)	(1,566)	13,287	123
Asset-backed securities	1,272	19	2,240	(2,126)	(283)	142	1,264	(30)
Total debt instruments	24,335	716	24,820	(16,251)	(9,801)	(2,813)	21,006	336
Equity securities	867	113	248	(259)	(286)	(252)	431	46
Physical commodities	4	(1)	–	–	(1)	–	2	–
Other	2,000	239	1,426	(276)	(201)	(2,138)	1,050	329
Total trading assets – debt and equity instruments	27,206	1,067 [c]	26,494	(16,786)	(10,289)	(5,203)	22,489	711 [c]
Net derivative receivables:[a]								
Interest rate	2,379	184	198	(256)	(1,771)	(108)	626	(853)
Credit	95	(149)	272	(47)	92	(74)	189	(107)
Foreign exchange	(1,200)	(137)	139	(27)	668	31	(526)	(62)
Equity	(1,063)	154	2,044	(2,863)	10	(67)	(1,785)	583
Commodity	115	(465)	1	(113)	(109)	6	(565)	(186)
Total net derivative receivables	326	(413) [c]	2,654	(3,306)	(1,110)	(212)	(2,061)	(625) [c]
Available-for-sale securities:								
Asset-backed securities	1,088	(41)	275	(2)	(101)	(311)	908	(40)
Other	1,234	(19)	122	–	(223)	(985)	129	(2)
Total available-for-sale securities	2,322	(60) [d]	397	(2)	(324)	(1,296)	1,037	(42) [d]
Loans	1,931	(254) [c]	3,258	(845)	(1,549)	–	2,541	(234) [c]
Mortgage servicing rights	9,614	(1,826) [e]	768	(209)	(911)	–	7,436	(1,826) [e]
Other assets:								
Private equity investments	5,816	400 [c]	145	(1,967)	(197)	(1,972)	2,225	33 [c]
All other	1,382	83 [f]	10	(357)	(159)	–	959	59 [f]

Year ended December 31, 2014 (in millions)	Fair value at January 1, 2014	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2014	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2014
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 2,255	$ 149 [c]	$ –	$ –	$ 1,578	$ (197)	$ (926)	$ 2,859	$ 130 [c]
Other borrowed funds	2,074	(596) [c]	–	–	5,377	(6,127)	725	1,453	(415) [c]
Trading liabilities – debt and equity instruments	113	(5) [c]	(305)	323	–	(5)	(49)	72	2 [c]
Accounts payable and other liabilities	–	27 [c]	–	–	–	(1)	–	26	–
Beneficial interests issued by consolidated VIEs	1,240	(4) [c]	–	–	775	(763)	(102)	1,146	(22) [c]
Long-term debt	10,008	(40) [c]	–	–	7,421	(5,231)	(281)	11,877	(9) [c]

Year ended December 31, 2013 (in millions)	Fair value at January 1, 2013	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2013	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2013
	Fair value measurements using significant unobservable inputs							
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 498	$ 169	$ 819	$ (381)	$ (100)	$ –	$ 1,005	$ 200
Residential – nonagency	663	407	780	(1,028)	(91)	(5)	726	205
Commercial – nonagency	1,207	114	841	(1,522)	(208)	–	432	(4)
Total mortgage-backed securities	2,368	690	2,440	(2,931)	(399)	(5)	2,163	401
Obligations of U.S. states and municipalities	1,436	71	472	(251)	(346)	–	1,382	18
Non-U.S. government debt securities	67	4	1,449	(1,479)	(8)	110	143	(1)
Corporate debt securities	5,308	103	7,602	(5,975)	(1,882)	764	5,920	466
Loans	10,787	665	10,411	(7,431)	(685)	(292)	13,455	315
Asset-backed securities	3,696	191	1,912	(2,379)	(292)	(1,856)	1,272	105
Total debt instruments	23,662	1,724	24,286	(20,446)	(3,612)	(1,279)	24,335	1,304
Equity securities	1,092	(37)	328	(266)	(135)	(115)	867	46
Physical commodities	–	(4)	–	(8)	–	16	4	(4)
Other	863	558	659	(95)	(120)	135	2,000	1,074
Total trading assets – debt and equity instruments	25,617	2,241 [c]	25,273	(20,815)	(3,867)	(1,243)	27,206	2,420 [c]
Net derivative receivables:[a]								
Interest rate	3,322	1,358	344	(220)	(2,391)	(34)	2,379	107
Credit	1,873	(1,697)	115	(12)	(357)	173	95	(1,449)
Foreign exchange	(1,750)	(101)	3	(4)	683	(31)	(1,200)	(110)
Equity	(1,806)	2,528	1,305	(2,111)	(1,353)	374	(1,063)	872
Commodity	254	816	105	(3)	(1,107)	50	115	410
Total net derivative receivables	1,893	2,904 [c]	1,872	(2,350)	(4,525)	532	326	(170) [c]
Available-for-sale securities:								
Asset-backed securities	28,024	4	579	(57)	(57)	(27,405)	1,088	4
Other	892	26	508	(216)	(6)	30	1,234	25
Total available-for-sale securities	28,916	30 [d]	1,087	(273)	(63)	(27,375)	2,322	29 [d]
Loans	2,282	81 [c]	1,065	(191)	(1,306)	–	1,931	(21) [c]
Mortgage servicing rights	7,614	1,612 [e]	2,215	(725)	(1,102)	–	9,614	1,612 [e]
Other assets:								
Private equity investments	5,590	824 [c]	537	(1,080)	140	(195)	5,816	42 [c]
All other	2,122	(17) [f]	49	(427)	(345)	–	1,382	(64) [f]

Year ended December 31, 2013 (in millions)	Fair value at January 1, 2013	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements[h]	Transfers into and/or out of level 3[i]	Fair value at Dec. 31, 2013	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2013
	Fair value measurements using significant unobservable inputs								
Liabilities:[b]									
Deposits	$ 1,983	$ (82) [c]	$ –	$ –	$ 1,248	$ (222)	$ (672)	$ 2,255	$ (88) [c]
Other borrowed funds	1,619	(177) [c]	–	–	7,108	(6,845)	369	2,074	291 [c]
Trading liabilities – debt and equity instruments	205	(83) [c]	(2,418)	2,594	–	(54)	(131)	113	(100) [c]
Accounts payable and other liabilities	–	–	–	–	–	–	–	–	–
Beneficial interests issued by consolidated VIEs	925	174 [c]	–	–	353	(212)	–	1,240	167 [c]
Long-term debt	8,476	(435) [c]	–	–	6,830	(4,362)	(501)	10,008	(85) [c]

Note: Effective April 1, 2015, the Firm adopted new accounting guidance for certain investments where the Firm measures fair value using the net asset value per share (or its equivalent) as a practical expedient and excluded such investments from the fair value hierarchy. The guidance was required to be applied retrospectively, and accordingly, prior period amounts have been revised to conform with the current period presentation. For further information, see page 190.

(a) All level 3 derivatives are presented on a net basis, irrespective of underlying counterparty.
(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 13%, 15% and 18% at December 31, 2015, 2014 and 2013, respectively.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for CCB mortgage loans, lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.
(d) Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange remeasurement adjustments recorded in income on AFS securities were $(7) million, $(43) million, and $17 million for the years ended December 31, 2015, 2014 and 2013, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $(25) million, $(16) million and $13 million for the years ended December 31, 2015, 2014 and 2013, respectively.
(e) Changes in fair value for CCB MSRs are reported in mortgage fees and related income.
(f) Predominantly reported in other income.
(g) Loan originations are included in purchases.
(h) Includes financial assets and liabilities that have matured, been partially or fully repaid, impacts of modifications, and deconsolidations associated with beneficial interests in VIEs.
(i) All transfers into and/or out of level 3 are assumed to occur at the beginning of the quarterly reporting period in which they occur.

Level 3 analysis

Consolidated balance sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 1.4% of total Firm assets at December 31, 2015. The following describes significant changes to level 3 assets since December 31, 2014, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on pages 200–201.

For the year ended December 31, 2015

Level 3 assets were $31.2 billion at December 31, 2015, reflecting a decrease of $18.0 billion from December 31, 2014. This decrease was driven by settlements (including repayments and restructurings) and transfers to Level 2 due to an increase in observability and a decrease in the significance of unobservable inputs. In particular:

- $10.6 billion decrease in trading assets – debt and equity instruments was driven by a decrease of $6.7 billion in trading loans due to sales, maturities and transfers from level 3 to level 2 as a result of an increase in observability of certain valuation inputs and a $2.3 billion decrease in corporate debt securities due to transfers from level 3 to level 2 as a result of an increase in observability of certain valuation inputs
- $4.6 billion decrease in gross derivative receivables was driven by a $3.9 billion decrease in equity, interest rate and foreign exchange derivative receivables due to market movements and transfers from level 3 to level 2 as a result of an increase in observability of certain valuation inputs

Gains and losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended December 31, 2015, 2014 and 2013. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 195–199.

2015

- $1.6 billion of net gains in interest rate, foreign exchange and equity derivative receivables largely due to market movements; partially offset by loss in commodity derivatives due to market movements
- $1.3 billion of net gains in liabilities due to market movements

2014

- $1.8 billion of losses on MSRs. For further discussion of the change, refer to Note 17
- $1.1 billion of net gains on trading assets – debt and equity instruments, largely driven by market movements and client-driven financing transactions

2013

- $2.9 billion of net gains on derivatives, largely driven by $2.5 billion of gains on equity derivatives, primarily related to client-driven market-making activity and a rise in equity markets; and $1.4 billion of gains, predominantly on interest rate lock and mortgage loan purchase commitments; partially offset by $1.7 billion of losses on credit derivatives from the impact of tightening reference entity credit spreads
- $2.2 billion of net gains on trading assets – debt and equity instruments, largely driven by market making and credit spread tightening in nonagency mortgage-backed securities and trading loans, and the impact of market movements on client-driven financing transactions
- $1.6 billion of net gains on MSRs. For further discussion of the change, refer to Note 17

Credit and funding adjustments

When determining the fair value of an instrument, it may be necessary to record adjustments to the Firm's estimates of fair value in order to reflect counterparty credit quality, the Firm's own creditworthiness, and the impact of funding:

- CVA is taken to reflect the credit quality of a counterparty in the valuation of derivatives. Derivatives are generally valued using models that use as their basis observable market parameters. These market parameters may not consider counterparty non-performance risk. Therefore, an adjustment may be necessary to reflect the credit quality of each derivative counterparty to arrive at fair value.

  The Firm estimates derivatives CVA using a scenario analysis to estimate the expected credit exposure across all of the Firm's positions with each counterparty, and then estimates losses as a result of a counterparty credit event. The key inputs to this methodology are (i) the expected positive exposure to each counterparty based on a simulation that assumes the current population of existing derivatives with each counterparty remains unchanged and considers contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset; (ii) the probability of a default event occurring for each counterparty, as derived from observed or estimated CDS spreads; and (iii) estimated recovery rates implied by CDS, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk. As such, the Firm estimates derivatives CVA relative to the relevant benchmark interest rate.

- DVA is taken to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The DVA calculation methodology is generally consistent with the CVA methodology described above and incorporates JPMorgan Chase's credit spreads as observed through the CDS market to estimate the probability of default and loss given default as a result of a systemic event affecting the Firm. Structured notes DVA is estimated using the current fair value of the structured note as the exposure amount, and is otherwise consistent with the derivative DVA methodology.

- FVA is taken to incorporate the impact of funding in the Firm's valuation estimates where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. For collateralized derivatives, the fair value is estimated by discounting expected future cash flows at the relevant overnight indexed swap ("OIS") rate given the underlying collateral agreement with the counterparty. For uncollateralized (including partially collateralized) over-the-counter ("OTC") derivatives and structured notes, effective in 2013, the Firm implemented a FVA framework to incorporate the impact of funding into its valuation estimates. The Firm's FVA framework leverages its existing CVA and DVA calculation methodologies, and considers the fact that the Firm's own credit risk is a significant component of funding costs. The key inputs to FVA are: (i) the expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; (ii) for assets, the estimated market funding cost in the principal market; and (iii) for liabilities, the hypothetical market funding cost for a transfer to a market participant with a similar credit standing as the Firm.

Upon the implementation of the FVA framework in 2013, the Firm recorded a one-time $1.5 billion loss in principal transactions revenue that was recorded in the CIB. While the FVA framework applies to both assets and liabilities, the loss on implementation largely related to uncollateralized derivative receivables given that the impact of the Firm's own credit risk, which is a significant component of funding costs, was already incorporated in the valuation of liabilities through the application of DVA.

The following table provides the impact of credit and funding adjustments on principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities. The DVA and FVA reported below include the impact of the Firm's own credit quality on the inception value of liabilities as well as the impact of changes in the Firm's own credit quality over time.

Year ended December 31, (in millions)	**2015**	2014	2013
Credit adjustments:			
Derivatives CVA	**$ 620**	$ (322)	$ 1,886
Derivatives DVA and FVA[(a)]	**73**	(58)	(1,152)
Structured notes DVA and FVA[(b)]	**754**	200	(760)

(a) Included derivatives DVA of $(6) million, $(1) million and $(115) million for the years ended December 31, 2015, 2014 and 2013, respectively.
(b) Included structured notes DVA of $171 million, $20 million and $(337) million for the years ended December 31, 2015, 2014 and 2013, respectively.

Assets and liabilities measured at fair value on a nonrecurring basis

At December 31, 2015 and 2014, assets measured at fair value on a nonrecurring basis were $1.7 billion and $4.5 billion, respectively, consisting predominantly of loans that had fair value adjustments for the years ended December 31, 2015 and 2014. At December 31, 2015, $696 million and $959 million of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2014, $1.3 billion and $3.2 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2015 and 2014. For the years ended December 31, 2015, 2014 and 2013, there were no significant transfers between levels 1, 2 and 3 related to assets held at the balance sheet date.

Of the $959 million in level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2015:

- $556 million related to residential real estate loans carried at the net realizable value of the underlying collateral (i.e., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3, as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 4% to 59%, with a weighted average of 22%.

The total change in the recorded value of assets and liabilities for which a fair value adjustment has been included in the Consolidated statements of income for the years ended December 31, 2015, 2014 and 2013, related to financial instruments held at those dates, were losses of $294 million, $992 million and $789 million, respectively; these reductions were predominantly associated with loans.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated balance sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated balance sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks, deposits with banks, federal funds sold, securities purchased under resale agreements and securities borrowed, short-term receivables and accrued interest receivable, commercial paper, federal funds purchased, securities loaned and sold under repurchase agreements, other borrowed funds, accounts payable, and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not permitted.

The following table presents by fair value hierarchy classification the carrying values and estimated fair values at December 31, 2015 and 2014, of financial assets and liabilities, excluding financial instruments which are carried at fair value on a recurring basis. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see pages 185–188 of this Note.

	December 31, 2015					December 31, 2014				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 20.5**	**$ 20.5**	**$ –**	**$ –**	**$ 20.5**	$ 27.8	$ 27.8	$ –	$ –	$ 27.8
Deposits with banks	**340.0**	**335.9**	**4.1**	**–**	**340.0**	484.5	480.4	4.1	–	484.5
Accrued interest and accounts receivable	**46.6**	**–**	**46.4**	**0.2**	**46.6**	70.1	–	70.0	0.1	70.1
Federal funds sold and securities purchased under resale agreements	**189.5**	**–**	**189.5**	**–**	**189.5**	187.2	–	187.2	–	187.2
Securities borrowed	**98.3**	**–**	**98.3**	**–**	**98.3**	109.4	–	109.4	–	109.4
Securities, held-to-maturity[(a)]	**49.1**	**–**	**50.6**	**–**	**50.6**	49.3	–	51.2	–	51.2
Loans, net of allowance for loan losses[(b)]	**820.8**	**–**	**25.4**	**802.7**	**828.1**	740.5	–	21.8	723.1	744.9
Other	**66.0**	**0.1**	**56.3**	**14.3**	**70.7**	64.7	–	55.7	13.3	69.0
Financial liabilities										
Deposits	**$ 1,267.2**	**$ –**	**$ 1,266.1**	**$ 1.2**	**$ 1,267.3**	$ 1,354.6	$ –	$ 1,353.6	$ 1.2	$ 1,354.8
Federal funds purchased and securities loaned or sold under repurchase agreements	**149.2**	**–**	**149.2**	**–**	**149.2**	189.1	–	189.1	–	189.1
Commercial paper	**15.6**	**–**	**15.6**	**–**	**15.6**	66.3	–	66.3	–	66.3
Other borrowed funds	**11.2**	**–**	**11.2**	**–**	**11.2**	15.5		15.5	–	15.5
Accounts payable and other liabilities[(c)]	**144.6**	**–**	**141.7**	**2.8**	**144.5**	172.6	–	169.6	2.9	172.5
Beneficial interests issued by consolidated VIEs[(d)]	**41.1**	**–**	**40.2**	**0.9**	**41.1**	50.2	–	48.2	2.0	50.2
Long-term debt and junior subordinated deferrable interest debentures[(e)]	**255.6**	**–**	**257.4**	**4.3**	**261.7**	246.2	–	251.2	3.8	255.0

(a) Carrying value reflects unamortized discount or premium.
(b) Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see Valuation hierarchy on pages 185–188.
(c) Certain prior period amounts have been revised to conform with the current presentation.
(d) Carrying value reflects unamortized issuance costs.
(e) Carrying value reflects unamortized premiums and discounts, issuance costs, and other valuation adjustments.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated balance sheets, nor are they actively traded. The carrying value of the allowance and the estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

	December 31, 2015					December 31, 2014				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[(a)]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[(a)]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 0.8**	**$ –**	**$ –**	**$ 3.0**	**$ 3.0**	$ 0.6	$ –	$ –	$ 1.6	$ 1.6

(a) Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which are recognized at fair value at the inception of guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases as permitted by law, without notice. For a further discussion of the valuation of lending-related commitments, see page 186 of this Note.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments.

The Firm has elected to measure certain instruments at fair value in order to:

- Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (e.g. certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;
- Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and/or
- Better reflect those instruments that are managed on a fair value basis.

The Firm's election of fair value includes the following instruments:

- Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.
- Certain securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.
- Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument.
- Certain investments that receive tax credits and other equity investments acquired as part of the Washington Mutual transaction.
- Structured notes issued as part of CIB's client-driven activities. (Structured notes are predominantly financial instruments that contain embedded derivatives.)
- Certain long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value.

Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated statements of income for the years ended December 31, 2015, 2014 and 2013, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

	2015			2014			2013		
December 31, (in millions)	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded	Principal transactions	All other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	**$ (38)**	**$ –**	**$ (38)**	$ (15)	$ –	$ (15)	$ (454)	$ –	$ (454)
Securities borrowed	**(6)**	**–**	**(6)**	(10)	–	(10)	10	–	10
Trading assets:									
Debt and equity instruments, excluding loans	**756**	**(10)** [d]	**746**	639	–	639	582	7 [c]	589
Loans reported as trading assets:									
Changes in instrument-specific credit risk	**138**	**41** [c]	**179**	885	29 [c]	914	1,161	23 [c]	1,184
Other changes in fair value	**232**	**818** [c]	**1,050**	352	1,353 [c]	1,705	(133)	1,833 [c]	1,700
Loans:									
Changes in instrument-specific credit risk	**35**	**–**	**35**	40	–	40	36	–	36
Other changes in fair value	**4**	**–**	**4**	34	–	34	17	–	17
Other assets	**79**	**(1)** [d]	**78**	24	6 [d]	30	32	86 [d]	118
Deposits[a]	**93**	**–**	**93**	(287)	–	(287)	260	–	260
Federal funds purchased and securities loaned or sold under repurchase agreements	**8**	**–**	**8**	(33)	–	(33)	73	–	73
Other borrowed funds[a]	**1,996**	**–**	**1,996**	(891)	–	(891)	(399)	–	(399)
Trading liabilities	**(20)**	**–**	**(20)**	(17)	–	(17)	(46)	–	(46)
Beneficial interests issued by consolidated VIEs	**49**	**–**	**49**	(233)	–	(233)	(278)	–	(278)
Other liabilities	**–**	**–**	**–**	(27)	–	(27)	–	–	–
Long-term debt:									
Changes in instrument-specific credit risk[a]	**300**	**–**	**300**	101	–	101	(271)	–	(271)
Other changes in fair value[b]	**1,088**	**–**	**1,088**	(615)	–	(615)	1,280	–	1,280

(a) Total changes in instrument-specific credit risk (DVA) related to structured notes were $171 million, $20 million and $(337) million for the years ended December 31, 2015, 2014 and 2013, respectively. These totals include such changes for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings that are attributable to changes in instrument-specific credit risk, were determined.

- Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery information, where available, or benchmarking to similar entities or industries.
- Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.
- Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2015 and 2014, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2015			2014		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 3,484**	**$ 631**	**$ (2,853)**	$ 3,847	$ 905	$ (2,942)
Loans	**7**	**7**	**–**	7	7	–
Subtotal	**3,491**	**638**	**(2,853)**	3,854	912	(2,942)
All other performing loans						
Loans reported as trading assets	**30,780**	**28,184**	**(2,596)**	37,608	35,462	(2,146)
Loans	**2,771**	**2,752**	**(19)**	2,397	2,389	(8)
Total loans	**$ 37,042**	**$ 31,574**	**$ (5,468)**	$ 43,859	$ 38,763	$ (5,096)
Long-term debt						
Principal-protected debt	**$ 17,910** [c]	**$ 16,611**	**$ (1,299)**	$ 14,660 [c]	$ 15,484	$ 824
Nonprincipal-protected debt[b]	**NA**	**16,454**	**NA**	NA	14,742	NA
Total long-term debt	**NA**	**$ 33,065**	**NA**	NA	$ 30,226	NA
Long-term beneficial interests						
Nonprincipal-protected debt	**NA**	**$ 787**	**NA**	NA	$ 2,162	NA
Total long-term beneficial interests	**NA**	**$ 787**	**NA**	NA	$ 2,162	NA

(a) There were no performing loans that were ninety days or more past due as of December 31, 2015 and 2014, respectively.
(b) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal protected notes.
(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Firm's next call date.

At December 31, 2015 and 2014, the contractual amount of letters of credit for which the fair value option was elected was $4.6 billion and $4.5 billion, respectively, with a corresponding fair value of $(94) million and $(147) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29.

Structured note products by balance sheet classification and risk component

The table below presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk to which the structured notes' embedded derivative relates.

	December 31, 2015				December 31, 2014			
(in millions)	Long-term debt	Other borrowed funds	Deposits	Total	Long-term debt	Other borrowed funds	Deposits	Total
Risk exposure								
Interest rate	**$ 12,531**	**$ 58**	**$ 3,340**	**$ 15,929**	$ 10,858	$ 460	$ 2,119	$ 13,437
Credit	**3,195**	**547**	**–**	**3,742**	4,023	450	–	4,473
Foreign exchange	**1,765**	**77**	**11**	**1,853**	2,150	211	17	2,378
Equity	**14,293**	**8,447**	**4,993**	**27,733**	12,348	12,412	4,415	29,175
Commodity	**640**	**50**	**1,981**	**2,671**	710	644	2,012	3,366
Total structured notes	**$ 32,424**	**$ 9,179**	**$ 10,325**	**$ 51,928**	$ 30,089	$ 14,177	$ 8,563	$ 52,829

Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential credit risk concentrations and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential credit risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. In the wholesale portfolio, credit risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, and collateral and other risk-reduction techniques. For additional information on loans, see Note 14.

The Firm does not believe that its exposure to any particular loan product (e.g., option adjustable rate mortgages ("ARMs")), or industry segment (e.g., commercial real estate), or its exposure to residential real estate loans with high loan-to-value ratios, results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

The table below presents both on-balance sheet and off-balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2015 and 2014.

	2015				2014			
	Credit exposure	On-balance sheet		Off-balance sheet[f]	Credit exposure	On-balance sheet		Off-balance sheet[f][g]
December 31, (in millions)		Loans	Derivatives			Loans	Derivatives	
Total consumer, excluding credit card	**$ 403,424**	**$ 344,821**	**$ –**	**$ 58,478**	$ 353,635	$ 295,374	$ –	$ 58,153
Total credit card	**646,981**	**131,463**	**–**	**515,518**	657,011	131,048	–	525,963
Total consumer	**1,050,405**	**476,284**	**–**	**573,996**	1,010,646	426,422	–	584,116
Wholesale-related[a]								
Real Estate	**116,857**	**92,820**	**312**	**23,725**	105,975	79,113	327	26,535
Consumer & Retail	**85,460**	**27,175**	**1,573**	**56,712**	83,663	25,094	1,845	56,724
Technology, Media & Telecommunications	**57,382**	**11,079**	**1,032**	**45,271**	46,655	11,362	2,190	33,103
Industrials	**54,386**	**16,791**	**1,428**	**36,167**	47,859	16,040	1,303	30,516
Healthcare	**46,053**	**16,965**	**2,751**	**26,337**	56,516	13,794	4,542	38,180
Banks & Finance Cos	**43,398**	**20,401**	**10,218**	**12,779**	55,098	23,367	15,706	16,025
Oil & Gas	**42,077**	**13,343**	**1,902**	**26,832**	43,148	15,616	1,836	25,696
Utilities	**30,853**	**5,294**	**1,689**	**23,870**	27,441	4,844	2,272	20,325
State & Municipal Govt	**29,114**	**9,626**	**3,287**	**16,201**	31,068	7,593	4,002	19,473
Asset Managers	**23,815**	**6,703**	**7,733**	**9,379**	27,488	8,043	9,386	10,059
Transportation	**19,227**	**9,157**	**1,575**	**8,495**	20,619	10,381	2,247	7,991
Central Govt	**17,968**	**2,000**	**13,240**	**2,728**	19,881	1,103	15,527	3,251
Chemicals & Plastics	**15,232**	**4,033**	**369**	**10,830**	12,612	3,087	410	9,115
Metals & Mining	**14,049**	**4,622**	**607**	**8,820**	14,969	5,628	589	8,752
Automotive	**13,864**	**4,473**	**1,350**	**8,041**	12,754	3,779	766	8,209
Insurance	**11,889**	**1,094**	**1,992**	**8,803**	13,350	1,175	3,474	8,701
Financial Markets Infrastructure	**7,973**	**724**	**2,602**	**4,647**	11,986	928	6,789	4,269
Securities Firms	**4,412**	**861**	**1,424**	**2,127**	4,801	1,025	1,351	2,425
All other[b]	**149,117**	**109,889**	**4,593**	**34,635**	134,475	92,530	4,413	37,532
Subtotal	**783,126**	**357,050**	**59,677**	**366,399**	770,358	324,502	78,975	366,881
Loans held-for-sale and loans at fair value	**3,965**	**3,965**	**–**	**–**	6,412	6,412	–	–
Receivables from customers and other[c]	**13,372**	**–**	**–**	**–**	28,972	–	–	–
Total wholesale-related	**800,463**	**361,015**	**59,677**	**366,399**	805,742	330,914	78,975	366,881
Total exposure[d][e]	**$ 1,850,868**	**$ 837,299**	**$ 59,677**	**$ 940,395**	$ 1,816,388	$ 757,336	$ 78,975	$ 950,997

(a) Effective in the fourth quarter 2015, the Firm realigned its wholesale industry divisions in order to better monitor and manage industry concentrations. Prior period amounts have been revised to conform with current period presentation. For additional information, see Wholesale credit portfolio on pages 122–129.
(b) All other includes: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16.
(c) Primarily consists of margin loans to prime brokerage customers that are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm did not hold any reserves for credit impairment on these receivables.
(d) For further information regarding on-balance sheet credit concentrations by major product and/or geography, see Note 6 and Note 14. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 29.
(e) Excludes cash placed with banks of $351.0 billion and $501.5 billion, at December 31, 2015 and 2014, respectively, placed with various central banks, predominantly Federal Reserve Banks.
(f) Represents lending-related financial instruments.
(g) Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.

Note 6 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sales price. JPMorgan Chase makes markets in derivatives for clients and also uses derivatives to hedge or manage its own risk exposures. Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

Market-making derivatives
The majority of the Firm's derivatives are entered into for market-making purposes. Clients use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

Risk management derivatives
The Firm manages its market risk exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increases or decreases as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities or the forecasted revenues or expenses increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset the depreciation or appreciation of the related inventory.

Credit derivatives are used to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of credit default swaps. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 218–220 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 218 of this Note, and the hedge accounting gains and losses tables on pages 216–218 of this Note.

Derivative counterparties and settlement types
The Firm enters into OTC derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain exchange-traded derivatives ("ETD") such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivative contracts with central counterparties ("CCPs"). ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

Derivative Clearing Services
The Firm provides clearing services for clients where the Firm acts as a clearing member with respect to certain derivative exchanges and clearing houses. The Firm does not reflect the clients' derivative contracts in its Consolidated Financial Statements. For further information on the Firm's clearing services, see Note 29.

Accounting for derivatives

All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated balance sheets at fair value.

As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. For further discussion of the offsetting of assets and liabilities, see Note 1. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 212–218 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4.

Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm's risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate, foreign exchange, and commodity derivatives used for risk management purposes.

To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item, and for benchmark interest rate hedges is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency-denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated statements of income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) ("AOCI") is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
◦ Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate	216
◦ Interest rate	Hedge floating-rate assets and liabilities	Cash flow hedge	Corporate	217
◦ Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	216
◦ Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate	217
◦ Foreign exchange	Hedge the value of the Firm's investments in non-U.S. subsidiaries	Net investment hedge	Corporate	218
◦ Commodity	Hedge commodity inventory	Fair value hedge	CIB	216
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
◦ Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	218
◦ Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	218
◦ Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	218
◦ Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate	218
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	218
• Various	Other derivatives	Market-making and other	CIB, Corporate	218

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2015 and 2014.

	Notional amounts[b]	
December 31, (in billions)	**2015**	2014
Interest rate contracts		
Swaps	**$ 24,162**	$ 29,734
Futures and forwards	**5,167**	10,189
Written options	**3,506**	3,903
Purchased options	**3,896**	4,259
Total interest rate contracts	**36,731**	48,085
Credit derivatives[a]	**2,900**	4,249
Foreign exchange contracts		
Cross-currency swaps	**3,199**	3,346
Spot, futures and forwards	**5,028**	4,669
Written options	**690**	790
Purchased options	**706**	780
Total foreign exchange contracts	**9,623**	9,585
Equity contracts		
Swaps	**232**	206
Futures and forwards	**43**	50
Written options	**395**	432
Purchased options	**326**	375
Total equity contracts	**996**	1,063
Commodity contracts		
Swaps	**83**	126
Spot, futures and forwards	**99**	193
Written options	**115**	181
Purchased options	**112**	180
Total commodity contracts	**409**	680
Total derivative notional amounts	**$ 50,659**	$ 63,662

(a) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 218–220 of this Note.

(b) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated balance sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated balance sheets as of December 31, 2015 and 2014, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables[(a)]

	Gross derivative receivables				Gross derivative payables			
December 31, 2015 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[(b)]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[(b)]
Trading assets and liabilities								
Interest rate	**$ 665,531**	**$ 4,080**	**$ 669,611**	**$ 26,363**	**$ 632,928**	**$ 2,238**	**$ 635,166**	**$ 10,221**
Credit	**51,468**	**–**	**51,468**	**1,423**	**50,529**	**–**	**50,529**	**1,541**
Foreign exchange	**179,072**	**803**	**179,875**	**17,177**	**189,397**	**1,503**	**190,900**	**19,769**
Equity	**35,859**	**–**	**35,859**	**5,529**	**38,663**	**–**	**38,663**	**9,183**
Commodity	**23,713**	**1,352**	**25,065**	**9,185**	**27,653**	**1**	**27,654**	**12,076**
Total fair value of trading assets and liabilities	**$ 955,643**	**$ 6,235**	**$ 961,878**	**$ 59,677**	**$ 939,170**	**$ 3,742**	**$ 942,912**	**$ 52,790**

	Gross derivative receivables				Gross derivative payables			
December 31, 2014 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[(b)]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[(b)]
Trading assets and liabilities								
Interest rate	$ 944,885 [(c)]	$ 5,372	$ 950,257 [(c)]	$ 33,725	$ 915,368 [(c)]	$ 3,011	$ 918,379 [(c)]	$ 17,745
Credit	76,842	–	76,842	1,838	75,895	–	75,895	1,593
Foreign exchange	211,537 [(c)]	3,650	215,187 [(c)]	21,253	223,988 [(c)]	626	224,614 [(c)]	22,970
Equity	42,489 [(c)]	–	42,489 [(c)]	8,177	46,262 [(c)]	–	46,262 [(c)]	11,740
Commodity	43,151	502	43,653	13,982	45,455	168	45,623	17,068
Total fair value of trading assets and liabilities	$1,318,904 [(c)]	$ 9,524	$1,328,428 [(c)]	$ 78,975	$1,306,968 [(c)]	$ 3,805	$1,310,773 [(c)]	$ 71,116

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 for further information.
(b) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.
(c) The prior period amounts have been revised to conform with the current period presentation. These revisions had no impact on Firm's Consolidated balance sheets or its results of operations.

The following table presents, as of December 31, 2015 and 2014, the gross and net derivative receivables by contract and settlement type. Derivative receivables have been netted on the Consolidated balance sheets against derivative payables and cash collateral payables to the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the receivables are not eligible under U.S. GAAP for netting on the Consolidated balance sheets, and are shown separately in the table below.

	2015			2014		
December 31, (in millions)	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
OTC	**$ 417,386**	**$ (396,506)**	**$ 20,880**	$ 542,107 [c]	$ (514,914) [c]	$ 27,193
OTC-cleared	**246,750**	**(246,742)**	**8**	401,656	(401,618)	38
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total interest rate contracts	**664,136**	**(643,248)**	**20,888**	943,763 [c]	(916,532) [c]	27,231
Credit contracts:						
OTC	**44,082**	**(43,182)**	**900**	66,636	(65,720)	916
OTC-cleared	**6,866**	**(6,863)**	**3**	9,320	(9,284)	36
Total credit contracts	**50,948**	**(50,045)**	**903**	75,956	(75,004)	952
Foreign exchange contracts:						
OTC	**175,060**	**(162,377)**	**12,683**	208,803 [c]	(193,900) [c]	14,903
OTC-cleared	**323**	**(321)**	**2**	36	(34)	2
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total foreign exchange contracts	**175,383**	**(162,698)**	**12,685**	208,839 [c]	(193,934) [c]	14,905
Equity contracts:						
OTC	**20,690**	**(20,439)**	**251**	23,258	(22,826)	432
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**12,285**	**(9,891)**	**2,394**	13,840 [c]	(11,486) [c]	2,354
Total equity contracts	**32,975**	**(30,330)**	**2,645**	37,098 [c]	(34,312) [c]	2,786
Commodity contracts:						
OTC	**15,001**	**(6,772)**	**8,229**	22,555	(14,327)	8,228
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**9,199**	**(9,108)**	**91**	19,500	(15,344)	4,156
Total commodity contracts	**24,200**	**(15,880)**	**8,320**	42,055	(29,671)	12,384
Derivative receivables with appropriate legal opinion	**$ 947,642**	**$ (902,201)** [b]	**$ 45,441**	$ 1,307,711 [c]	$(1,249,453) [b][c]	$ 58,258
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**14,236**		**14,236**	20,717		20,717
Total derivative receivables recognized on the Consolidated balance sheets	**$ 961,878**		**$ 59,677**	$ 1,328,428 [c]		$ 78,975

(a) Exchange-traded derivative amounts that relate to futures contracts are settled daily.
(b) Included cash collateral netted of $73.7 billion and $74.0 billion at December 31, 2015, and 2014, respectively.
(c) The prior period amounts have been revised to conform with the current period presentation. These revisions had no impact on Firm's Consolidated balance sheets or its results of operations.

The following table presents, as of December 31, 2015 and 2014, the gross and net derivative payables by contract and settlement type. Derivative payables have been netted on the Consolidated balance sheets against derivative receivables and cash collateral receivables from the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the payables are not eligible under U.S. GAAP for netting on the Consolidated balance sheets, and are shown separately in the table below.

	2015			2014		
December 31, (in millions)	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC	**$ 393,709**	**$ (384,576)**	**$ 9,133**	$ 515,904 [c]	$ (503,384) [c]	$ 12,520
OTC-cleared	**240,398**	**(240,369)**	**29**	398,518	(397,250)	1,268
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total interest rate contracts	**634,107**	**(624,945)**	**9,162**	914,422 [c]	(900,634) [c]	13,788
Credit contracts:						
OTC	**44,379**	**(43,019)**	**1,360**	65,432	(64,904)	528
OTC-cleared	**5,969**	**(5,969)**	**–**	9,398	(9,398)	–
Total credit contracts	**50,348**	**(48,988)**	**1,360**	74,830	(74,302)	528
Foreign exchange contracts:						
OTC	**185,178**	**(170,830)**	**14,348**	217,998 [c]	(201,578) [c]	16,420
OTC-cleared	**301**	**(301)**	**–**	66	(66)	–
Exchange-traded[a]	**–**	**–**	**–**	–	–	–
Total foreign exchange contracts	**185,479**	**(171,131)**	**14,348**	218,064 [c]	(201,644) [c]	16,420
Equity contracts:						
OTC	**23,458**	**(19,589)**	**3,869**	27,908	(23,036)	4,872
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**10,998**	**(9,891)**	**1,107**	12,864 [c]	(11,486) [c]	1,378
Total equity contracts	**34,456**	**(29,480)**	**4,976**	40,772 [c]	(34,522) [c]	6,250
Commodity contracts:						
OTC	**16,953**	**(6,256)**	**10,697**	25,129	(13,211)	11,918
OTC-cleared	**–**	**–**	**–**	–	–	–
Exchange-traded[a]	**9,374**	**(9,322)**	**52**	18,486	(15,344)	3,142
Total commodity contracts	**26,327**	**(15,578)**	**10,749**	43,615	(28,555)	15,060
Derivative payables with appropriate legal opinions	**$ 930,717**	**$ (890,122)** [b]	**$ 40,595**	$ 1,291,703 [c]	$(1,239,657) [b][c]	$ 52,046
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**12,195**		**12,195**	19,070		19,070
Total derivative payables recognized on the Consolidated balance sheets	**$ 942,912**		**$ 52,790**	$ 1,310,773 [c]		$ 71,116

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
(b) Included cash collateral netted of $61.6 billion and $64.2 billion related to OTC and OTC-cleared derivatives at December 31, 2015, and 2014, respectively.
(c) The prior period amounts have been revised to conform with the current period presentation. These revisions had no impact on Firm's Consolidated balance sheets or its results of operations.

In addition to the cash collateral received and transferred that is presented on a net basis with net derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments but are not eligible for net presentation, because (a) the collateral consists of non-cash financial instruments (generally U.S. government and agency securities and other Group of Seven Nations ("G7") government bonds), (b) the amount of collateral held or transferred exceeds the fair value exposure, at the individual counterparty level, as of the date presented, or (c) the collateral relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained.

The following tables present information regarding certain financial instrument collateral received and transferred as of December 31, 2015 and 2014, that is not eligible for net presentation under U.S. GAAP. The collateral included in these tables relates only to the derivative instruments for which appropriate legal opinions have been obtained; excluded are (i) additional collateral that exceeds the fair value exposure and (ii) all collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

Derivative receivable collateral

	2015			2014		
December 31, (in millions)	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure
Derivative receivables with appropriate legal opinions	**$ 45,441**	**$ (13,543)** [a]	**$ 31,898**	$ 58,258	$ (16,194) [a]	$ 42,064

Derivative payable collateral[b]

	2015			2014		
December 31, (in millions)	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[c]	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[c]
Derivative payables with appropriate legal opinions	**$ 40,595**	**$ (7,957)** [a]	**$ 32,638**	$ 52,046	$ (10,505) [a]	$ 41,541

(a) Represents liquid security collateral as well as cash collateral held at third party custodians. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.
(b) Derivative payables collateral relates only to OTC and OTC-cleared derivative instruments. Amounts exclude collateral transferred related to exchange-traded derivative instruments.
(c) Net amount represents exposure of counterparties to the Firm.

Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk — the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue, where possible, the use of legally enforceable master netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated balance sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2015 and 2014.

OTC and OTC-cleared derivative payables containing downgrade triggers

December 31, (in millions)	**2015**	2014
Aggregate fair value of net derivative payables	**$ 22,328**	$ 32,303
Collateral posted	**18,942**	27,585

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), at December 31, 2015 and 2014, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral (except in certain instances in which additional initial margin may be required upon a ratings downgrade), nor in termination payments requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating by the rating agencies referred to in the derivative contract.

Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

December 31, (in millions)	2015 Single-notch downgrade	2015 Two-notch downgrade	2014 Single-notch downgrade	2014 Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[(a)]	**$ 807**	**$ 3,028**	$ 1,046	$ 3,331
Amount required to settle contracts with termination triggers upon downgrade[(b)]	**271**	**1,093**	366	1,388

(a) Includes the additional collateral to be posted for initial margin.
(b) Amounts represent fair values of derivative payables, and do not reflect collateral posted.

Derivatives executed in contemplation of a sale of the underlying financial asset
In certain instances the Firm enters into transactions in which it transfers financial assets but maintains the economic exposure to the transferred assets by entering into a derivative with the same counterparty in contemplation of the initial transfer. The Firm generally accounts for such transfers as collateralized financing transactions as described in Note 13, but in limited circumstances they may qualify to be accounted for as a sale and a derivative under U.S. GAAP. The amount of such transfers accounted for as a sale where the associated derivative was outstanding at December 31, 2015 was not material.

Impact of derivatives on the Consolidated statements of income
The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

Fair value hedge gains and losses
The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2015, 2014 and 2013, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2015 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[(d)]	Excluded components[(e)]
Contract type					
Interest rate[(a)]	**$ 38**	**$ 911**	**$ 949**	**$ 3**	**$ 946**
Foreign exchange[(b)]	**6,030**	**(6,006)**	**24**	**—**	**24**
Commodity[(c)]	**1,153**	**(1,142)**	**11**	**(13)**	**24**
Total	**$ 7,221**	**$ (6,237)**	**$ 984**	**$ (10)**	**$ 994**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2014 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[(d)]	Excluded components[(e)]
Contract type					
Interest rate[(a)]	$ 2,106	$ (801)	$ 1,305	$ 131	$ 1,174
Foreign exchange[(b)]	8,279	(8,532)	(253)	—	(253)
Commodity[(c)]	49	145	194	42	152
Total	$ 10,434	$ (9,188)	$ 1,246	$ 173	$ 1,073

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2013 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[(d)]	Excluded components[(e)]
Contract type					
Interest rate[(a)]	$ (3,469)	$ 4,851	$ 1,382	$ (132)	$ 1,514
Foreign exchange[(b)]	(1,096)	864	(232)	—	(232)
Commodity[(c)]	485	(1,304)	(819)	38	(857)
Total	$ (4,080)	$ 4,411	$ 331	$ (94)	$ 425

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income.
(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign currency rates, were recorded primarily in principal transactions revenue and net interest income.

(c) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value). Gains and losses were recorded in principal transactions revenue.
(d) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.
(e) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the years ended December 31, 2015, 2014 and 2013, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated statements of income.

	Gains/(losses) recorded in income and other comprehensive income/(loss)				
Year ended December 31, 2015 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ (99)**	**$ –**	**$ (99)**	**$ (44)**	**$ 55**
Foreign exchange[b]	**(81)**	**–**	**(81)**	**(53)**	**28**
Total	**$ (180)**	**$ –**	**$ (180)**	**$ (97)**	**$ 83**

	Gains/(losses) recorded in income and other comprehensive income/(loss)				
Year ended December 31, 2014 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (54)	$ –	$ (54)	$ 189	$ 243
Foreign exchange[b]	78	–	78	(91)	(169)
Total	$ 24	$ –	$ 24	$ 98	$ 74

	Gains/(losses) recorded in income and other comprehensive income/(loss)				
Year ended December 31, 2013 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[c]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (108)	$ –	$ (108)	$ (565)	$ (457)
Foreign exchange[b]	7	–	7	40	33
Total	$ (101)	$ –	$ (101)	$ (525)	$ (424)

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income, and for the forecasted transactions that the Firm determined during the year ended December 31, 2015, were probable of not occurring, in other income.
(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily noninterest revenue and compensation expense.
(c) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

In 2015, the Firm reclassified approximately $150 million of net losses from AOCI to other income because the Firm determined that it was probable that the forecasted interest payment cash flows would not occur as a result of the planned reduction in wholesale non-operating deposits. The Firm did not experience any forecasted transactions that failed to occur for the years ended December 31, 2014 or 2013.

Over the next 12 months, the Firm expects that approximately $95 million (after-tax) of net losses recorded in AOCI at December 31, 2015, related to cash flow hedges, will be recognized in income. For terminated cash flow hedges, the maximum length of time over which forecasted transactions are remaining is approximately 7 years. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately 2 years. The Firm's longer-dated forecasted transactions relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such instruments for the years ended December 31, 2015, 2014 and 2013.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2015		2014		2013	
Year ended December 31, (in millions)	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI	Excluded components recorded directly in income[a]	Effective portion recorded in OCI
Foreign exchange derivatives	**$(379)**	**$1,885**	$(448)	$1,698	$(383)	$773

(a) Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded components are recorded in other income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates and, therefore, there was no significant ineffectiveness for net investment hedge accounting relationships during 2015, 2014 and 2013.

Gains and losses on derivatives used for specified risk management purposes

The following table presents pretax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, AFS securities, foreign currency-denominated assets and liabilities, and commodities-related contracts and investments.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2015**	2014	2013
Contract type			
Interest rate[a]	**$ 853**	$ 2,308	$ 617
Credit[b]	**70**	(58)	(142)
Foreign exchange[c]	**25**	(7)	1
Commodity[d]	**(12)**	156	178
Total	**$ 936**	$ 2,399	$ 654

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in the mortgage pipeline, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to hedges of the foreign exchange risk of specified foreign currency-denominated assets and liabilities. Gains and losses were recorded in principal transactions revenue.

(d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from the Firm's market-making activities, including the counterparty credit risk arising from derivative receivables. All derivatives not included in the hedge accounting or specified risk management categories above are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 7 for information on principal transactions revenue.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from certain financial instruments in the Firm's market-making businesses. Following is a summary of various types of credit derivatives.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are either OTC or OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index consists of a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity (or one of the entities that makes up a reference index) experiences a specified credit event. If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2015 and 2014. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

	Maximum payout/Notional amount			
December 31, 2015 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	**$ (1,386,071)**	**$ 1,402,201**	**$ 16,130**	**$ 12,011**
Other credit derivatives[a]	**(42,738)**	**38,158**	**(4,580)**	**18,792**
Total credit derivatives	**(1,428,809)**	**1,440,359**	**11,550**	**30,803**
Credit-related notes	**(30)**	**–**	**(30)**	**4,715**
Total	**$ (1,428,839)**	**$ 1,440,359**	**$ 11,520**	**$ 35,518**

	Maximum payout/Notional amount			
December 31, 2014 (in millions)	Protection sold	Protection purchased with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (2,056,982)	$ 2,078,096	$ 21,114	$ 18,631
Other credit derivatives[a]	(43,281)	32,048	(11,233)	19,475
Total credit derivatives	(2,100,263)	2,110,144	9,881	38,106
Credit-related notes	(40)	–	(40)	3,704
Total	$ (2,100,303)	$ 2,110,144	$ 9,841	$ 41,810

(a) Other credit derivatives predominantly consists of credit swap options.
(b) Represents the total notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional amounts by the ratings and maturity profile, and the total fair value, of credit derivatives and credit-related notes as of December 31, 2015 and 2014, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings[a]/maturity profile

December 31, 2015 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	**$ (307,211)**	**$ (699,227)**	**$ (46,970)**	**$ (1,053,408)**	**$ 13,539**	**$ (6,836)**	**$ 6,703**
Noninvestment-grade	**(109,195)**	**(245,151)**	**(21,085)**	**(375,431)**	**10,823**	**(18,891)**	**(8,068)**
Total	**$ (416,406)**	**$ (944,378)**	**$ (68,055)**	**$ (1,428,839)**	**$ 24,362**	**$ (25,727)**	**$ (1,365)**

December 31, 2014 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[b]	Fair value of payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (323,398)	$ (1,118,293)	$ (79,486)	$ (1,521,177)	$ 25,767	$ (6,314)	$ 19,453
Noninvestment-grade	(157,281)	(396,798)	(25,047)	(579,126)	20,677	(22,455)	(1,778)
Total	$ (480,679)	$ (1,515,091)	$ (104,533)	$ (2,100,303)	$ 46,444	$ (28,769)	$ 17,675

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's Investors Service ("Moody's").
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

Note 7 – Noninterest revenue

Investment banking fees

This revenue category includes equity and debt underwriting and advisory fees. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee. Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	**2015**	2014	2013
Underwriting			
Equity	**$ 1,408**	$ 1,571	$ 1,499
Debt	**3,232**	3,340	3,537
Total underwriting	**4,640**	4,911	5,036
Advisory	**2,111**	1,631	1,318
Total investment banking fees	**$ 6,751**	$ 6,542	$ 6,354

Principal transactions

Principal transactions revenue consists of realized and unrealized gains and losses on derivatives and other instruments (including those accounted for under the fair value option) primarily used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes realized and unrealized gains and losses related to hedge accounting and specified risk-management activities, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives. For further information on the income statement classification of gains and losses from derivatives activities, see Note 6.

In the financial commodity markets, the Firm transacts in OTC derivatives (e.g., swaps, forwards, options) and exchange-traded derivatives that reference a wide range of underlying commodities. In the physical commodity markets, the Firm primarily purchases and sells precious and base metals and may hold other commodities inventories under financing and other arrangements with clients. Prior to the 2014 sale of certain parts of its physical commodity business, the Firm also engaged in the purchase, sale, transport and storage of power, gas, liquefied natural gas, coal, crude oil and refined products.

Physical commodities inventories are generally carried at the lower of cost or market (market approximates fair value) subject to any applicable fair value hedge accounting adjustments, with realized gains and losses and unrealized losses recorded in principal transactions revenue.

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities. See Note 8 for further information on interest income and interest expense. Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual line of business.

Year ended December 31, (in millions)	**2015**	2014	2013
Trading revenue by instrument type			
Interest rate	**$ 1,933**	$ 1,362	$ 284
Credit	**1,735**	1,880	2,654
Foreign exchange	**2,557**	1,556	1,801
Equity	**2,990**	2,563	2,517
Commodity[(a)]	**842**	1,663	2,083
Total trading revenue	**10,057**	9,024	9,339
Private equity gains[(b)]	**351**	1,507	802
Principal transactions	**$ 10,408**	$ 10,531	$ 10,141

(a) Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories. For gains/(losses) related to commodity fair value hedges, see Note 6.

(b) Includes revenue on private equity investments held in the Private Equity business within Corporate, as well as those held in other business segments.

Lending- and deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met. The Firm has contractual arrangements with third parties to provide certain services in connection with its asset management activities. Amounts paid to third-

party service providers are predominantly expensed, such that asset management fees are recorded gross of payments made to third parties.

The following table presents Firmwide asset management, administration and commissions.

Year ended December 31, (in millions)	**2015**	2014	2013
Asset management fees			
Investment management fees[a]	**$ 9,403**	$ 9,169	$ 8,044
All other asset management fees[b]	**352**	477	505
Total asset management fees	**9,755**	9,646	8,549
Total administration fees[c]	**2,015**	2,179	2,101
Commissions and other fees			
Brokerage commissions	**2,304**	2,270	2,321
All other commissions and fees	**1,435**	1,836	2,135
Total commissions and fees	**3,739**	4,106	4,456
Total asset management, administration and commissions	**$ 15,509**	$ 15,931	$ 15,106

(a) Represents fees earned from managing assets on behalf of the Firm's clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.
(b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.
(c) Predominantly includes fees for custody, securities lending, funds services and securities clearance.

Mortgage fees and related income

This revenue category primarily reflects CCB's Mortgage Banking production and servicing revenue, including fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously sold loans; the impact of risk-management activities associated with the mortgage pipeline, warehouse loans and MSRs; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of CCB MSRs are reported in mortgage fees and related income. Net interest income from mortgage loans is recorded in interest income. For a further discussion of MSRs, see Note 17.

Card income

This revenue category includes interchange income from credit and debit cards and net fees earned from processing credit card transactions for merchants. Card income is recognized as earned. Cost related to rewards programs is recorded when the rewards are earned by the customer and presented as a reduction to interchange income. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period.

Credit card revenue sharing agreements

The Firm has contractual agreements with numerous co-brand partners and affinity organizations (collectively, "partners"), which grant the Firm exclusive rights to market to the customers or members of such partners. These partners endorse the credit card programs and provide their customer and member lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to ten years.

The Firm typically makes incentive payments to the partners based on new account originations, sales volumes and the cost of the partners' marketing activities and awards. Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on sales volumes are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

Other income

Other income on the Firm's Consolidated statements of income included the following:

Year ended December 31, (in millions)	**2015**	2014	2013
Operating lease income	**$ 2,081**	$ 1,699	$ 1,472
Gain from sale of Visa B shares	**–**	–	1,310

Note 8 – Interest income and Interest expense

Interest income and interest expense are recorded in the Consolidated statements of income and classified based on the nature of the underlying asset or liability. Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	**2015**	2014	2013
Interest Income			
Loans	**$ 33,134**	$ 32,218	$ 33,489
Taxable securities	**6,550**	7,617	6,916
Non taxable securities[(a)]	**1,706**	1,423	896
Total securities	**8,256**	9,040	7,812
Trading assets	**6,621**	7,312	8,099
Federal funds sold and securities purchased under resale agreements	**1,592**	1,642	1,940
Securities borrowed[(b)]	**(532)**	(501)	(127)
Deposits with banks	**1,250**	1,157	918
Other assets[(c)]	**652**	663	538
Total interest income	**$ 50,973**	$ 51,531	$ 52,669
Interest expense			
Interest bearing deposits	**$ 1,252**	$ 1,633	$ 2,067
Federal funds purchased and securities loaned or sold under repurchase agreements	**609**	604	582
Commercial paper	**110**	134	112
Trading liabilities - debt, short-term and other liabilities	**622**	712	1,104
Long-term debt	**4,435**	4,409	5,007
Beneficial interest issued by consolidated VIEs	**435**	405	478
Total interest expense	**$ 7,463**	$ 7,897	$ 9,350
Net interest income	**$ 43,510**	$ 43,634	$ 43,319
Provision for credit losses	**3,827**	3,139	225
Net interest income after provision for credit losses	**$ 39,683**	$ 40,495	$ 43,094

(a) Represents securities which are tax exempt for U.S. federal income tax purposes.
(b) Negative interest income for the years ended December 31, 2015, 2014 and 2013, is a result of increased client-driven demand for certain securities combined with the impact of low interest rates; this is matched book activity and the negative interest expense on the corresponding securities loaned is recognized in interest expense.
(c) Largely margin loans.
(d) Includes brokerage customer payables.

Note 9 – Pension and other postretirement employee benefit plans

The Firm has various defined benefit pension plans and other postretirement employee benefit ("OPEB") plans that provide benefits to its employees. These plans are discussed below.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on years of service and eligible compensation (generally base salary/regular pay and variable incentive compensation capped at $100,000 annually). Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm's policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. The Firm does not anticipate at this time any contribution to the U.S. defined benefit pension plan in 2016. The 2016 contributions to the non-U.S. defined benefit pension plans are expected to be $47 million of which $31 million are contractually required.

JPMorgan Chase also has a number of defined benefit pension plans that are not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees previously earned pay credits on compensation amounts above the maximum stipulated by law under a qualified plan; no further pay credits are allocated under this plan. The Excess Retirement Plan had an unfunded projected benefit obligation ("PBO") in the amount of $237 million and $257 million, at December 31, 2015 and 2014, respectively.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is the JPMorgan Chase 401(k) Savings Plan (the "401(k) Savings Plan"), which covers substantially all U.S. employees. Employees can contribute to the 401(k) Savings Plan on a pretax and/or Roth 401(k) after-tax basis. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matches eligible employee contributions up to 5% of eligible compensation (generally base salary/regular pay and variable incentive compensation) on an annual basis.

Employees begin to receive matching contributions after completing a one-year-of-service requirement. Employees with total annual cash compensation of $250,000 or more are not eligible for matching contributions. Matching contributions vest after three years of service. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with the length of service and the date of hire and provide for limits on the Firm's share of covered medical benefits. The medical and life insurance benefits are both contributory. Effective January 1, 2015, there was a transition of certain Medicare eligible retirees from JPMC group sponsored coverage to Medicare exchanges. As a result of this change, eligible retirees will receive a Healthcare Reimbursement Account amount each year if they enroll through the Medicare exchange. The impact of this change was not material. Postretirement medical benefits also are offered to qualifying United Kingdom ("U.K.") employees.

JPMorgan Chase's U.S. OPEB obligation is funded with corporate-owned life insurance ("COLI") purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.

The following table presents the changes in benefit obligations, plan assets and funded status amounts reported on the Consolidated balance sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans					
As of or for the year ended December 31,	U.S.		Non-U.S.		OPEB plans[d]	
(in millions)	**2015**	2014	**2015**	2014	**2015**	2014
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (12,536)**	$(10,776)	**$ (3,640)**	$ (3,433)	**$ (842)**	$ (826)
Benefits earned during the year	**(340)**	(281)	**(37)**	(33)	**(1)**	–
Interest cost on benefit obligations	**(498)**	(534)	**(112)**	(137)	**(31)**	(38)
Plan amendments	**–**	(53)	**–**	–	**–**	–
Special termination benefits	**–**	–	**(1)**	(1)	**–**	–
Curtailments	**–**	–	**–**	–	**–**	(3)
Employee contributions	**NA**	NA	**(7)**	(7)	**(25)**	(62)
Net gain/(loss)	**702**	(1,669)	**146**	(408)	**71**	(58)
Benefits paid	**760**	777	**120**	119	**88**	145
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(6)**	(2)
Foreign exchange impact and other	**–**	–	**184**	260	**2**	2
Benefit obligation, end of year	**$ (11,912)**	$(12,536)	**$ (3,347)**	$ (3,640)	**$ (744)**	$ (842)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 14,623**	$ 14,354	**$ 3,718**	$ 3,532	**$ 1,903**	$ 1,757
Actual return on plan assets	**231**	1,010	**52**	518	**13**	159
Firm contributions	**31**	36	**45**	46	**2**	3
Employee contributions	**–**	–	**7**	7	**–**	–
Benefits paid	**(760)**	(777)	**(120)**	(119)	**(63)**	(16)
Foreign exchange impact and other	**–**	–	**(191)**	(266)	**–**	–
Fair value of plan assets, end of year	**$ 14,125**	$ 14,623 [b][c]	**$ 3,511**	$ 3,718	**$ 1,855**	$ 1,903
Net funded status[a]	**$ 2,213**	$ 2,087	**$ 164**	$ 78	**$ 1,111**	$ 1,061
Accumulated benefit obligation, end of year	**$ (11,774)**	$(12,375)	**$ (3,322)**	$ (3,615)	**NA**	NA

(a) Represents plans with an aggregate overfunded balance of $4.1 billion and $3.9 billion at December 31, 2015 and 2014, respectively, and plans with an aggregate underfunded balance of $636 million and $708 million at December 31, 2015 and 2014, respectively.
(b) At December 31, 2015 and 2014, approximately $533 million and $336 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(c) At December 31, 2015 and 2014, defined benefit pension plan amounts not measured at fair value included $74 million and $106 million, respectively, of accrued receivables, and $123 million and $257 million, respectively, of accrued liabilities, for U.S. plans.
(d) Includes an unfunded accumulated postretirement benefit obligation of $32 million and $37 million at December 31, 2015 and 2014, respectively, for the U.K. plan.

Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the PBO or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for the U.S. defined benefit pension plan is currently seven years and for the non-U.S. defined benefit pension plans is the period appropriate for the affected plan. In addition, prior service costs are amortized over the average remaining service period of active employees expected to receive benefits under the plan when the prior service cost is first recognized. The average remaining amortization period for the U.S. defined benefit pension plan for current prior service costs is four years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market related value of assets. Any excess net gain or loss is amortized over the average expected lifetime of retired participants, which is currently thirteen years; however, prior service costs resulting from plan changes are amortized over the average years of service remaining to full eligibility age, which is currently two years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

	Defined benefit pension plans					
December 31,	U.S.		Non-U.S.		OPEB plans	
(in millions)	**2015**	2014	**2015**	2014	**2015**	2014
Net gain/(loss)	**$ (3,096)**	$ (3,346)	**$ (513)**	$ (628)	**$ 109**	$ 130
Prior service credit/(cost)	**68**	102	**9**	11	**–**	–
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (3,028)**	$ (3,244)	**$ (504)**	$ (617)	**$ 109**	$ 130

The following table presents the components of net periodic benefit costs reported in the Consolidated statements of income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

	Pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Components of net periodic benefit cost									
Benefits earned during the year	**$ 340**	$ 281	$ 314	**$ 37**	$ 33	$ 34	**$ 1**	$ –	$ 1
Interest cost on benefit obligations	**498**	534	447	**112**	137	125	**31**	38	35
Expected return on plan assets	**(929)**	(985)	(956)	**(150)**	(172)	(142)	**(106)**	(101)	(92)
Amortization:									
Net (gain)/loss	**247**	25	271	**35**	47	49	**–**	–	1
Prior service cost/(credit)	**(34)**	(41)	(41)	**(2)**	(2)	(2)	**–**	(1)	–
Special termination benefits	**–**	–	–	**1**	–	–	**–**	–	–
Net periodic defined benefit cost	**122**	(186)	35	**33**	43	64	**(74)**	(64)	(55)
Other defined benefit pension plans[a]	**14**	14	15	**10**	6	14	**NA**	NA	NA
Total defined benefit plans	**136**	(172)	50	**43**	49	78	**(74)**	(64)	(55)
Total defined contribution plans	**449**	438	447	**320**	329	321	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 585**	$ 266	$ 497	**$ 363**	$ 378	$ 399	**$ (74)**	$ (64)	$ (55)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ (3)**	$ 1,645	$ (1,817)	**$ (47)**	$ 57	$ 19	**$ 21**	$ (5)	$ (257)
Prior service credit arising during the year	**–**	53	–	**–**	–	–	**–**	–	–
Amortization of net loss	**(247)**	(25)	(271)	**(35)**	(47)	(49)	**–**	–	(1)
Amortization of prior service (cost)/credit	**34**	41	41	**2**	2	2	**–**	1	–
Foreign exchange impact and other	**–**	–	–	**(33)** [a]	(39) [a]	14 [a]	**–**	–	–
Total recognized in other comprehensive income	**$ (216)**	$ 1,714	$ (2,047)	**$ (113)**	$ (27)	$ (14)	**$ 21**	$ (4)	$ (258)
Total recognized in net periodic benefit cost and other comprehensive income	**$ (94)**	$ 1,528	$ (2,012)	**$ (80)**	$ 16	$ 50	**$ (53)**	$ (68)	$ (313)

(a) Includes various defined benefit pension plans which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2016 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss/(gain)	$ 231	$ 23	$ –	$ –
Prior service cost/(credit)	(34)	(2)	–	–
Total	$ 197	$ 21	$ –	$ –

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

	U.S.			Non-U.S.		
Year ended December 31,	**2015**	2014	2013	**2015**	2014	2013
Actual rate of return:						
Defined benefit pension plans	**0.88%**	7.29%	15.95%	**(0.48) - 4.92%**	5.62 - 17.69%	3.74 - 23.80%
OPEB plans	**1.16**	9.84	13.88	**NA**	NA	NA

Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on plan assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The expected return on "AA" rated long-term corporate bonds is based on an implied yield for similar bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was provided by our actuaries. This rate was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension plan represents a rate of appropriate duration from the analysis of yield curves provided by our actuaries.

In 2014, the Society of Actuaries ("SOA") completed a comprehensive review of mortality experience of uninsured private retirement plans in the U.S. In October 2014, the SOA published new mortality tables and a new mortality improvement scale that reflects improved life expectancies and an expectation that this trend will continue. In 2014, the Firm adopted the SOA's tables and projection scale, resulting in an estimated increase in PBO of $533 million. In 2015, the SOA updated the projection scale to reflect two additional years of historical data. The Firm has adopted the updated projection scale resulting in an estimated decrease in PBO in 2015 of $112 million.

At December 31, 2015, the Firm increased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in a decrease in expense of approximately $63 million for 2016. The 2016 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 6.50% and 5.75%, respectively. For 2016, the initial health care benefit obligation trend assumption has been set at 5.50%, and the ultimate health care trend assumption and the year to reach the ultimate rate remains at 5.00% and 2017, respectively, unchanged from 2015. As of December 31, 2015, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.00% and 3.50%, respectively.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

	U.S.		Non-U.S.	
December 31,	**2015**	2014	**2015**	2014
Discount rate:				
Defined benefit pension plans	**4.50%**	4.00%	**0.80 – 3.70%**	1.00 – 3.60%
OPEB plans	**4.40**	4.10	**–**	–
Rate of compensation increase	**3.50**	3.50	**2.25 – 4.30**	2.75 – 4.20
Health care cost trend rate:				
Assumed for next year	**5.50**	6.00	**–**	–
Ultimate	**5.00**	5.00	**–**	–
Year when rate will reach ultimate	**2017**	2017	**–**	–

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2015**	2014	2013	**2015**	2014	2013
Discount rate:						
Defined benefit pension plans	**4.00%**	5.00%	3.90%	**1.00 – 3.60%**	1.10 – 4.40%	1.40 – 4.40%
OPEB plans	**4.10**	4.90	3.90	**–**	–	–
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**6.50**	7.00	7.50	**0.90 – 4.80**	1.20 – 5.30	2.40 – 4.90
OPEB plans	**6.00**	6.25	6.25	**NA**	NA	NA
Rate of compensation increase	**3.50**	3.50	4.00	**2.75 – 4.20**	2.75 – 4.60	2.75 – 4.10
Health care cost trend rate:						
Assumed for next year	**6.00**	6.50	7.00	**–**	–	–
Ultimate	**5.00**	5.00	5.00	**–**	–	–
Year when rate will reach ultimate	**2017**	2017	2017	**–**	–	–

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's accumulated postretirement benefit obligation. As of December 31, 2015, there was no material effect on total service and interest cost.

Year ended December 31, 2015 (in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on accumulated postretirement benefit obligation	$ 8	$ (7)

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an aggregate increase of approximately $39 million in 2016 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2016 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $31 million and an increase in the related benefit obligations of approximately an aggregate $296 million. A 25-basis point decrease in the interest crediting rate for the U.S. defined benefit pension plan would result in a decrease in 2016 U.S. defined benefit pension expense of approximately $35 million and a decrease in the related PBO of approximately $145 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2016 non-U.S. defined benefit pension plan expense of approximately $17 million.

Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies, which are used to partially fund the U.S. OPEB plan, are held in separate accounts of an insurance company and are allocated to investments intended to replicate equity and fixed income indices.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals of the plan using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers. Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short- and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. As the U.S. defined benefit pension plan is overfunded, the investment strategy for this plan was adjusted in 2013 to provide for greater liquidity. Currently, approved asset allocation ranges are: U.S. equity 0% to 45%, international equity 0% to 40%, debt securities 0% to 80%, hedge funds 0% to 5%, real estate 0% to 10%, real assets 0% to 10% and private equity 0% to 20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Investment strategies incorporate the economic outlook and the anticipated implications of the macroeconomic environment on the various asset classes while maintaining an appropriate level of liquidity for the plan. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. In order to reduce the volatility in returns relative to the plans' liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations and asset managers for the U.K. plans are reviewed regularly and the portfolios are rebalanced when deemed necessary.

Investments held by the Plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2015, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except through indirect exposures through investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of $3.2 billion and $3.7 billion for U.S. plans and $1.2 billion and $1.4 billion for non-U.S. plans, as of December 31, 2015 and 2014, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2015**	2014	Allocation	**2015**	2014	Allocation	**2015**	2014
Asset category									
Debt securities[a]	0-80%	**32%**	31%	59%	**60%**	61%	30-70%	**50%**	50%
Equity securities	0-85	**48**	46	40	**38**	38	30-70	**50**	50
Real estate	0-10	**4**	4	–	**1**	–	–	**–**	–
Alternatives[b]	0-35	**16**	19	1	**1**	1	–	**–**	–
Total	100%	**100%**	100%	100%	**100%**	100%	100%	**100%**	100%

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.
(b) Alternatives primarily include limited partnerships.
(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 3.

Pension and OPEB plan assets and liabilities measured at fair value

	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[g]		
December 31, 2015 (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	**$ 112**	**$ –**	**$ –**	**$ 112**	**$ 114**	**$ 1**	**$ 115**
Equity securities	**4,826**	**5**	**2**	**4,833**	**1,002**	**157**	**1,159**
Common/collective trust funds[a]	**339**	**–**	**–**	**339**	**135**	**–**	**135**
Limited partnerships[b]	**53**	**–**	**–**	**53**	**–**	**–**	**–**
Corporate debt securities[c]	**–**	**1,619**	**2**	**1,621**	**–**	**758**	**758**
U.S. federal, state, local and non-U.S. government debt securities	**580**	**108**	**–**	**688**	**212**	**504**	**716**
Mortgage-backed securities	**–**	**67**	**1**	**68**	**2**	**26**	**28**
Derivative receivables	**–**	**104**	**–**	**104**	**–**	**209**	**209**
Other[d]	**1,760**	**27**	**534**	**2,321**	**257**	**53**	**310**
Total assets measured at fair value	**$ 7,670**	**$ 1,930**	**$ 539**	**$ 10,139** [e]	**$ 1,722**	**$ 1,708**	**$ 3,430**
Derivative payables	**$ –**	**$ (35)**	**$ –**	**$ (35)**	**$ –**	**$ (153)**	**$ (153)**
Total liabilities measured at fair value	**$ –**	**$ (35)**	**$ –**	**$ (35)** [f]	**$ –**	**$ (153)**	**$ (153)**

	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans[g]		
December 31, 2014 (in millions)	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 87	$ –	$ –	$ 87	$ 128	$ 1	$ 129
Equity securities	5,286	20	4	5,310	1,019	169	1,188
Common/collective trust funds[a]	345	–	–	345	112	–	112
Limited partnerships[b]	70	–	–	70	–	–	–
Corporate debt securities[c]	–	1,454	9	1,463	–	724	724
U.S. federal, state, local and non-U.S. government debt securities	446	161	–	607	235	540	775
Mortgage-backed securities	1	73	1	75	2	77	79
Derivative receivables	–	114	–	114	–	258	258
Other[d]	2,031	27	337	2,395	283	58	341
Total assets measured at fair value	$ 8,266	$ 1,849	$ 351	$ 10,466 [e]	$ 1,779	$ 1,827	$ 3,606
Derivative payables	$ –	$ (23)	$ –	$ (23)	$ –	$ (139)	$ (139)
Total liabilities measured at fair value	$ –	$ (23)	$ –	$ (23) [f]	$ –	$ (139)	$ (139)

Note: Effective April 1, 2015, the Firm adopted new accounting guidance for certain investments where the Firm measures fair value using the net asset value per share (or its equivalent) as a practical expedient and excluded them from the fair value hierarchy. Accordingly, such investments are not included within these tables. At December 31, 2015 and 2014, the fair values of these investments, which include certain limited partnerships and common/collective trust funds, were $4.1 billion and $4.3 billion, respectively, of U.S. defined benefit pension plan investments, and $234 million and $251 million, respectively, of non-U.S. defined benefit pension plan investments. Of these investments $1.3 billion and $3.0 billion, respectively, of U.S. defined benefit pension plan investments had been previously classified in level 2 and level 3, respectively, and $251 million of non-U.S. defined benefit pension plan investments had been previously classified in level 2 at December 31, 2014. The guidance was required to be applied retrospectively, and accordingly, prior period amounts have been revised to conform with the current period presentation.

(a) At December 31, 2015 and 2014, common/collective trust funds primarily included a mix of short-term investment funds, domestic and international equity investments (including index) and real estate funds.
(b) Unfunded commitments to purchase limited partnership investments for the plans were $895 million and $1.2 billion for 2015 and 2014, respectively.
(c) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.
(d) Other consists of money markets funds, exchange-traded funds and participating and non-participating annuity contracts. Money markets funds and exchange-traded funds are primarily classified within level 1 of the fair value hierarchy given they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to lack of market mechanisms for transferring each policy and surrender restrictions.
(e) At December 31, 2015 and 2014, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $74 million and $106 million, respectively.
(f) At December 31, 2015 and 2014, excluded $106 million and $241 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $17 million and $16 million, respectively, of other liabilities.
(g) There were zero assets or liabilities classified as level 3 for the non-U.S. defined benefit pension plans as of December 31, 2015 and 2014.

The Firm's U.S. OPEB plan was partially funded with COLI policies of $1.9 billion at both December 31, 2015 and 2014, which were classified in level 3 of the valuation hierarchy.

Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2015 (in millions)	Fair value, January 1, 2015	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2015
U.S. defined benefit pension plans						
Equities	**$ 4**	**$ –**	**$ (2)**	**$ –**	**$ –**	**$ 2**
Corporate debt securities	**9**	**–**	**–**	**(7)**	**–**	**2**
Mortgage-backed securities	**1**	**–**	**–**	**–**	**–**	**1**
Other	**337**	**–**	**197**	**–**	**–**	**534**
Total U.S. defined benefit pension plans	**$ 351**	**$ –**	**$ 195**	**$ (7)**	**$ –**	**$ 539**
OPEB plans						
COLI	**$ 1,903**	**$ –**	**$ (48)**	**$ –**	**$ –**	**$ 1,855**
Total OPEB plans	**$ 1,903**	**$ –**	**$ (48)**	**$ –**	**$ –**	**$ 1,855**

Year ended December 31, 2014 (in millions)	Fair value, January 1, 2014	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2014
U.S. defined benefit pension plans						
Equities	$ 4	$ –	$ –	$ –	$ –	$ 4
Corporate debt securities	7	(2)	2	4	(2)	9
Mortgage-backed securities	–	–	–	1	–	1
Other	430	–	(93)	–	–	337
Total U.S. defined benefit pension plans	$ 441	$ (2)	$ (91)	$ 5	$ (2)	$ 351
OPEB plans						
COLI	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903
Total OPEB plans	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903

Year ended December 31, 2013 (in millions)	Fair value, January 1, 2013	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2013
U.S. defined benefit pension plans						
Equities	$ 4	$ –	$ –	$ –	$ –	$ 4
Corporate debt securities	1	–	–	–	6	7
Mortgage-backed securities	–	–	–	–	–	–
Other	420	–	10	–	–	430
Total U.S. defined benefit pension plans	$ 425	$ –	$ 10	$ –	$ 6	$ 441
OPEB plans						
COLI	$ 1,554	$ –	$ 195	$ –	$ –	$ 1,749
Total OPEB plans	$ 1,554	$ –	$ 195	$ –	$ –	$ 1,749

Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2016	$ 762	$ 107	$ 68	$ 1
2017	798	110	66	1
2018	927	119	63	1
2019	966	123	61	1
2020	1,009	129	59	1
Years 2021–2025	4,409	722	259	4

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2015, 2014 and 2013, JPMorgan Chase granted long-term stock-based awards to certain employees under its Long-Term Incentive Plan, as amended and restated effective May 19, 2015 ("LTIP"). Under the terms of the LTIP, as of December 31, 2015, 93 million shares of common stock were available for issuance through May 2019. The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the "LTI Plans," and such plans constitute the Firm's stock-based incentive plans.

Restricted stock units ("RSUs") are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All RSUs awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 24.

Under the LTI Plans, stock options and stock appreciation rights ("SARs") have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. The Firm periodically grants employee stock options to individual employees. There were no material grants of stock options or SARs in 2015 and 2014. Grants of SARs in 2013 become exercisable ratably over five years (i.e., 20% per year) and contain clawback provisions similar to RSUs. The 2013 grants of SARs contain full-career eligibility provisions. SARs generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

The Firm's policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2015, 2014 and 2013, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. On July 15, 2014, the Compensation & Management Development Committee and Board of Directors determined that all requirements for the vesting of the 2 million SAR awards had been met and thus, the awards became exercisable. The SARs, which will expire in January 2018, have an exercise price of $39.83 (the price of JPMorgan Chase common stock on the date of grant). The expense related to this award was dependent on changes in fair value of the SARs through July 15, 2014 (the date when the vested number of SARs were determined), and the cumulative expense was recognized ratably over the service period, which was initially assumed to be five years but, effective in the first quarter of 2013, had been extended to six and one-half years. The Firm recognized $3 million and $14 million in compensation expense in 2014 and 2013, respectively, for this award.

RSUs, employee stock options and SARs activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, employee stock options and SARs activity for 2015.

	RSUs		Options/SARs			
Year ended December 31, 2015 (in thousands, except weighted-average data, and where otherwise stated)	Number of shares	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price	Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding, January 1	**100,568**	**$ 47.81**	**59,195**	**$ 45.00**		
Granted	**36,096**	**56.31**	**107**	**64.41**		
Exercised or vested	**(47,709)**	**41.64**	**(14,313)**	**40.44**		
Forfeited	**(3,648)**	**54.17**	**(943)**	**43.04**		
Canceled	**NA**	**NA**	**(580)**	**278.93**		
Outstanding, December 31	**85,307**	**$ 54.60**	**43,466**	**$ 43.51**	**4.6**	**$ 1,109,411**
Exercisable, December 31	**NA**	**NA**	**31,853**	**43.85**	**4.0**	**832,929**

The total fair value of RSUs that vested during the years ended December 31, 2015, 2014 and 2013, was $2.8 billion, $3.2 billion and $2.9 billion, respectively. The weighted-average grant date per share fair value of stock options and SARs granted during the year ended December 31, 2013, was $9.58. The total intrinsic value of options exercised during the years ended December 31, 2015, 2014 and 2013, was $335 million, $539 million and $507 million, respectively.

Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated statements of income.

Year ended December 31, (in millions)	**2015**	2014	2013
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	**$ 1,109**	$ 1,371	$ 1,440
Accrual of estimated costs of stock-based awards to be granted in future periods including those to full-career eligible employees	**878**	819	779
Total noncash compensation expense related to employee stock-based incentive plans	**$ 1,987**	$ 2,190	$ 2,219

At December 31, 2015, approximately $688 million (pretax) of compensation expense related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 0.9 years. The Firm does not capitalize any compensation expense related to share-based compensation awards to employees.

Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated statements of income for the years ended December 31, 2015, 2014 and 2013, were $746 million, $854 million and $865 million, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	**2015**	2014	2013
Cash received for options exercised	**$ 20**	$ 63	$ 166
Tax benefit realized[(a)]	**64**	104	42

(a) The tax benefit realized from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings are recorded as an increase to additional paid-in capital and included in the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards.

Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the year ended December 31, 2013, under the Black-Scholes valuation model. There were no material grants of stock options or SARs for the years ended December 31, 2015 and 2014.

Year ended December 31,	2013
Weighted-average annualized valuation assumptions	
Risk-free interest rate	1.18%
Expected dividend yield	2.66
Expected common stock price volatility	28
Expected life (in years)	6.6

The expected dividend yield is determined using forward-looking assumptions. The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historical experience.

Note 11 – Noninterest expense

For details on noninterest expense, see Consolidated statements of income on page 176. Included within other expense is the following:

Year ended December 31, (in millions)	**2015**	2014	2013
Legal expense	**$ 2,969**	$ 2,883	$ 11,143
Federal Deposit Insurance Corporation-related ("FDIC") expense	**1,227**	1,037	1,496

Note 12 – Securities

Securities are classified as trading, AFS or held-to-maturity ("HTM"). Securities classified as trading assets are discussed in Note 3. Predominantly all of the Firm's AFS and HTM investment securities (the "investment securities portfolio") are held by Treasury and CIO in connection with its asset-liability management objectives. At December 31, 2015, the investment securities portfolio consisted of debt securities with an average credit rating of AA+ (based upon external ratings where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody's). AFS securities are carried at fair value on the Consolidated balance sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated statements of income. HTM debt securities, which management has the intent and ability to hold until maturity, are carried at amortized cost on the Consolidated balance sheets. For both AFS and HTM debt securities, purchase discounts or premiums are generally amortized into interest income over the contractual life of the security.

During 2014, the Firm transferred U.S. government agency mortgage-backed securities and obligations of U.S. states and municipalities with a fair value of $19.3 billion from AFS to HTM. These securities were transferred at fair value, and the transfer was a non-cash transaction. AOCI included net pretax unrealized losses of $9 million on the securities at the date of transfer. The transfer reflected the Firm's intent to hold the securities to maturity in order to reduce the impact of price volatility on AOCI and certain capital measures under Basel III.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

	2015				2014			
December 31, (in millions)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies[a]	**$ 53,689**	**$ 1,483**	**$ 106**	**$ 55,066**	$ 63,089	$ 2,302	$ 72	$ 65,319
Residential:								
Prime and Alt-A	**7,462**	**40**	**57**	**7,445**	5,595	78	29	5,644
Subprime	**210**	**7**	**–**	**217**	677	14	–	691
Non-U.S.	**19,629**	**341**	**13**	**19,957**	43,550	1,010	–	44,560
Commercial	**22,990**	**150**	**243**	**22,897**	20,687	438	17	21,108
Total mortgage-backed securities	**103,980**	**2,021**	**419**	**105,582**	133,598	3,842	118	137,322
U.S. Treasury and government agencies[a]	**11,202**	**–**	**166**	**11,036**	13,603	56	14	13,645
Obligations of U.S. states and municipalities	**31,328**	**2,245**	**23**	**33,550**	27,841	2,243	16	30,068
Certificates of deposit	**282**	**1**	**–**	**283**	1,103	1	1	1,103
Non-U.S. government debt securities	**35,864**	**853**	**41**	**36,676**	51,492	1,272	21	52,743
Corporate debt securities	**12,464**	**142**	**170**	**12,436**	18,158	398	24	18,532
Asset-backed securities:								
Collateralized loan obligations	**31,146**	**52**	**191**	**31,007**	30,229	147	182	30,194
Other	**9,125**	**72**	**100**	**9,097**	12,442	184	11	12,615
Total available-for-sale debt securities	**235,391**	**5,386**	**1,110**	**239,667**	288,466	8,143	387	296,222
Available-for-sale equity securities	**2,067**	**20**	**–**	**2,087**	2,513	17	–	2,530
Total available-for-sale securities	**237,458**	**5,406**	**1,110**	**241,754**	290,979	8,160	387	298,752
Total held-to-maturity securities[b]	**$ 49,073**	**$ 1,560**	**$ 46**	**$ 50,587**	$ 49,252	$ 1,902	$ –	$ 51,154

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $42.3 billion and $59.3 billion at December 31, 2015 and 2014, respectively, which were predominantly mortgage-related.

(b) As of December 31, 2015, consists of mortgage backed securities ("MBS") issued by U.S. government-sponsored enterprises with an amortized cost of $30.8 billion, MBS issued by U.S. government agencies with an amortized cost of $5.5 billion and obligations of U.S. states and municipalities with an amortized cost of $12.8 billion. As of December 31, 2014, consists of MBS issued by U.S. government-sponsored enterprises with an amortized cost of $35.3 billion, MBS issued by U.S. government agencies with an amortized cost of $3.7 billion and obligations of U.S. states and municipalities with an amortized cost of $10.2 billion.

Securities impairment

The following tables present the fair value and gross unrealized losses for the investment securities portfolio by aging category at December 31, 2015 and 2014.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2015 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	**$ 13,002**	**$ 95**	**$ 697**	**$ 11**	**$ 13,699**	**$ 106**
Residential:						
Prime and Alt-A	**5,147**	**51**	**238**	**6**	**5,385**	**57**
Subprime	**–**	**–**	**–**	**–**	**–**	**–**
Non-U.S.	**2,021**	**12**	**167**	**1**	**2,188**	**13**
Commercial	**13,779**	**239**	**658**	**4**	**14,437**	**243**
Total mortgage-backed securities	**33,949**	**397**	**1,760**	**22**	**35,709**	**419**
U.S. Treasury and government agencies	**10,998**	**166**	**–**	**–**	**10,998**	**166**
Obligations of U.S. states and municipalities	**1,676**	**18**	**205**	**5**	**1,881**	**23**
Certificates of deposit	**–**	**–**	**–**	**–**	**–**	**–**
Non-U.S. government debt securities	**3,267**	**26**	**367**	**15**	**3,634**	**41**
Corporate debt securities	**3,198**	**125**	**848**	**45**	**4,046**	**170**
Asset-backed securities:						
Collateralized loan obligations	**15,340**	**67**	**10,692**	**124**	**26,032**	**191**
Other	**4,284**	**60**	**1,005**	**40**	**5,289**	**100**
Total available-for-sale debt securities	**72,712**	**859**	**14,877**	**251**	**87,589**	**1,110**
Available-for-sale equity securities	**–**	**–**	**–**	**–**	**–**	**–**
Held-to-maturity securities	**3,763**	**46**	**–**	**–**	**3,763**	**46**
Total securities with gross unrealized losses	**$ 76,475**	**$ 905**	**$ 14,877**	**$ 251**	**$ 91,352**	**$ 1,156**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2014 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ 1,118	$ 5	$ 4,989	$ 67	$ 6,107	$ 72
Residential:						
Prime and Alt-A	1,840	10	405	19	2,245	29
Subprime	–	–	–	–	–	–
Non-U.S.	–	–	–	–	–	–
Commercial	4,803	15	92	2	4,895	17
Total mortgage-backed securities	7,761	30	5,486	88	13,247	118
U.S. Treasury and government agencies	8,412	14	–	–	8,412	14
Obligations of U.S. states and municipalities	1,405	15	130	1	1,535	16
Certificates of deposit	1,050	1	–	–	1,050	1
Non-U.S. government debt securities	4,433	4	906	17	5,339	21
Corporate debt securities	2,492	22	80	2	2,572	24
Asset-backed securities:						
Collateralized loan obligations	13,909	76	9,012	106	22,921	182
Other	2,258	11	–	–	2,258	11
Total available-for-sale debt securities	41,720	173	15,614	214	57,334	387
Available-for-sale equity securities	–	–	–	–	–	–
Held-to-maturity securities	–	–	–	–	–	–
Total securities with gross unrealized losses	$ 41,720	$ 173	$ 15,614	$ 214	$ 57,334	$ 387

Gross unrealized losses

The Firm has recognized the unrealized losses on securities it intends to sell. As of December 31, 2015, the Firm does not intend to sell any securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2015.

Other-than-temporary impairment

AFS debt and equity securities and HTM debt securities in unrealized loss positions are analyzed as part of the Firm's ongoing assessment of other-than-temporary impairment ("OTTI"). For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests in securitizations that are rated below "AA" at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an impairment to be other than temporary when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm's intent and ability to hold the security until recovery.

For AFS debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. For debt securities in an unrealized loss position that the Firm has the intent and ability to hold, the expected cash flows to be received from the securities are evaluated to determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI.

The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the cost basis. Any impairment loss on an equity security is equal to the full difference between the cost basis and the fair value of the security.

Securities gains and losses

The following table presents realized gains and losses and OTTI from AFS securities that were recognized in income.

Year ended December 31, (in millions)	**2015**	2014	2013
Realized gains	**$ 351**	$ 314	$ 1,302
Realized losses	**(127)**	(233)	(614)
OTTI losses	**(22)**	(4)	(21)
Net securities gains	**202**	77	667
OTTI losses			
Credit losses recognized in income	**(1)**	(2)	(1)
Securities the Firm intends to sell[(a)]	**(21)**	(2)	(20)
Total OTTI losses recognized in income	**$ (22)**	$ (4)	$ (21)

(a) Excludes realized losses on securities sold of $5 million, $3 million and $12 million for the years ended December 31, 2015, 2014 and 2013, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward for the years ended December 31, 2015, 2014 and 2013, of the credit loss component of OTTI losses that have been recognized in income, related to AFS debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	**2015**	2014	2013
Balance, beginning of period	**$ 3**	$ 1	$ 522
Additions:			
Newly credit-impaired securities	**1**	2	1
Losses reclassified from other comprehensive income on previously credit-impaired securities	**–**	–	–
Reductions:			
Sales and redemptions of credit-impaired securities	**–**	–	(522)
Balance, end of period	**$ 4**	$ 3	$ 1

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2015, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2015 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 2,415	$ 9,728	$ 6,562	$ 85,275	$ 103,980
Fair value	2,421	9,886	6,756	86,519	105,582
Average yield[b]	1.48%	1.86%	3.15%	3.08%	2.93%
U.S. Treasury and government agencies[a]					
Amortized cost	$ –	$ –	$ 10,069	$ 1,133	$ 11,202
Fair value	–	–	9,932	1,104	11,036
Average yield[b]	–%	–%	0.31%	0.48%	0.33%
Obligations of U.S. states and municipalities					
Amortized cost	$ 184	$ 754	$ 1,520	$ 28,870	$ 31,328
Fair value	187	774	1,600	30,989	33,550
Average yield[b]	5.21%	3.50%	5.57%	6.68%	6.54%
Certificates of deposit					
Amortized cost	$ 230	$ 52	$ –	$ –	$ 282
Fair value	231	52	–	–	283
Average yield[b]	8.66%	3.28%	–%	–%	7.68%
Non-U.S. government debt securities					
Amortized cost	$ 6,126	$ 11,177	$ 16,575	$ 1,986	$ 35,864
Fair value	6,422	11,429	16,747	2,078	36,676
Average yield[b]	3.11%	1.84%	1.06%	0.67%	1.63%
Corporate debt securities					
Amortized cost	$ 2,761	$ 7,175	$ 2,385	$ 143	$ 12,464
Fair value	2,776	7,179	2,347	134	12,436
Average yield[b]	2.87%	2.32%	3.09%	4.46%	2.61%
Asset-backed securities					
Amortized cost	$ 39	$ 442	$ 20,501	$ 19,289	$ 40,271
Fair value	40	449	20,421	19,194	40,104
Average yield[b]	0.71%	1.72%	1.79%	1.84%	1.81%
Total available-for-sale debt securities					
Amortized cost	$ 11,755	$ 29,328	$ 57,612	$ 136,696	$ 235,391
Fair value	12,077	29,769	57,803	140,018	239,667
Average yield[b]	2.85%	2.00%	1.63%	3.61%	2.89%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 2,067	$ 2,067
Fair value	–	–	–	2,087	2,087
Average yield[b]	–%	–%	–%	0.30%	0.30%
Total available-for-sale securities					
Amortized cost	$ 11,755	$ 29,328	$ 57,612	$ 138,763	$ 237,458
Fair value	12,077	29,769	57,803	142,105	241,754
Average yield[b]	2.85%	2.00%	1.63%	3.56%	2.87%
Total held-to-maturity securities					
Amortized cost	$ 51	$ –	$ 931	$ 48,091	$ 49,073
Fair value	50	–	976	49,561	50,587
Average yield[b]	4.42%	–%	5.01%	3.98%	4.00%

(a) U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2015.

(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated weighted-average life, which reflects anticipated future prepayments, is approximately five years for agency residential mortgage-backed securities, two years for agency residential collateralized mortgage obligations and four years for nonagency residential collateralized mortgage obligations.

Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Firm's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm's Consolidated balance sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. For further discussion of the offsetting of assets and liabilities, see Note 1. Fees received and paid in connection with securities financing agreements are recorded in interest income and interest expense on the Consolidated statements of income.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 4. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements, securities loaned or sold under repurchase agreements, and securities borrowed on the Consolidated balance sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

Secured financing transactions expose the Firm to credit and liquidity risk. To manage these risks, the Firm monitors the value of the underlying securities (predominantly high-quality securities collateral, including government-issued debt and agency MBS) that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral, and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.

In resale agreements and securities borrowed transactions, the Firm is exposed to credit risk to the extent that the value of the securities received is less than initial cash principal advanced and any collateral amounts exchanged. In repurchase agreements and securities loaned transactions, credit risk exposure arises to the extent that the value of underlying securities exceeds the value of the initial cash principal advanced, and any collateral amounts exchanged.

Additionally, the Firm typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Firm's policy to take possession, where possible, of the securities underlying resale agreements and securities borrowed transactions. For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30.

As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment with respect to these agreements as of December 31, 2015 and 2014.

Certain prior period amounts for securities purchased under resale agreements and securities borrowed, as well as securities sold under repurchase agreements and securities loaned, have been revised to conform with the current period presentation. These revisions had no impact on the Firm's Consolidated balance sheets or its results of operations.

The following table presents as of December 31, 2015 and 2014, the gross and net securities purchased under resale agreements and securities borrowed. Securities purchased under resale agreements have been presented on the Consolidated balance sheets net of securities sold under repurchase agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities purchased under resale agreements are not eligible for netting and are shown separately in the table below. Securities borrowed are presented on a gross basis on the Consolidated balance sheets.

	2015				2014			
December 31, (in millions)	Gross asset balance	Amounts netted on the Consolidated balance sheets	Net asset balance		Gross asset balance	Amounts netted on the Consolidated balance sheets	Net asset balance	
Securities purchased under resale agreements								
Securities purchased under resale agreements with an appropriate legal opinion	**$ 365,805**	**$ (156,258)**	**$ 209,547**		$ 347,142	$ (142,719)	$ 204,423	
Securities purchased under resale agreements where an appropriate legal opinion has not been either sought or obtained	**2,343**		**2,343**		10,598		10,598	
Total securities purchased under resale agreements	**$ 368,148**	**$ (156,258)**	**$ 211,890**	(a)	$ 357,740	$ (142,719)	$ 215,021	(a)
Securities borrowed	**$ 98,721**	**NA**	**$ 98,721**	(b)(c)	$ 110,435	NA	$ 110,435	(b)(c)

(a) At December 31, 2015 and 2014, included securities purchased under resale agreements of $23.1 billion and $28.6 billion, respectively, accounted for at fair value.
(b) At December 31, 2015 and 2014, included securities borrowed of $395 million and $992 million, respectively, accounted for at fair value.
(c) Included $31.3 billion and $35.3 billion at December 31, 2015 and 2014, respectively, of securities borrowed where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2015 and 2014, regarding the securities purchased under resale agreements and securities borrowed for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to resale agreements and securities borrowed where such a legal opinion has not been either sought or obtained.

	2015				2014			
		Amounts not nettable on the Consolidated balance sheets[a]				Amounts not nettable on the Consolidated balance sheets[a]		
December 31, (in millions)	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure
Securities purchased under resale agreements with an appropriate legal opinion	**$ 209,547**	**$ (206,423)**	**$ (351)**	**$ 2,773**	$ 204,423	$ (201,375)	$ (246)	$ 2,802
Securities borrowed	**$ 67,453**	**$ (65,081)**	**$ –**	**$ 2,372**	$ 75,113	$ (72,730)	$ –	$ 2,383

(a) For some counterparties, the sum of the financial instruments and cash collateral not nettable on the Consolidated balance sheets may exceed the net asset balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net reverse repurchase agreement or securities borrowed asset with that counterparty. As a result a net exposure amount is reported even though the Firm, on an aggregate basis for its securities purchased under resale agreements and securities borrowed, has received securities collateral with a total fair value that is greater than the funds provided to counterparties.
(b) Includes financial instrument collateral received, repurchase liabilities and securities loaned liabilities with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated balance sheets because other U.S. GAAP netting criteria are not met.

The following table presents as of December 31, 2015 and 2014, the gross and net securities sold under repurchase agreements and securities loaned. Securities sold under repurchase agreements have been presented on the Consolidated balance sheets net of securities purchased under resale agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities sold under repurchase agreements are not eligible for netting and are shown separately in the table below. Securities loaned are presented on a gross basis on the Consolidated balance sheets.

	2015				2014			
December 31, (in millions)	Gross liability balance	Amounts netted on the Consolidated balance sheets	Net liability balance		Gross liability balance	Amounts netted on the Consolidated balance sheets	Net liability balance	
Securities sold under repurchase agreements								
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 277,415**	**$ (156,258)**	**$ 121,157**		$ 290,529	$ (142,719)	$ 147,810	
Securities sold under repurchase agreements where an appropriate legal opinion has not been either sought or obtained[a]	**12,629**		**12,629**		21,996		21,996	
Total securities sold under repurchase agreements	**$ 290,044**	**$ (156,258)**	**$ 133,786**	**(c)**	$ 312,525	$ (142,719)	$ 169,806	(c)
Securities loaned[b]	**$ 22,556**	**NA**	**$ 22,556**	**(d)(e)**	$ 25,927	NA	$ 25,927	(d)(e)

(a) Includes repurchase agreements that are not subject to a master netting agreement but do provide rights to collateral.
(b) Included securities-for-securities lending transactions of $4.4 billion and $4.1 billion at December 31, 2015 and 2014, respectively, accounted for at fair value, where the Firm is acting as lender. These amounts are presented within other liabilities in the Consolidated balance sheets.
(c) At December 31, 2015 and 2014, included securities sold under repurchase agreements of $3.5 billion and $3.0 billion, respectively, accounted for at fair value.
(d) There were no securities loaned accounted for at fair value at December 31, 2015 and 2014, respectively.
(e) Included $45 million and $271 million at December 31, 2015 and 2014, respectively, of securities loaned where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2015 and 2014, regarding the securities sold under repurchase agreements and securities loaned for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to repurchase agreements and securities loaned where such a legal opinion has not been either sought or obtained.

	2015				2014			
		Amounts not nettable on the Consolidated balance sheets[a]				Amounts not nettable on the Consolidated balance sheets[a]		
December 31, (in millions)	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 121,157**	**$ (117,825)**	**$ (1,007)**	**$ 2,325**	$ 147,810	$ (145,732)	$ (497)	$ 1,581
Securities loaned	**$ 22,511**	**$ (22,245)**	**$ –**	**$ 266**	$ 25,656	$ (25,287)	$ –	$ 369

(a) For some counterparties the sum of the financial instruments and cash collateral not nettable on the Consolidated balance sheets may exceed the net liability balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net repurchase agreement or securities loaned liability with that counterparty.
(b) Includes financial instrument collateral transferred, reverse repurchase assets and securities borrowed assets with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated balance sheets because other U.S. GAAP netting criteria are not met.
(c) Net amount represents exposure of counterparties to the Firm.

Effective April 1, 2015, the Firm adopted new accounting guidance, which requires enhanced disclosures with respect to the types of financial assets pledged in secured financing transactions and the remaining contractual maturity of the secured financing transactions; the following tables present this information as of December 31, 2015.

	Gross liability balance	
December 31, 2015 (in millions)	Securities sold under repurchase agreements	Securities loaned
Mortgage-backed securities	$ 12,790	$ –
U.S. Treasury and government agencies	154,377	5
Obligations of U.S. states and municipalities	1,316	–
Non-U.S. government debt	80,162	4,426
Corporate debt securities	21,286	78
Asset-backed securities	4,394	–
Equity securities	15,719	18,047
Total	$ 290,044	$ 22,556

	Remaining contractual maturity of the agreements				
December 31, 2015 (in millions)	Overnight and continuous	Up to 30 days	30 – 90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	$ 114,595	$ 100,082	$ 29,955	$ 45,412	$ 290,044
Total securities loaned	8,320	708	793	12,735	22,556

Transfers not qualifying for sale accounting

At December 31, 2015 and 2014, the Firm held $7.5 billion and $13.8 billion, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets and loans, and the corresponding liabilities are predominantly recorded in other borrowed funds on the Consolidated balance sheets.

Note 14 – Loans

Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than purchased credit-impaired ("PCI") loans
- Loans held-for-sale
- Loans at fair value
- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are measured at the principal amount outstanding, net of the following: allowance for loan losses; charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs. Credit card loans also include billed finance charges and fees net of an allowance for uncollectible amounts.

Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, or when principal and interest has been in default for a period of 90 days or more, unless the loan is both well-secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of accrued interest and fee income on credit card loans. The allowance is established with a charge to interest income and is reported as an offset to loans.

Allowance for loan losses

The allowance for loan losses represents the estimated probable credit losses inherent in the held-for-investment loan portfolio at the balance sheet date. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated statements of income. See Note 15 for further information on the Firm's accounting policies for the allowance for loan losses.

Charge-offs

Consumer loans, other than risk-rated business banking, risk-rated auto and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the Federal Financial Institutions Examination Council ("FFIEC"). Residential real estate loans, non-modified credit card loans and scored business banking loans are generally charged off at 180 days past due. Auto and student loans are charged off no later than 120 days past due, and modified credit card loans are charged off at 120 days past due.

Certain consumer loans will be charged off earlier than the FFIEC charge-off standards in certain circumstances as follows:

- A charge-off is recognized when a loan is modified in a troubled debt restructuring ("TDR") if the loan is determined to be collateral-dependent. A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.
- Loans to borrowers who have experienced an event (e.g., bankruptcy) that suggests a loss is either known or highly certain are subject to accelerated charge-off standards. Residential real estate and auto loans are charged off when the loan becomes 60 days past due, or sooner if the loan is determined to be collateral-

dependent. Credit card and scored business banking loans are charged off within 60 days of receiving notification of the bankruptcy filing or other event. Student loans are generally charged off when the loan becomes 60 days past due after receiving notification of a bankruptcy.

- Auto loans are written down to net realizable value upon repossession of the automobile and after a redemption period (i.e., the period during which a borrower may cure the loan) has passed.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and risk-rated auto loans are charged off when it is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), generally, either through foreclosure or upon the execution of a deed in lieu of foreclosure transaction with the borrower, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared with the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or loss recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

Loans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

For these loans, the earned current contractual interest payment is recognized in interest income. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

See Note 4 for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 for further information on loans carried at fair value and classified as trading assets.

PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 255 of this Note for information on accounting for PCI loans subsequent to their acquisition.

Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; non-credit related losses such as those due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15.

Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, principal forgiveness, or the acceptance of equity or other assets in lieu of payments.

Such modifications are accounted for and reported as TDRs. A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (a) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (b) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, loan-to-value ("LTV") ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR generally remains subject to the asset-specific allowance methodology throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status and/or the loan has been removed from the impaired loans disclosures (i.e., loans restructured at market rates). For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated balance sheets and initially recognized at fair value less costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment, the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class:

Consumer, excluding credit card[a]	Credit card	Wholesale[c]
Residential real estate – excluding PCI • Home equity – senior lien • Home equity – junior lien • Prime mortgage, including option ARMs • Subprime mortgage Other consumer loans • Auto[b] • Business banking[b] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other[d]

(a) Includes loans held in CCB, prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate.
(b) Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.
(c) Includes loans held in CIB, CB, AM and Corporate. Excludes prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.
(d) Includes loans to: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2015 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	**$ 344,355**	**$ 131,387**	**$ 357,050**	**$ 832,792**	[b]
Held-for-sale	**466**	**76**	**1,104**	**1,646**	
At fair value	**–**	**–**	**2,861**	**2,861**	
Total	**$ 344,821**	**$ 131,463**	**$ 361,015**	**$ 837,299**	

December 31, 2014 (in millions)	Consumer, excluding credit card	Credit card[a]	Wholesale	Total	
Retained	$ 294,979	$ 128,027	$ 324,502	$ 747,508	[b]
Held-for-sale	395	3,021	3,801	7,217	
At fair value	–	–	2,611	2,611	
Total	$ 295,374	$ 131,048	$ 330,914	$ 757,336	

(a) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(b) Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs. These amounts were not material as of December 31, 2015 and 2014.

The following tables provide information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. These tables exclude loans recorded at fair value. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures.

	2015			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 5,279** [(a)(b)]	**$ –**	**$ 2,154**	**$ 7,433**
Sales	**5,099**	**–**	**9,188**	**14,287**
Retained loans reclassified to held-for-sale	**1,514**	**79**	**642**	**2,235**

	2014			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 7,434 [(a)(b)]	$ –	$ 885	$ 8,319
Sales	6,655	– [(c)]	7,381	14,036
Retained loans reclassified to held-for-sale	1,190	3,039	581	4,810

	2013			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 7,616 [(a)(b)]	$ 328	$ 697	$ 8,641
Sales	4,845	–	4,232	9,077
Retained loans reclassified to held-for-sale	1,261	309	5,641	7,211

(a) Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Ginnie Mae guidelines. The Firm typically elects to repurchase these delinquent loans as it continues to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, the Federal Housing Administration ("FHA"), Rural Housing Services ("RHS") and/or the U.S. Department of Veterans Affairs ("VA").
(b) Excludes purchases of retained loans sourced through the correspondent origination channel and underwritten in accordance with the Firm's standards. Such purchases were $50.3 billion, $15.1 billion and $5.7 billion for the years ended December 31, 2015, 2014 and 2013, respectively.
(c) Prior period amounts have been revised to conform with current period presentation.

The following table provides information about gains and losses, including lower of cost or fair value adjustments, on loan sales by portfolio segment.

Year ended December 31, (in millions)	**2015**	2014	2013
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[(a)]			
Consumer, excluding credit card	**$ 305**	$ 341	$ 313
Credit card	**1**	(241)	3
Wholesale	**34**	101	(76)
Total net gains on sales of loans (including lower of cost or fair value adjustments)	**$ 340**	$ 201	$ 240

(a) Excludes sales related to loans accounted for at fair value.

Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans originated by Washington Mutual that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class.

December 31, (in millions)	**2015**	2014
Residential real estate – excluding PCI		
Home equity:		
Senior lien	**$ 14,848**	$ 16,367
Junior lien	**30,711**	36,375
Mortgages:		
Prime, including option ARMs	**162,549**	104,921
Subprime	**3,690**	5,056
Other consumer loans		
Auto	**60,255**	54,536
Business banking	**21,208**	20,058
Student and other	**10,096**	10,970
Residential real estate – PCI		
Home equity	**14,989**	17,095
Prime mortgage	**8,893**	10,220
Subprime mortgage	**3,263**	3,673
Option ARMs	**13,853**	15,708
Total retained loans	**$ 344,355**	$ 294,979

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV can provide insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.
- For scored auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.
- Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For further information about risk-rated wholesale loan credit quality indicators, see pages 259–260 of this Note.

Residential real estate — excluding PCI loans

The following table provides information by class for residential real estate — excluding retained PCI loans in the consumer, excluding credit card, portfolio segment.

The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate — excluding PCI loans portfolio: (i) junior lien home equity loans may be fully charged off when the loan becomes 180 days past due, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates for this product class; and (ii) the lengthening of loss-mitigation timelines may result in higher delinquency rates for loans carried at the net realizable value of the collateral that remain on the Firm's Consolidated balance sheets.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity[i]				Mortgages					
	Senior lien		Junior lien		Prime, including option ARMs[i]		Subprime		Total residential real estate – excluding PCI	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Loan delinquency[a]										
Current	**$ 14,278**	$ 15,730	**$ 30,021**	$ 35,575	**$ 153,323**	$ 93,951	**$ 3,140**	$ 4,296	**$ 200,762**	$ 149,552
30–149 days past due	**238**	275	**470**	533	**3,666**	4,091	**376**	489	**4,750**	5,388
150 or more days past due	**332**	362	**220**	267	**5,560**	6,879	**174**	271	**6,286**	7,779
Total retained loans	**$ 14,848**	$ 16,367	**$ 30,711**	$ 36,375	**$ 162,549**	$104,921	**$ 3,690**	$ 5,056	**$ 211,798**	$ 162,719
% of 30+ days past due to total retained loans[b]	**3.84%**	3.89%	**2.25%**	2.20%	**0.71%**	1.42%	**14.91%**	15.03%	**1.40%**	2.27%
90 or more days past due and government guaranteed[c]	**–**	–	**–**	–	**6,056**	7,544	**–**	–	**6,056**	7,544
Nonaccrual loans	**867**	938	**1,324**	1,590	**1,752**	2,190	**751**	1,036	**4,694**	5,754
Current estimated LTV ratios[d][e][f][g]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 42**	$ 37	**$ 123**	$ 252	**$ 56**	$ 97	**$ 2**	$ 4	**$ 223**	$ 390
Less than 660	**3**	6	**29**	65	**65**	72	**12**	28	**109**	171
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**50**	83	**1,294**	2,105	**249**	478	**25**	76	**1,618**	2,742
Less than 660	**23**	40	**411**	651	**190**	282	**101**	207	**725**	1,180
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**311**	466	**4,226**	5,849	**3,013**	2,686	**146**	382	**7,696**	9,383
Less than 660	**142**	206	**1,267**	1,647	**597**	838	**399**	703	**2,405**	3,394
Less than 80% and refreshed FICO scores:										
Equal to or greater than 660	**11,721**	12,588	**17,927**	19,435	**140,942**	82,350	**1,299**	1,624	**171,889**	115,997
Less than 660	**1,942**	2,184	**2,992**	3,326	**5,280**	4,872	**1,517**	1,795	**11,731**	12,177
No FICO/LTV available	**614**	757	**2,442**	3,045	**1,469**	1,136	**189**	237	**4,714**	5,175
U.S. government-guaranteed	**–**	–	**–**	–	**10,688**	12,110	**–**	–	**10,688**	12,110
Total retained loans	**$ 14,848**	$ 16,367	**$ 30,711**	$ 36,375	**$ 162,549**	$104,921	**$ 3,690**	$ 5,056	**$ 211,798**	$ 162,719
Geographic region										
California	**$ 2,072**	$ 2,232	**$ 6,873**	$ 8,144	**$ 46,745**	$ 28,133	**$ 518**	$ 718	**$ 56,208**	$ 39,227
New York	**2,583**	2,805	**6,564**	7,685	**20,941**	16,550	**521**	677	**30,609**	27,717
Illinois	**1,189**	1,306	**2,231**	2,605	**11,379**	6,654	**145**	207	**14,944**	10,772
Texas	**1,581**	1,845	**951**	1,087	**8,986**	4,935	**142**	177	**11,660**	8,044
Florida	**797**	861	**1,612**	1,923	**6,763**	5,106	**414**	632	**9,586**	8,522
New Jersey	**647**	654	**1,943**	2,233	**5,395**	3,361	**172**	227	**8,157**	6,475
Washington	**442**	506	**1,009**	1,216	**4,097**	2,410	**79**	109	**5,627**	4,241
Arizona	**815**	927	**1,328**	1,595	**3,081**	1,805	**74**	112	**5,298**	4,439
Michigan	**650**	736	**700**	848	**1,866**	1,203	**79**	121	**3,295**	2,908
Ohio	**1,014**	1,150	**638**	778	**1,166**	615	**81**	112	**2,899**	2,655
All other[h]	**3,058**	3,345	**6,862**	8,261	**52,130**	34,149	**1,465**	1,964	**63,515**	47,719
Total retained loans	**$ 14,848**	$ 16,367	**$ 30,711**	$ 36,375	**$ 162,549**	$104,921	**$ 3,690**	$ 5,056	**$ 211,798**	$ 162,719

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $2.6 billion and $2.6 billion; 30–149 days past due included $3.2 billion and $3.5 billion; and 150 or more days past due included $4.9 billion and $6.0 billion at December 31, 2015 and 2014, respectively.

(b) At December 31, 2015 and 2014, Prime, including option ARMs loans excluded mortgage loans insured by U.S. government agencies of $8.1 billion and $9.5 billion, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

(c) These balances, which are 90 days or more past due, were excluded from nonaccrual loans as the loans are guaranteed by U.S government agencies. Typically the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. At December 31, 2015 and 2014, these balances included $3.4 billion and $4.2 billion, respectively, of loans that are no longer accruing interest based on the agreed-upon servicing guidelines. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate. There were no loans not guaranteed by U.S. government agencies that are 90 or more days past due and still accruing at December 31, 2015 and 2014.

(d) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Effective December 31, 2015, the current estimated LTV ratios reflect updates to the nationally recognized home price index valuation estimates incorporated into the Firm's home valuation models. The prior period ratios have been revised to conform with these updates in the home price index.

(e) Junior lien represents combined LTV, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.

(f) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

(g) The current period current estimated LTV ratios disclosures have been updated to reflect where either the FICO score or estimated property value is unavailable. The prior period amounts have been revised to conform with the current presentation.

(h) At December 31, 2015 and 2014, included mortgage loans insured by U.S. government agencies of $10.7 billion and $12.1 billion, respectively.

(i) Includes residential real estate loans to private banking clients in AM, for which the primary credit quality indicators are the borrower's financial position and LTV.

The following table represent the Firm's delinquency statistics for junior lien home equity loans and lines as of December 31, 2015 and 2014.

December 31, (in millions, except ratios)	Total loans		Total 30+ day delinquency rate	
	2015	2014	**2015**	2014
HELOCs:[a]				
Within the revolving period[b]	**$ 17,050**	**25,252**	**1.57%**	**1.75%**
Beyond the revolving period	**11,252**	**7,979**	**3.10**	**3.16**
HELOANs	**2,409**	**3,144**	**3.03**	**3.34**
Total	**$ 30,711**	**36,375**	**2.25%**	**2.20%**

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs originated by Washington Mutual that allow interest-only payments beyond the revolving period.
(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount.

Home equity lines of credit ("HELOCs") beyond the revolving period and home equity loans ("HELOANs") have higher delinquency rates than do HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the loss estimates produced by the Firm's delinquency roll-rate methodology, which estimates defaults based on the current delinquency status of a portfolio.

Impaired loans

The table below sets forth information about the Firm's residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15.

December 31, (in millions)	Home equity				Mortgages				Total residential real estate – excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime			
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Impaired loans										
With an allowance	**$ 557**	$ 552	**$ 736**	$ 722	**$ 3,850**	$ 4,949	**$ 1,393**	$ 2,239	**$ 6,536**	$ 8,462
Without an allowance[a]	**491**	549	**574**	582	**976**	1,196	**471**	639	**2,512**	2,966
Total impaired loans[b][c]	**$ 1,048**	$ 1,101	**$ 1,310**	$ 1,304	**$ 4,826**	$ 6,145	**$ 1,864**	$ 2,878	**$ 9,048**	$ 11,428
Allowance for loan losses related to impaired loans	**$ 53**	$ 84	**$ 85**	$ 147	**$ 93**	$ 127	**$ 15**	$ 64	**$ 246**	$ 422
Unpaid principal balance of impaired loans[d]	**1,370**	1,451	**2,590**	2,603	**6,225**	7,813	**2,857**	4,200	**13,042**	16,067
Impaired loans on nonaccrual status[e]	**581**	628	**639**	632	**1,287**	1,559	**670**	931	**3,177**	3,750

(a) Represents collateral-dependent residential mortgage loans that are charged off to the fair value of the underlying collateral less cost to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower ("Chapter 7 loans") as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. At December 31, 2015, Chapter 7 residential real estate loans included approximately 17% of senior lien home equity, 9% of junior lien home equity, 18% of prime mortgages, including option ARMs, and 15% of subprime mortgages that were 30 days or more past due.
(b) At December 31, 2015 and 2014, $3.8 billion and $4.9 billion, respectively, of loans modified subsequent to repurchase from Government National Mortgage Association ("Ginnie Mae") in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.
(c) Predominantly all residential real estate impaired loans, excluding PCI loans, are in the U.S.
(d) Represents the contractual amount of principal owed at December 31, 2015 and 2014. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.
(e) As of December 31, 2015 and 2014, nonaccrual loans included $2.5 billion and $2.9 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer to the Loan accounting framework on pages 242–244 of this Note.

The following table presents average impaired loans and the related interest income reported by the Firm.

Year ended December 31,	Average impaired loans			Interest income on impaired loans[a]			Interest income on impaired loans on a cash basis[a]		
(in millions)	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Home equity									
Senior lien	**$ 1,077**	$ 1,122	$ 1,151	**$ 51**	$ 55	$ 59	**$ 35**	$ 37	$ 40
Junior lien	**1,292**	1,313	1,297	**77**	82	82	**50**	53	55
Mortgages									
Prime, including option ARMs	**5,397**	6,730	7,214	**217**	262	280	**46**	54	59
Subprime	**2,300**	3,444	3,798	**131**	182	200	**41**	51	55
Total residential real estate – excluding PCI	**$ 10,066**	$ 12,609	$ 13,460	**$ 476**	$ 581	$ 621	**$ 172**	$ 195	$ 209

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms.

Loan modifications

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

The following table presents new TDRs reported by the Firm.

Year ended December 31, (in millions)	**2015**	2014	2013
Home equity:			
Senior lien	**$ 108**	$ 110	$ 210
Junior lien	**293**	211	388
Mortgages:			
Prime, including option ARMs	**209**	287	770
Subprime	**58**	124	319
Total residential real estate – excluding PCI	**$ 668**	$ 732	$ 1,687

Nature and extent of modifications

The U.S. Treasury's Making Home Affordable ("MHA") programs, as well as the Firm's proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm's loss mitigation programs during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate - excluding PCI		
Year ended Dec. 31,	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Number of loans approved for a trial modification	**1,345**	939	1,719	**2,588**	626	884	**1,103**	1,052	2,846	**1,608**	2,056	4,233	**6,644**	4,673	9,682
Number of loans permanently modified	**1,096**	1,171	1,765	**3,200**	2,813	5,040	**1,495**	2,507	4,356	**1,650**	3,141	5,364	**7,441**	9,632	16,525
Concession granted:[(a)]															
Interest rate reduction	**75%**	53%	70%	**63%**	84%	88%	**72%**	43%	73%	**71%**	47%	72%	**68%**	58%	77%
Term or payment extension	**86**	67	76	**90**	83	80	**80**	51	73	**82**	53	56	**86**	63	70
Principal and/or interest deferred	**32**	16	12	**19**	23	24	**34**	19	30	**21**	12	13	**24**	18	21
Principal forgiveness	**4**	36	38	**8**	22	32	**24**	51	38	**31**	53	48	**16**	41	39
Other[(b)]	**–**	–	–	**–**	–	–	**9**	10	23	**13**	10	14	**5**	6	11

(a) Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. A significant portion of trial modifications include interest rate reductions and/or term or payment extensions.

(b) Represents variable interest rate to fixed interest rate modifications.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the Firm's loss mitigation programs and about redefaults of certain loans modified in TDRs for the periods presented. Because the specific types and amounts of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following table presents only the financial effects of permanent modifications. This table also excludes Chapter 7 loans where the sole concession granted is the discharge of debt.

Year ended December 31, (in millions, except weighted-average data and number of loans)	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate – excluding PCI		
	2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Weighted-average interest rate of loans with interest rate reductions – before TDR	**5.69%**	6.38%	6.35%	**4.93%**	4.81%	5.05%	**5.03%**	4.82%	5.28%	**6.67%**	7.16%	7.33%	**5.51%**	5.61%	5.88%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**2.70**	3.03	3.23	**2.17**	2.00	2.14	**2.55**	2.69	2.77	**3.15**	3.37	3.52	**2.64**	2.78	2.92
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**17**	17	19	**18**	19	20	**25**	25	25	**24**	24	24	**22**	23	23
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**32**	30	31	**36**	35	34	**37**	37	37	**36**	36	35	**36**	36	36
Charge-offs recognized upon permanent modification	**$ 1**	$ 2	$ 7	**$ 3**	$ 25	$ 70	**$ 9**	$ 9	$ 16	**$ 2**	$ 3	$ 5	**$ 15**	$ 39	$ 98
Principal deferred	**13**	5	7	**14**	11	24	**41**	39	129	**17**	19	43	**85**	74	203
Principal forgiven	**2**	14	30	**4**	21	51	**34**	83	206	**32**	89	218	**72**	207	505
Balance of loans that redefaulted within one year of permanent modification[(a)]	**$ 14**	$ 19	$ 26	**$ 7**	$ 10	$ 20	**$ 75**	$ 121	$ 164	**$ 58**	$ 93	$ 106	**$ 154**	$ 243	$ 316

(a) Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

At December 31, 2015, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 10 years for senior lien home equity, 9 years for junior lien home equity, 10 years for prime mortgages, including option ARMs, and 8 years for subprime mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

Active and suspended foreclosure

At December 31, 2015 and 2014, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $1.2 billion and $1.5 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Other consumer loans

The table below provides information for other consumer retained loan classes, including auto, business banking and student loans.

December 31, (in millions, except ratios)	Auto		Business banking		Student and other		Total other consumer	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014
Loan delinquency[a]								
Current	**$59,442**	$53,866	**$20,887**	$19,710	**$ 9,405**	$10,080	**$ 89,734**	$83,656
30–119 days past due	**804**	663	**215**	208	**445**	576	**1,464**	1,447
120 or more days past due	**9**	7	**106**	140	**246**	314	**361**	461
Total retained loans	**$60,255**	$54,536	**$21,208**	$20,058	**$10,096**	$10,970	**$ 91,559**	$85,564
% of 30+ days past due to total retained loans	**1.35%**	1.23%	**1.51%**	1.73%	**1.63%** [d]	2.15% [d]	**1.42%** [d]	1.47% [d]
90 or more days past due and still accruing [b]	**$ –**	$ –	**$ –**	$ –	**$ 290**	$ 367	**$ 290**	$ 367
Nonaccrual loans	**116**	115	**263**	279	**242**	270	**621**	664
Geographic region								
California	**$ 7,186**	$ 6,294	**$ 3,530**	$ 3,008	**$ 1,051**	$ 1,143	**$ 11,767**	$10,445
New York	**3,874**	3,662	**3,359**	3,187	**1,224**	1,259	**8,457**	8,108
Illinois	**3,678**	3,175	**1,459**	1,373	**679**	729	**5,816**	5,277
Texas	**6,457**	5,608	**2,622**	2,626	**839**	868	**9,918**	9,102
Florida	**2,843**	2,301	**941**	827	**516**	521	**4,300**	3,649
New Jersey	**1,998**	1,945	**500**	451	**366**	378	**2,864**	2,774
Washington	**1,135**	1,019	**264**	258	**212**	235	**1,611**	1,512
Arizona	**2,033**	2,003	**1,205**	1,083	**236**	239	**3,474**	3,325
Michigan	**1,550**	1,633	**1,361**	1,375	**415**	466	**3,326**	3,474
Ohio	**2,340**	2,157	**1,363**	1,354	**559**	629	**4,262**	4,140
All other	**27,161**	24,739	**4,604**	4,516	**3,999**	4,503	**35,764**	33,758
Total retained loans	**$60,255**	$54,536	**$21,208**	$20,058	**$10,096**	$10,970	**$ 91,559**	$85,564
Loans by risk ratings[c]								
Noncriticized	**$11,277**	$ 9,822	**$15,505**	$14,619	**NA**	NA	**$ 26,782**	$24,441
Criticized performing	**76**	35	**815**	708	**NA**	NA	**891**	743
Criticized nonaccrual	**–**	–	**210**	213	**NA**	NA	**210**	213

(a) Student loan delinquency classifications included loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") as follows: current included $3.8 billion and $4.3 billion; 30-119 days past due included $299 million and $364 million; and 120 or more days past due included $227 million and $290 million at December 31, 2015 and 2014, respectively.

(b) These amounts represent student loans, which are insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.

(c) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

(d) December 31, 2015 and 2014, excluded loans 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $526 million and $654 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

Other consumer impaired loans and loan modifications

The table below sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	2015	2014
Impaired loans		
With an allowance	**$ 527**	$ 557
Without an allowance[a]	**31**	35
Total impaired loans[b][c]	**$ 558**	$ 592
Allowance for loan losses related to impaired loans	**$ 118**	$ 117
Unpaid principal balance of impaired loans[d]	**668**	719
Impaired loans on nonaccrual status	**449**	456

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.
(b) Predominantly all other consumer impaired loans are in the U.S.
(c) Other consumer average impaired loans were $566 million, $599 million and $648 million for the years ended December 31, 2015, 2014 and 2013, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the years ended December 31, 2015, 2014 and 2013.
(d) Represents the contractual amount of principal owed at December 31, 2015 and 2014. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

Loan modifications

Certain other consumer loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All of these TDRs are reported as impaired loans in the table above.

The following table provides information about the Firm's other consumer loans modified in TDRs. New TDRs were not material for the years ended December 31, 2015 and 2014.

December 31, (in millions)	2015	2014
Loans modified in TDRs[a][b]	**$ 384**	$ 442
TDRs on nonaccrual status	**275**	306

(a) The impact of these modifications was not material to the Firm for the years ended December 31, 2015 and 2014.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2015 and 2014 were immaterial.

Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition. PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer PCI loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any foregone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified PCI loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated balance sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

The liquidation of PCI loans, which may include sales of loans, receipt of payment in full from the borrower, or foreclosure, results in removal of the loans from the underlying PCI pool. When the amount of the liquidation proceeds (e.g., cash, real estate), if any, is less than the unpaid principal balance of the loan, the difference is first applied against the PCI pool's nonaccretable difference for principal losses (i.e., the lifetime credit loss estimate established as a purchase accounting adjustment at the acquisition date). When the nonaccretable difference for a particular loan pool has been fully depleted, any excess of the unpaid principal balance of the loan over the liquidation proceeds is written off against the PCI pool's allowance for loan losses. Beginning in 2014, write-offs of PCI loans also include other adjustments, primarily related to interest forgiveness modifications. Because the Firm's PCI loans are accounted for at a pool level, the Firm does not recognize charge-offs of PCI loans when they reach specified stages of delinquency (i.e., unlike non-PCI consumer loans, these loans are not charged off based on FFIEC standards).

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2015, to have a remaining weighted-average life of 9 years.

Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Carrying value[a]	**$14,989**	$17,095	**$ 8,893**	$10,220	**$ 3,263**	$ 3,673	**$13,853**	$15,708	**$40,998**	$46,696
Related allowance for loan losses[b]	**1,708**	1,758	**985**	1,193	**–**	180	**49**	194	**2,742**	3,325
Loan delinquency (based on unpaid principal balance)										
Current	**$14,387**	$16,295	**$ 7,894**	$ 8,912	**$ 3,232**	$ 3,565	**$12,370**	$13,814	**$37,883**	$42,586
30–149 days past due	**322**	445	**424**	500	**439**	536	**711**	858	**1,896**	2,339
150 or more days past due	**633**	1,000	**601**	837	**380**	551	**1,272**	1,824	**2,886**	4,212
Total loans	**$15,342**	$17,740	**$ 8,919**	$10,249	**$ 4,051**	$ 4,652	**$14,353**	$16,496	**$42,665**	$49,137
% of 30+ days past due to total loans	**6.22%**	8.15%	**11.49%**	13.05%	**20.22%**	23.37%	**13.82%**	16.26%	**11.21%**	13.33%
Current estimated LTV ratios (based on unpaid principal balance)[c][d][e]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 153**	$ 301	**$ 10**	$ 22	**$ 10**	$ 22	**$ 19**	$ 50	**$ 192**	$ 395
Less than 660	**80**	159	**28**	52	**55**	106	**36**	84	**199**	401
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**942**	1,448	**120**	268	**77**	144	**166**	330	**1,305**	2,190
Less than 660	**444**	728	**152**	284	**220**	390	**239**	448	**1,055**	1,850
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**2,709**	3,591	**816**	1,405	**331**	451	**977**	1,695	**4,833**	7,142
Less than 660	**1,136**	1,485	**614**	969	**643**	911	**1,050**	1,610	**3,443**	4,975
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**6,724**	6,626	**4,243**	4,211	**863**	787	**7,073**	7,053	**18,903**	18,677
Less than 660	**2,265**	2,308	**2,438**	2,427	**1,642**	1,585	**4,065**	4,291	**10,410**	10,611
No FICO/LTV available	**889**	1,094	**498**	611	**210**	256	**728**	935	**2,325**	2,896
Total unpaid principal balance	**$15,342**	$17,740	**$ 8,919**	$10,249	**$ 4,051**	$ 4,652	**$14,353**	$16,496	**$42,665**	$49,137
Geographic region (based on unpaid principal balance)										
California	**$ 9,205**	$10,671	**$ 5,172**	$ 5,965	**$ 1,005**	$ 1,138	**$ 8,108**	$ 9,190	**$23,490**	$26,964
New York	**788**	876	**580**	672	**400**	463	**813**	933	**2,581**	2,944
Illinois	**358**	405	**263**	301	**196**	229	**333**	397	**1,150**	1,332
Texas	**224**	273	**94**	92	**243**	281	**75**	85	**636**	731
Florida	**1,479**	1,696	**586**	689	**373**	432	**1,183**	1,440	**3,621**	4,257
New Jersey	**310**	348	**238**	279	**139**	165	**470**	553	**1,157**	1,345
Washington	**819**	959	**194**	225	**81**	95	**339**	395	**1,433**	1,674
Arizona	**281**	323	**143**	167	**76**	85	**203**	227	**703**	802
Michigan	**44**	53	**141**	166	**113**	130	**150**	182	**448**	531
Ohio	**17**	20	**45**	48	**62**	72	**61**	69	**185**	209
All other	**1,817**	2,116	**1,463**	1,645	**1,363**	1,562	**2,618**	3,025	**7,261**	8,348
Total unpaid principal balance	**$15,342**	$17,740	**$ 8,919**	$10,249	**$ 4,051**	$ 4,652	**$14,353**	$16,496	**$42,665**	$49,137

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.
(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.
(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property. Effective December 31, 2015, the current estimated LTV ratios reflect updates to the nationally recognized home price index valuation estimates incorporated into the Firm's home valuation models. The prior period ratios have been revised to conform with these updates in the home price index.
(d) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.
(e) The current period current estimated LTV ratios disclosures have been updated to reflect where either the FICO score or estimated property value is unavailable. The prior period amounts have been revised to conform with the current presentation.

Approximately 23% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following table sets forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on the unpaid principal balance as of December 31, 2015 and 2014.

	Total loans		Total 30+ day delinquency rate	
December 31, (in millions, except ratios)	**2015**	2014	**2015**	2014
HELOCs:[a]				
Within the revolving period[b]	**$ 5,000**	$ 8,972	**4.10%**	6.42%
Beyond the revolving period[c]	**6,252**	4,143	**4.46**	6.42
HELOANs	**582**	736	**5.33**	8.83
Total	**$ 11,834**	$ 13,851	**4.35%**	6.55%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.
(b) Substantially all undrawn HELOCs within the revolving period have been closed.
(c) Includes loans modified into fixed-rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2015, 2014 and 2013, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

Year ended December 31, (in millions, except ratios)	Total PCI		
	2015	2014	2013
Beginning balance	**$ 14,592**	$ 16,167	$ 18,457
Accretion into interest income	**(1,700)**	(1,934)	(2,201)
Changes in interest rates on variable-rate loans	**279**	(174)	(287)
Other changes in expected cash flows[a]	**230**	533	198
Reclassification from nonaccretable difference[b]	**90**	–	–
Balance at December 31	**$ 13,491**	$ 14,592	$ 16,167
Accretable yield percentage	**4.20%**	4.19%	4.31%

(a) Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model and periodically updates model assumptions. For the years ended December 31, 2015 and December 31, 2014, other changes in expected cash flows were driven by changes in prepayment assumptions. For the year ended December 31, 2013, other changes in expected cash flows were due to refining the expected interest cash flows on HELOCs with balloon payments, partially offset by changes in prepayment assumptions.
(b) Reclassifications from the nonaccretable difference in the year ended December 31, 2015 were driven by continued improvement in home prices and delinquencies, as well as increased granularity in the impairment estimates.

The factors that most significantly affect estimates of gross cash flows expected to be collected, and accordingly the accretable yield balance, include: (i) changes in the benchmark interest rate indices for variable-rate products such as option ARM and home equity loans; and (ii) changes in prepayment assumptions.

Active and suspended foreclosure

At December 31, 2015 and 2014, the Firm had PCI residential real estate loans with an unpaid principal balance of $2.3 billion and $3.2 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the table below; FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	**2015**	2014
Net charge-offs	**$ 3,122**	$ 3,429
% of net charge-offs to retained loans	**2.51%**	2.75%
Loan delinquency		
Current and less than 30 days past due and still accruing	**$ 129,502**	$ 126,189
30–89 days past due and still accruing	**941**	943
90 or more days past due and still accruing	**944**	895
Total retained credit card loans	**$ 131,387**	$ 128,027
Loan delinquency ratios		
% of 30+ days past due to total retained loans	**1.43%**	1.44%
% of 90+ days past due to total retained loans	**0.72**	0.70
Credit card loans by geographic region		
California	**$ 18,802**	$ 17,940
Texas	**11,847**	11,088
New York	**11,360**	10,940
Florida	**7,806**	7,398
Illinois	**7,655**	7,497
New Jersey	**5,879**	5,750
Ohio	**4,700**	4,707
Pennsylvania	**4,533**	4,489
Michigan	**3,562**	3,552
Colorado	**3,399**	3,226
All other	**51,844**	51,440
Total retained credit card loans	**$ 131,387**	$ 128,027
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**84.4%**	85.7%
Less than 660	**15.6**	14.3

Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

December 31, (in millions)	2015	2014
Impaired credit card loans with an allowance[a][b]		
Credit card loans with modified payment terms[c]	**$ 1,286**	$ 1,775
Modified credit card loans that have reverted to pre-modification payment terms[d]	**179**	254
Total impaired credit card loans[e]	**$ 1,465**	$ 2,029
Allowance for loan losses related to impaired credit card loans	**$ 460**	$ 500

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.
(b) There were no impaired loans without an allowance.
(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.
(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2015 and 2014, $113 million and $159 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining $66 million and $95 million at December 31, 2015 and 2014, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.
(e) Predominantly all impaired credit card loans are in the U.S.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2015	2014	2013
Average impaired credit card loans	**$ 1,710**	$ 2,503	$ 3,882
Interest income on impaired credit card loans	**82**	123	198

Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. Most of the credit card loans have been modified under long-term programs for borrowers who are experiencing financial difficulties. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. The Firm may also offer short-term programs for borrowers who may be in need of temporary relief; however, none are currently being offered. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Substantially all modifications are considered to be TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

New enrollments in these loan modification programs for the years ended December 31, 2015, 2014 and 2013, were $638 million, $807 million and $1.2 billion, respectively.

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented.

Year ended December 31, (in millions, except weighted-average data)	2015	2014	2013
Weighted-average interest rate of loans – before TDR	**15.08%**	14.96%	15.37%
Weighted-average interest rate of loans – after TDR	**4.40**	4.40	4.38
Loans that redefaulted within one year of modification[a]	**$ 85**	$ 119	$ 167

(a) Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate for credit card loans modified was expected to be 25.61%, 27.91% and 30.72% as of December 31, 2015, 2014 and 2013, respectively.

Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the probability of default ("PD") and the loss given default ("LGD"). The PD is the likelihood that a loan will default and not be fully repaid by the borrower. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm's definition of criticized aligns with the banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody's. Investment-grade ratings range from "AAA/Aaa" to "BBB-/Baa3." Noninvestment-grade ratings

are classified as noncriticized ("BB+/Ba1 and B-/B3") and criticized ("CCC+"/"Caa1 and below"), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management's assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor's ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 for further detail on industry concentrations.

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other[e]		Total retained loans	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Loans by risk ratings												
Investment grade	**$ 62,150**	$ 63,069	**$74,330**	$61,006	**$21,786**	$ 27,111	**$11,363**	$8,393	**$ 98,107**	$ 82,087	**$267,736**	$241,666
Noninvestment grade:												
Noncriticized	**45,632**	44,117	**17,008**	16,541	**7,667**	7,093 [d]	**256**	300	**11,390**	10,067 [d]	**81,953**	78,118
Criticized performing	**4,542**	2,251	**1,251**	1,313	**320**	316	**7**	3	**253**	236	**6,373**	4,119
Criticized nonaccrual	**608**	188	**231**	253	**10**	18	**–**	–	**139**	140	**988**	599
Total noninvestment grade	**50,782**	46,556	**18,490**	18,107	**7,997**	7,427 [d]	**263**	303	**11,782**	10,443 [d]	**89,314**	82,836
Total retained loans	**$112,932**	$109,625	**$92,820**	$79,113	**$29,783**	$ 34,538 [d]	**$11,626**	$8,696	**$109,889**	$ 92,530 [d]	**$357,050**	$324,502
% of total criticized to total retained loans	**4.56%**	2.22%	**1.60 %**	1.98 %	**1.11 %**	0.97 %	**0.06 %**	0.03%	**0.36%**	0.41 %	**2.06%**	1.45%
% of nonaccrual loans to total retained loans	**0.54**	0.17	**0.25**	0.32	**0.03**	0.05	**–**	–	**0.13**	0.15	**0.28**	0.18
Loans by geographic distribution[a]												
Total non-U.S.	**$ 30,063**	$ 33,739	**$ 3,003**	$ 2,099	**$17,166**	$ 20,944	**$ 1,788**	$1,122	**$ 42,031**	$ 42,961	**$ 94,051**	$100,865
Total U.S.	**82,869**	75,886	**89,817**	77,014	**12,617**	13,594 [d]	**9,838**	7,574	**67,858**	49,569 [d]	**262,999**	223,637
Total retained loans	**$112,932**	$109,625	**$92,820**	$79,113	**$29,783**	$ 34,538 [d]	**$11,626**	$8,696	**$109,889**	$ 92,530 [d]	**$357,050**	$324,502
Net charge-offs/ (recoveries)	**$ 26**	$ 22	**$ (14)**	$ (9)	**$ (5)**	$ (12)	**$ (8)**	$ 25	**$ 11**	$ (14)	**$ 10**	$ 12
% of net charge-offs/ (recoveries) to end-of-period retained loans	**0.02%**	0.02%	**(0.02)%**	(0.01)%	**(0.02)%**	(0.04) %	**(0.07)%**	0.29%	**0.01%**	(0.02) %	**–%**	–%
Loan delinquency[b]												
Current and less than 30 days past due and still accruing	**$112,058**	$108,857	**$92,381**	$78,552	**$29,713**	$ 34,416 [d]	**$11,565**	$8,627	**$108,734**	$ 91,160 [d]	**$354,451**	$321,612
30–89 days past due and still accruing	**259**	566	**193**	275	**49**	104	**55**	69	**988**	1,201	**1,544**	2,215
90 or more days past due and still accruing[c]	**7**	14	**15**	33	**11**	–	**6**	–	**28**	29	**67**	76
Criticized nonaccrual	**608**	188	**231**	253	**10**	18	**–**	–	**139**	140	**988**	599
Total retained loans	**$112,932**	$109,625	**$92,820**	$79,113	**$29,783**	$ 34,538 [d]	**$11,626**	$8,696	**$109,889**	$ 92,530 [d]	**$357,050**	$324,502

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality.
(c) Represents loans that are considered well-collateralized and therefore still accruing interest.
(d) Effective in the fourth quarter 2015, the Firm realigned its wholesale industry divisions in order to better monitor and manage industry concentrations. Prior period amounts have been revised to conform with current period presentation. For additional information, see Wholesale credit portfolio on pages 122–129.
(e) Other includes: individuals; SPEs; holding companies; and private education and civic organizations. For more information on exposures to SPEs, see Note 16.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio segment for the periods indicated. The real estate class primarily consists of secured commercial loans mainly to borrowers for multi-family and commercial lessor properties. Multifamily lending specifically finances apartment buildings. Commercial lessors receive financing specifically for real estate leased to retail, office and industrial tenants. Commercial construction and development loans represent financing for the construction of apartments, office and professional buildings and malls. Other real estate loans include lodging, real estate investment trusts ("REITs"), single-family, homebuilders and other real estate.

December 31, (in millions, except ratios)	Multifamily		Commercial lessors		Commercial construction and development		Other		Total real estate loans	
	2015	2014	**2015**	2014	**2015**	**2014**	**2015**	**2014**	**2015**	**2014**
Real estate retained loans	**$ 60,290**	$ 51,049	**$ 20,062**	$ 17,438	**$ 4,920**	$ 4,264	**$ 7,548**	$ 6,362	**$ 92,820**	$ 79,113
Criticized	**520**	652	**844**	841	**43**	42	**75**	31	**1,482**	1,566
% of criticized to total real estate retained loans	**0.86%**	1.28%	**4.21%**	4.82%	**0.87%**	0.98%	**0.99%**	0.49%	**1.60%**	1.98%
Criticized nonaccrual	**$ 85**	$ 126	**$ 100**	$ 110	**$ 1**	$ –	**$ 45**	$ 17	**$ 231**	$ 253
% of criticized nonaccrual to total real estate retained loans	**0.14%**	0.25%	**0.50%**	0.63%	**0.02%**	–%	**0.60%**	0.27%	**0.25%**	0.32%

Wholesale impaired loans and loan modifications

Wholesale impaired loans consist of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15.

The table below sets forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2015	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014	**2015**	2014
Impaired loans												
With an allowance	**$ 522**	$ 174	**$ 148**	$ 193	**$ 10**	$ 15	**$ –**	$ –	**$ 46**	$ 89	**$ 726**	$ 471
Without an allowance[a]	**98**	24	**106**	87	**–**	3	**–**	–	**94**	52	**298**	166
Total impaired loans	**$ 620**	$ 198	**$ 254**	$ 280	**$ 10**	$ 18	**$ –**	$ –	**$ 140**	$ 141	**$ 1,024** [c]	$ 637 [c]
Allowance for loan losses related to impaired loans	**$ 220**	$ 34	**$ 27**	$ 36	**$ 3**	$ 4	**$ –**	$ –	**$ 24**	$ 13	**$ 274**	$ 87
Unpaid principal balance of impaired loans[b]	**669**	266	**363**	345	**13**	22	**–**	–	**164**	202	**1,209**	835

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.
(b) Represents the contractual amount of principal owed at December 31, 2015 and 2014. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.
(c) Based upon the domicile of the borrower, largely consists of loans in the U.S.

The following table presents the Firm's average impaired loans for the years ended 2015, 2014 and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
Commercial and industrial	**$ 453**	$ 243	$ 412
Real estate	**250**	297	484
Financial institutions	**13**	20	17
Government agencies	**–**	–	–
Other	**129**	155	211
Total[a]	**$ 845**	$ 715	$ 1,124

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2015, 2014 and 2013.

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above. TDRs were not material as of December 31, 2015 and 2014.

Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the consumer, including credit card, portfolio segments (primarily scored); and wholesale (risk-rated) portfolio, and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans. During 2015, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses; such policies are described in the following paragraphs.

The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Scored loans (i.e., consumer loans) are pooled by product type, while risk-rated loans (primarily wholesale loans) are segmented by risk rating.

The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the provision for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Impaired collateral-dependent loans are charged down to the fair value of collateral less costs to sell and therefore may not be subject to an asset-specific reserve as are other impaired loans. See Note 14 for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of foregone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted modified loans. For credit card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program. For wholesale loans modified in TDRs, expected losses incorporate redefaults based on management's expectation of the borrower's ability to repay under the modified terms.

The formula-based component is based on a statistical calculation to provide for incurred credit losses in performing risk-rated loans and all consumer loans, except for any loans restructured in TDRs and PCI loans. See Note 14 for more information on PCI loans.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed by applying loss factors to outstanding principal balances over an estimated loss emergence period. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends.

Loss factors are statistically derived and sensitive to changes in delinquency status, credit scores, collateral values and other risk factors. The Firm uses a number of different forecasting models to estimate both the PD and the loss severity, including delinquency roll rate models and credit loss severity models. In developing PD and loss severity assumptions, the Firm also considers known and anticipated changes in the economic environment, including changes in home prices, unemployment rates and other risk indicators.

A nationally recognized home price index measure is used to estimate both the PD and the loss severity on residential real estate loans at the metropolitan statistical areas ("MSA") level. Loss severity estimates are regularly validated by comparison to actual losses recognized on defaulted loans, market-specific real estate appraisals and property sales activity. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

For risk-rated loans, the statistical calculation is the product of an estimated PD and an estimated LGD. These factors are determined based on the credit quality and specific attributes of the Firm's loans and lending-related commitments to each obligor. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on the Firm's history of actual credit losses over more than one credit cycle. Estimates of PD and LGD are subject to periodic refinement based on changes to underlying external and Firm-specific historical data.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. The determination of the appropriate adjustment is based on management's view of loss events that have occurred but that are not yet reflected in the loss factors and that relate to current macroeconomic and political conditions, the quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the portfolio. For the scored loan portfolios, adjustments to the statistical calculation are made in part by analyzing the historical loss experience for each major product segment. Factors related to unemployment, home prices, borrower behavior and lien position, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials and uncertainties regarding the ultimate success of loan modifications are incorporated into the calculation, as appropriate. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. In addition, for the risk-rated portfolios, any adjustments made to the statistical calculation take into consideration model imprecision, deteriorating conditions within an industry, product or portfolio type, geographic location, credit concentration, and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation.

Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing consumer and wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2015, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

Allowance for credit losses and related information

The table below summarizes information about the allowances for loan losses, and lending-relating commitments, and includes a breakdown of loans and lending-related commitments by impairment methodology.

	2015			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Gross charge-offs	1,658	3,488	95	5,241
Gross recoveries	(704)	(366)	(85)	(1,155)
Net charge-offs/(recoveries)	954	3,122	10	4,086
Write-offs of PCI loans[(a)]	208	—	—	208
Provision for loan losses	(82)	3,122	623	3,663
Other	—	(5)	6	1
Ending balance at December 31,	$ 5,806	$ 3,434	$ 4,315	$ 13,555
Allowance for loan losses by impairment methodology				
Asset-specific[(b)]	$ 364	$ 460 [(c)]	$ 274	$ 1,098
Formula-based	2,700	2,974	4,041	9,715
PCI	2,742	—	—	2,742
Total allowance for loan losses	$ 5,806	$ 3,434	$ 4,315	$ 13,555
Loans by impairment methodology				
Asset-specific	$ 9,606	$ 1,465	$ 1,024	$ 12,095
Formula-based	293,751	129,922	356,022	779,695
PCI	40,998	—	4	41,002
Total retained loans	$ 344,355	$ 131,387	$ 357,050	$ 832,792
Impaired collateral-dependent loans				
Net charge-offs	$ 104	$ —	$ 16	$ 120
Loans measured at fair value of collateral less cost to sell	2,566	—	283	2,849
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 13	$ —	$ 609	$ 622
Provision for lending-related commitments	1	—	163	164
Other	—	—	—	—
Ending balance at December 31,	$ 14	$ —	$ 772	$ 786
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ —	$ —	$ 73	$ 73
Formula-based	14	—	699	713
Total allowance for lending-related commitments	$ 14	$ —	$ 772	$ 786
Lending-related commitments by impairment methodology				
Asset-specific	$ —	$ —	$ 193	$ 193
Formula-based	58,478	515,518	366,206	940,202
Total lending-related commitments	$ 58,478	$ 515,518	$ 366,399	$ 940,395

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(d) Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.

(table continued from previous page)

2014				2013			
Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
$ 8,456	$ 3,795	$ 4,013	$ 16,264	$ 12,292	$ 5,501	$ 4,143	$ 21,936
2,132	3,831	151	6,114	2,754	4,472	241	7,467
(814)	(402)	(139)	(1,355)	(847)	(593)	(225)	(1,665)
1,318	3,429	12	4,759	1,907	3,879	16	5,802
533	–	–	533	53	–	–	53
414	3,079	(269)	3,224	(1,872)	2,179	(119)	188
31	(6)	(36)	(11)	(4)	(6)	5	(5)
$ 7,050	$ 3,439	$ 3,696	$ 14,185	$ 8,456	$ 3,795	$ 4,013	$ 16,264
$ 539	$ 500 [c]	$ 87	$ 1,126	$ 601	$ 971 [c]	$ 181	$ 1,753
3,186	2,939	3,609	9,734	3,697	2,824	3,832	10,353
3,325	–	–	3,325	4,158	–	–	4,158
$ 7,050	$ 3,439	$ 3,696	$ 14,185	$ 8,456	$ 3,795	$ 4,013	$ 16,264
$ 12,020	$ 2,029	$ 637	$ 14,686	$ 13,785	$ 3,115	$ 845	$ 17,745
236,263	125,998	323,861	686,122	221,609	124,350	307,412	653,371
46,696	–	4	46,700	53,055	–	6	53,061
$ 294,979	$ 128,027	$ 324,502	$ 747,508	$ 288,449	$ 127,465	$ 308,263	$ 724,177
$ 133	$ –	$ 21	$ 154	$ 235	$ –	$ 37	$ 272
3,025	–	326	3,351	3,105	–	362	3,467
$ 8	$ –	$ 697	$ 705	$ 7	$ –	$ 661	$ 668
5	–	(90)	(85)	1	–	36	37
–	–	2	2	–	–	–	–
$ 13	$ –	$ 609	$ 622	$ 8	$ –	$ 697	$ 705
$ –	$ –	$ 60	$ 60	$ –	$ –	$ 60	$ 60
13	–	549	562	8	–	637	645
$ 13	$ –	$ 609	$ 622	$ 8	$ –	$ 697	$ 705
$ –	$ –	$ 103	$ 103	$ –	$ –	$ 206	$ 206
58,153	525,963	366,778 [d]	950,894	56,057	529,383	344,032 [d]	929,472
$ 58,153	$ 525,963	$ 366,881	$ 950,997	$ 56,057	$ 529,383	$ 344,238	$ 929,678

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the primary beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line-of-Business	*Transaction Type*	*Activity*	*Annual Report page references*
CCB	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	266
	Mortgage securitization trusts	Servicing and securitization of both originated and purchased residential mortgages	267–269
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages and student loans	267–269
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	269–271
	Investor intermediation activities:		
	Municipal bond vehicles		269–270

The Firm's other business segments are also involved with VIEs, but to a lesser extent, as follows:

- Asset Management: AM sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund's investment objective and is competitively priced. For fund entities that qualify as VIEs, AM's interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.
- Commercial Banking: CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending-related services to certain client-sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.
- Corporate: The Private Equity business, within Corporate, is involved with entities that may meet the definition of VIEs. However, the Firm's Private Equity business is generally subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 271 of this Note.

Significant Firm-sponsored variable interest entities

Credit card securitizations

The Card business securitizes both originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's other creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (which is generally 4%). As of December 31, 2015 and 2014, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $13.6 billion and $10.9 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 22% for both the years ended December 31, 2015 and 2014. As of December 31, 2015 and 2014, the Firm also retained $0 million and $40 million of senior securities, and as of both December 31, 2015 and 2014, retained $5.3 billion of subordinated securities in certain of its credit card securitization trusts. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

Firm-sponsored mortgage and other securitization trusts
The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including student loans) primarily in its CCB and CIB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans; holding senior interests or subordinated interests; recourse or guarantee arrangements; and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 272 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and pages 272–273 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2015 [a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime/Alt-A and option ARMs	**$ 85.7**	**$ 1.4**	**$ 66.7**	**$ 0.4**	**$ 1.6**	**$ 2.0**
Subprime	**24.4**	**0.1**	**22.6**	**0.1**	**–**	**0.1**
Commercial and other[b]	**123.5**	**0.1**	**80.3**	**0.4**	**3.5**	**3.9**
Total	**$ 233.6**	**$ 1.6**	**$ 169.6**	**$ 0.9**	**$ 5.1**	**$ 6.0**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2014[a] (in billions)	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
Securitization-related						
Residential mortgage:						
Prime/Alt-A and option ARMs	$ 96.3	$ 2.7	$ 78.3	$ 0.5	$ 0.7	$ 1.2
Subprime	28.4	0.8	25.7	0.1	–	0.1
Commercial and other[b]	129.6	0.2	94.4	0.4	3.5	3.9
Total	$ 254.3	$ 3.7	$ 198.4	$ 1.0	$ 4.2	$ 5.2

(a) Excludes U.S. government agency securitizations. See pages 272–273 of this Note for information on the Firm's loan sales to U.S. government agencies.
(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions.
(c) The table above excludes the following: retained servicing (see Note 17 for a discussion of MSRs); securities retained from loan sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 6 for further information on derivatives); senior and subordinated securities of $163 million and $73 million, respectively, at December 31, 2015, and $136 million and $34 million, respectively, at December 31, 2014, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) As of December 31, 2015 and 2014, 76% and 77%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of $1.9 billion and $1.1 billion of investment-grade and $93 million and $185 million of noninvestment-grade retained interests at December 31, 2015 and 2014, respectively. The retained interests in commercial and other securitizations trusts consisted of $3.7 billion and $3.7 billion of investment-grade and $198 million and $194 million of noninvestment-grade retained interests at December 31, 2015 and 2014, respectively.

Residential mortgage
The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans originated or purchased by CCB, and for certain mortgage loans purchased by CIB. For securitizations holding loans serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations at the time of securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 271 of this Note for more information on consolidated residential mortgage securitizations.

The Firm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. At December 31, 2015 and 2014, the Firm did not consolidate the assets of certain Firm-sponsored residential mortgage securitization VIEs, in which the Firm had continuing involvement, primarily due to the fact that the Firm did not hold an interest in these trusts that could potentially be significant to the trusts. See the table on page 271 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

Commercial mortgages and other consumer securitizations
CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities ("controlling class"). See the table on page 271 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

The Firm retains servicing responsibilities for certain student loan securitizations. The Firm has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 271 of this Note for more information on the consolidated student loan securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

Re-securitizations
The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Federal National Mortgage Association ("Fannie Mae"), Federal Home Loan Mortgage Company ("Freddie Mac") and Ginnie Mae) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm's consolidation analysis is largely dependent on the Firm's role and interest in the re-securitization trusts. During the years ended December 31, 2015, 2014 and 2013, the Firm transferred $21.9 billion, $22.7 billion and $25.3 billion, respectively, of securities to agency VIEs, and $777 million, $1.1 billion and $55 million, respectively, of securities to private-label VIEs.

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients is seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.

In more limited circumstances, the Firm creates a re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party re-securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it was not involved in the initial design of the trust, or the Firm is involved with an independent third-party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

As of December 31, 2015 and 2014, total assets (including the notional amount of interest-only securities) of nonconsolidated Firm-sponsored private-label re-securitization entities in which the Firm has continuing involvement were $2.2 billion and $2.9 billion, respectively. At December 31, 2015 and 2014, the Firm held $4.6 billion and $2.4 billion, respectively, of interests in nonconsolidated agency re-securitization entities. The Firm's exposure to non-consolidated private-label re-securitization entities as of December 31, 2015 and 2014 was not material. As of December 31, 2015 and 2014, the Firm did not consolidate any agency re-securitizations. As of December 31, 2015 and 2014, the Firm consolidated an insignificant amount of assets and liabilities of Firm-sponsored private-label re-securitizations.

Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that provide secured financing, collateralized by pools of receivables and other financial assets, to customers of the Firm. The conduits fund their financing facilities through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, and to provide the conduits with funding to provide financing to customers in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits. See page 271 of this Note for further information on consolidated VIE assets and liabilities.

In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper issued by the Firm-administered multi-seller conduits. The Firm held $15.7 billion and $5.7 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2015 and 2014, respectively. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. The Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded portion of these commitments was $5.6 billion and $9.9 billion at December 31, 2015 and 2014, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29.

VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions with these VIEs, typically using derivatives, to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles.

Municipal bond vehicles

Municipal bond vehicles or tender option bond ("TOB") trusts allow investors to finance their municipal bond investments at short-term rates. In a typical TOB transaction, the trust purchases highly rated municipal bond(s) of a single issuer and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates ("Floaters") and (2) inverse floating-rate residual interests ("Residuals"). The Floaters are typically purchased by money market funds or other short-term investors and may be tendered, with requisite notice, to the TOB trust. The Residuals are retained by the investor seeking to finance its municipal bond investment. TOB transactions where the Residual is held by a third party investor are typically known as Customer TOB trusts, and Non-Customer TOB trusts are transactions where the Residual is retained by the Firm. The Firm serves as sponsor for all Non-Customer TOB transactions and certain Customer TOB transactions established prior to 2014. The Firm may provide various services to a TOB trust, including remarketing agent, liquidity or tender option provider, and/or sponsor.

J.P. Morgan Securities LLC may serve as a remarketing agent on the Floaters for TOB trusts. The remarketing agent is responsible for establishing the periodic variable rate on the Floaters, conducting the initial placement and remarketing tendered Floaters. The remarketing agent may, but is not obligated to make markets in Floaters. At December 31, 2015 and 2014, the Firm held an insignificant amount of these Floaters on its Consolidated balance sheets and did not hold any significant amounts during 2015.

JPMorgan Chase Bank, N.A. or J.P. Morgan Securities LLC often serves as the sole liquidity or tender option provider for the TOB trusts. The liquidity provider's obligation to perform is conditional and is limited by certain events ("Termination Events"), which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the liquidity provider's exposure is typically further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or, in certain transactions, the reimbursement agreements with the Residual holders.

Holders of the Floaters may "put," or tender, their Floaters to the TOB trust. If the remarketing agent cannot successfully remarket the Floaters to another investor, the liquidity provider either provides a loan to the TOB trust for the purchase of or directly purchases the tendered Floaters. In certain Customer TOB transactions, the Firm, as liquidity provider, has entered into a reimbursement agreement with the Residual holder. In those transactions, upon the termination of the vehicle, if the proceeds from the sale of the underlying municipal bonds are not sufficient to repay amounts owed to the Firm, as liquidity or tender option provider, the Firm has recourse to the third party Residual holders for any shortfall. Residual holders with reimbursement agreements are required to post collateral with the Firm to support such reimbursement obligations should the market value of the underlying municipal bonds decline. The Firm does not have any intent to protect Residual holders from potential losses on any of the underlying municipal bonds.

TOB trusts are considered to be variable interest entities. The Firm consolidates Non-Customer TOB trusts because as the Residual holder, the Firm has the right to make decisions that significantly impact the economic performance of the municipal bond vehicle, and have the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Firm does not consolidate Customer TOB trusts, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. Certain non-consolidated Customer TOB trusts are sponsored by a third party, and not the Firm. See page 271 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2015 and 2014, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities	Excess[a]	Maximum exposure
Nonconsolidated municipal bond vehicles				
2015	**$ 6.9**	**$ 3.8**	**$ 3.1**	**$ 3.8**
2014	11.5	6.3	5.2	6.3

	Ratings profile of VIE assets[b]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB+ to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
2015	**$ 1.7**	**$ 4.6**	**$ 0.5**	**$ –**	**$ 0.1**	**$ 6.9**	**4.0**
2014	2.7	8.4	0.4	–	–	$ 11.5	4.9

(a) Represents the excess of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.
(b) The ratings scale is presented on an S&P-equivalent basis.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, remarketing agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated balance sheets similarly to the way it would record and report positions in respect of any other third-party transaction.

Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2015 and 2014.

	Assets				Liabilities		
December 31, 2015 (in billions)[a]	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ –**	**$ 47.4**	**$ 0.7**	**$ 48.1**	**$ 27.9**	**$ –**	**$ 27.9**
Firm-administered multi-seller conduits	**–**	**24.4**	**–**	**24.4**	**8.7**	**–**	**8.7**
Municipal bond vehicles	**2.7**	**–**	**–**	**2.7**	**2.6**	**–**	**2.6**
Mortgage securitization entities[b]	**0.8**	**1.4**	**–**	**2.2**	**0.8**	**0.7**	**1.5**
Student loan securitization entities	**–**	**1.9**	**0.1**	**2.0**	**1.8**	**–**	**1.8**
Other	**0.2**	**–**	**2.0**	**2.2**	**0.1**	**0.1**	**0.2**
Total	**$ 3.7**	**$ 75.1**	**$ 2.8**	**$ 81.6**	**$ 41.9**	**$ 0.8**	**$ 42.7**

	Assets				Liabilities		
December 31, 2014 (in billions)[a]	Trading assets	Loans	Other[c]	Total assets[d]	Beneficial interests in VIE assets[e]	Other[f]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	$ –	$ 48.3	$ 0.7	$ 49.0	$ 31.2	$ –	$ 31.2
Firm-administered multi-seller conduits	–	17.7	0.1	17.8	12.0	–	12.0
Municipal bond vehicles	5.3	–	–	5.3	4.9	–	4.9
Mortgage securitization entities[b]	3.3	0.7	–	4.0	2.1	0.8	2.9
Student loan securitization entities	0.2	2.2	–	2.4	2.1	–	2.1
Other	0.3	–	1.0	1.3	–	0.2	0.2
Total	$ 9.1	$ 68.9	$ 1.8	$ 79.8	$ 52.3	$ 1.0	$ 53.3

(a) Excludes intercompany transactions, which were eliminated in consolidation.
(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.
(c) Includes assets classified as cash, AFS securities, and other assets within the Consolidated balance sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.
(e) The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated balance sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in beneficial interests in VIE assets are long-term beneficial interests of $30.6 billion and $35.4 billion at December 31, 2015 and 2014, respectively. The maturities of the long-term beneficial interests as of December 31, 2015, were as follows: $5.1 billion under one year, $21.6 billion between one and five years, and $3.9 billion over five years, all respectively.
(f) Includes liabilities classified as accounts payable and other liabilities in the Consolidated balance sheets.

Loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, student and commercial (primarily related to real estate) loans, as well as debt securities. The purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when all of the following accounting criteria for a sale are met: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

Securitization activity

The following table provides information related to the Firm's securitization activities for the years ended December 31, 2015, 2014 and 2013, related to assets held in JPMorgan Chase-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

	2015		2014		2013	
Year ended December 31, (in millions, except rates)[a]	Residential mortgage[d][e]	Commercial and other[e][f]	Residential mortgage[d][e]	Commercial and other[e][f]	Residential mortgage[d][e]	Commercial and other[e][f]
Principal securitized	**$ 3,008**	**$ 11,933**	$ 2,558	$ 11,911	$ 1,404	$ 11,318
All cash flows during the period:						
Proceeds from new securitizations[b]	**$ 3,022**	**$ 12,011**	$ 2,569	$ 12,079	$ 1,410	$ 11,507
Servicing fees collected	**528**	**3**	557	4	576	5
Purchases of previously transferred financial assets (or the underlying collateral)[c]	**3**	**—**	121	—	294	—
Cash flows received on interests	**407**	**597**	179	578	156	325

(a) Excludes re-securitization transactions.
(b) Proceeds from residential mortgage securitizations were received in the form of securities. During 2015, $3.0 billion of residential mortgage securitizations were received as securities and classified in level 2, and $59 million were classified in level 3 of the fair value hierarchy. During 2014, $2.4 billion of residential mortgage securitizations were received as securities and classified in level 2, and $185 million were classified in level 3 of the fair value hierarchy. During 2013, $1.4 billion of residential mortgage securitizations were received as securities and classified in level 2. Proceeds from commercial mortgage securitizations were received as securities and cash. During 2015, $12.0 billion of proceeds from commercial mortgage securitizations were received as securities and classified in level 2, and $43 million of proceeds were classified in level 3 of the fair value hierarchy; and zero of proceeds from commercial mortgage securitizations were received as cash. During 2014, $11.4 billion of proceeds from commercial mortgage securitizations were received as securities and classified in level 2, and $130 million of proceeds were classified in level 3 of the fair value hierarchy: and $568 million of proceeds from commercial mortgage securitizations were received as cash. During 2013, $11.3 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy, and $207 million of proceeds from commercial mortgage securitizations were received as cash.
(c) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities – for example, loan repurchases due to representation and warranties and servicer clean-up calls.
(d) Includes prime, Alt-A, subprime, and option ARMs. Excludes certain loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.
(e) Key assumptions used to measure residential mortgage retained interests originated during the year included weighted-average life (in years) of 4.2, 5.9 and 3.9 for the years ended December 31, 2015, 2014 and 2013, respectively, and weighted-average discount rate of 2.9%, 3.4% and 2.5% for the years ended December 31, 2015, 2014 and 2013, respectively. Key assumptions used to measure commercial and other retained interests originated during the year included weighted-average life (in years) of 6.2, 6.5 and 8.3 for the years ended December 31, 2015, 2014, and 2013, respectively, and weighted-average discount rate of 4.1%, 4.8% and 3.2% for the years ended December 31, 2015, 2014 and 2013, respectively.
(f) Includes commercial and student loan securitizations.

Loans and excess MSRs sold to U.S. government-sponsored enterprises ("U.S. GSEs"), loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities

In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess MSRs on a nonrecourse basis, predominantly to U.S. GSEs. These loans and excess MSRs are sold primarily for the purpose of securitization by the U.S. GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans

with the purchaser. See Note 29 for additional information about the Firm's loan sales- and securitization-related indemnifications.

See Note 17 for additional information about the impact of the Firm's sale of certain excess MSRs.

The following table summarizes the activities related to loans sold to the U.S. GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

Year ended December 31, (in millions)	**2015**	2014	2013
Carrying value of loans sold	**$ 42,161**	$ 55,802	$ 166,028
Proceeds received from loan sales as cash	**$ 313**	$ 260	$ 782
Proceeds from loans sales as securities[(a)]	**41,615**	55,117	163,373
Total proceeds received from loan sales[(b)]	**$ 41,928**	$ 55,377	$ 164,155
Gains on loan sales[(c)]	**$ 299**	$ 316	$ 302

(a) Predominantly includes securities from U.S. GSEs and Ginnie Mae that are generally sold shortly after receipt.
(b) Excludes the value of MSRs retained upon the sale of loans. Gains on loan sales include the value of MSRs.
(c) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 29, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated balance sheets as a loan with a corresponding liability. As of December 31, 2015 and 2014, the Firm had recorded on its Consolidated balance sheets $11.1 billion and $12.4 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase. Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools. Additionally, real estate owned resulting from voluntary repurchases of loans was $343 million and $464 million as of December 31, 2015 and 2014, respectively. Substantially all of these loans and real estate owned are insured or guaranteed by U.S. government agencies. For additional information, refer to Note 14.

Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets, in which the Firm has continuing involvement, and delinquencies as of December 31, 2015 and 2014.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	**2015**	2014	**2015**	2014	**2015**	2014
Securitized loans[(a)]						
Residential mortgage:						
Prime/ Alt-A & option ARMs	**$ 66,708**	$ 78,294	**$ 8,325**	$ 11,363	**$ 1,946**	$ 2,166
Subprime	**22,549**	25,659	**5,448**	6,473	**1,431**	1,931
Commercial and other	**80,319**	94,438	**1,808**	1,522	**375**	1,267
Total loans securitized[(b)]	**$ 169,576**	$ 198,391	**$ 15,581**	$ 19,358	**$ 3,752**	$ 5,364

(a) Total assets held in securitization-related SPEs were $233.6 billion and $254.3 billion, respectively, at December 31, 2015 and 2014. The $169.6 billion and $198.4 billion, respectively, of loans securitized at December 31, 2015 and 2014, excludes: $62.4 billion and $52.2 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and $1.6 billion and $3.7 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated balance sheets at December 31, 2015 and 2014.
(b) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

Note 17 – Goodwill and other intangible assets

Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	**2015**	2014	2013
Consumer & Community Banking	**$ 30,769**	$ 30,941	$ 30,985
Corporate & Investment Bank	**6,772**	6,780	6,888
Commercial Banking	**2,861**	2,861	2,862
Asset Management	**6,923**	6,964	6,969
Corporate	**–**	101	377
Total goodwill	**$ 47,325**	$ 47,647	$ 48,081

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	**2015**	2014	2013
Balance at beginning of period	**$ 47,647**	$ 48,081	$ 48,175
Changes during the period from:			
Business combinations	**28**	43	64
Dispositions	**(160)** [(b)]	(80)	(5)
Other[(a)]	**(190)**	(397)	(153)
Balance at December 31,	**$ 47,325**	$ 47,647	$ 48,081

(a) Includes foreign currency translation adjustments, other tax-related adjustments, and, during 2014, goodwill impairment associated with the Firm's Private Equity business of $276 million.
(b) Includes $101 million of Private Equity goodwill, which was disposed of as part of the Private Equity sale completed in January 2015.

Impairment testing

The Firm's goodwill was not impaired at December 31, 2015. Further, except for the goodwill related to its Private Equity business, the Firm's goodwill was not impaired at December 31, 2014. $276 million of goodwill was written off during 2014 related to the goodwill impairment associated with the Firm's Private Equity business. No goodwill was written off due to impairment during 2013.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

The Firm uses the reporting units' allocated equity plus goodwill capital as a proxy for the carrying amounts of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of equity to the Firm's lines of business, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III), economic risk measures and capital levels for similarly rated peers. Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated equity is further reviewed on a periodic basis and updated as needed.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes (including, but not limited to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act")), and which are reviewed with the senior management of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firms' overall estimated cost of equity to ensure reasonableness.

The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to

assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firmwide level that do not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

Declines in business performance, increases in credit losses, increases in equity capital requirements, as well as deterioration in economic or market conditions, adverse estimates of regulatory or legislative changes or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Mortgage servicing rights

Mortgage servicing rights represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm has elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread ("OAS") model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm's prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSRs is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that consist of the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e., those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2015, 2014 and 2013.

As of or for the year ended December 31, (in millions, except where otherwise noted)	**2015**	2014	2013
Fair value at beginning of period	**$ 7,436**	$ 9,614	$ 7,614
MSR activity:			
Originations of MSRs	**550**	757	2,214
Purchase of MSRs	**435**	11	1
Disposition of MSRs[a]	**(486)**	(209)	(725)
Net additions	**499**	559	1,490
Changes due to collection/realization of expected cash flows	**(922)**	(911)	(1,102)
Changes in valuation due to inputs and assumptions:			
Changes due to market interest rates and other[b]	**(160)**	(1,608)	2,122
Changes in valuation due to other inputs and assumptions:			
Projected cash flows (e.g., cost to service)	**(112)**	133	109
Discount rates	**(10)**	(459) [e]	(78)
Prepayment model changes and other[c]	**(123)**	108	(541)
Total changes in valuation due to other inputs and assumptions	**(245)**	(218)	(510)
Total changes in valuation due to inputs and assumptions	**$ (405)**	$ (1,826)	$ 1,612
Fair value at December 31,	**$ 6,608**	$ 7,436	$ 9,614
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	**$ (405)**	$ (1,826)	$ 1,612
Contractual service fees, late fees and other ancillary fees included in income	**$ 2,533**	$ 2,884	$ 3,309
Third-party mortgage loans serviced at December 31, (in billions)	**$ 677**	$ 756	$ 822
Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions)[d]	**$ 6.5**	$ 8.5	$ 9.6

(a) For 2014 and 2013, predominantly represents excess MSRs transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities ("SMBS"). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired and has retained the remaining balance of those SMBS as trading securities. Also includes sales of MSRs.

(b) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(c) Represents changes in prepayments other than those attributable to changes in market interest rates.

(d) Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these servicer advances is minimal because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

(e) For the year ending December 31, 2014, the negative impact was primarily related to higher capital allocated to the Mortgage Servicing business, which, in turn, resulted in an increase in the OAS. The resulting OAS assumption was consistent with capital and return requirements the Firm believed a market participant would consider, taking into account factors such as the operating risk environment and regulatory and economic capital requirements.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
CCB mortgage fees and related income			
Net production revenue	**$ 769**	$ 1,190	$ 3,004
Net mortgage servicing revenue:			
Operating revenue:			
Loan servicing revenue	**2,776**	3,303	3,552
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(917)**	(905)	(1,094)
Total operating revenue	**1,859**	2,398	2,458
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[(a)]	**(160)**	(1,606)	2,119
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**(245)**	(218)	(511)
Change in derivative fair value and other	**288**	1,796	(1,875)
Total risk management	**(117)**	(28)	(267)
Total net mortgage servicing revenue	**1,742**	2,370	2,191
Total CCB mortgage fees and related income	**2,511**	3,560	5,195
All other	**2**	3	10
Mortgage fees and related income	**$ 2,513**	$ 3,563	$ 5,205

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

(b) Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g., changes in prepayments due to changes in home prices).

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2015 and 2014, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	**2015**	2014
Weighted-average prepayment speed assumption ("CPR")	**9.81%**	9.80%
Impact on fair value of 10% adverse change	**$ (275)**	$ (337)
Impact on fair value of 20% adverse change	**(529)**	(652)
Weighted-average option adjusted spread	**9.02%**	9.43%
Impact on fair value of 100 basis points adverse change	**$ (258)**	$ (300)
Impact on fair value of 200 basis points adverse change	**(498)**	(578)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

Note 19 – Deposits

At December 31, 2015 and 2014, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	**2015**	2014
U.S. offices		
Noninterest-bearing	**$ 392,721**	$ 437,558
Interest-bearing		
Demand[a]	**84,088**	90,319
Savings[b]	**486,043**	466,730
Time (included **$10,916** and $7,501 at fair value)[c]	**92,873**	86,301
Total interest-bearing deposits	**663,004**	643,350
Total deposits in U.S. offices	**1,055,725**	1,080,908
Non-U.S. offices		
Noninterest-bearing	**18,921**	19,078
Interest-bearing		
Demand	**154,773**	217,011
Savings	**2,157**	2,673
Time (included **$1,600** and $1,306 at fair value)[c]	**48,139**	43,757
Total interest-bearing deposits	**205,069**	263,441
Total deposits in non-U.S. offices	**223,990**	282,519
Total deposits	**$1,279,715**	$1,363,427

(a) Includes Negotiable Order of Withdrawal ("NOW") accounts, and certain trust accounts.
(b) Includes Money Market Deposit Accounts ("MMDAs").
(c) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4.

At December 31, 2015 and 2014, time deposits in denominations of $250,000 or more were as follows.

December 31, (in millions)	**2015**	2014
U.S. offices	$ 64,519	$ 56,983
Non-U.S. offices	48,091	43,719
Total	$112,610	$ 100,702

At December 31, 2015, the maturities of interest-bearing time deposits were as follows.

December 31, 2015 (in millions)	U.S.	Non-U.S.	**Total**
2016	78,246	47,791	126,037
2017	2,940	145	3,085
2018	2,172	39	2,211
2019	1,564	47	1,611
2020	1,615	117	1,732
After 5 years	6,336	–	6,336
Total	$ 92,873	$ 48,139	$ 141,012

Note 20 – Accounts payable and other liabilities

Accounts payable and other liabilities consist of payables to customers; payables to brokers, dealers and clearing organizations; payables from security purchases that did not settle; income taxes payables; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral.

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	**2015**	2014
Brokerage payables[(a)]	**$ 107,632**	$ 134,467
Accounts payable and other liabilities	**70,006**	72,472
Total	**$ 177,638**	$ 206,939

(a) Includes payables to customers, brokers, dealers and clearing organizations, and payables from security purchases that did not settle.

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated statements of income. The following table is a summary of long-term debt carrying values (including unamortized premiums and discounts, issuance costs, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2015.

By remaining maturity at December 31,		**2015**				2014
(in millions, except rates)		Under 1 year	1-5 years	After 5 years	**Total**	Total
Parent company						
Senior debt:	Fixed rate	**$ 12,014**	**$ 54,200**	**$ 51,544**	**$ 117,758**	$ 108,529
	Variable rate	**15,158**	**23,254**	**5,766**	**44,178**	42,201
	Interest rates[(a)]	**0.16-7.00%**	**0.24-7.25%**	**0.31-6.40%**	**0.16-7.25%**	0.18-7.25%
Subordinated debt:	Fixed rate	**$ –**	**$ 2,292**	**$ 13,958**	**$ 16,250**	$ 16,645
	Variable rate	**–**	**1,038**	**9**	**1,047**	3,452
	Interest rates[(a)]	**–%**	**1.06-8.53%**	**3.38-8.00%**	**1.06-8.53%**	0.48-8.53%
	Subtotal	**$ 27,172**	**$ 80,784**	**$ 71,277**	**$ 179,233**	$ 170,827
Subsidiaries						
Federal Home Loan Banks ("FHLB") advances:	Fixed rate	**$ 5**	**$ 30**	**$ 156**	**$ 191**	$ 2,204
	Variable rate	**9,700**	**56,690**	**5,000**	**71,390**	62,790
	Interest rates[(a)]	**0.37-0.65%**	**0.17-0.72%**	**0.50-0.70%**	**0.17-0.72%**	0.11-2.04%
Senior debt:	Fixed rate	**$ 631**	**$ 1,288**	**$ 3,631**	**$ 5,550**	$ 5,751
	Variable rate	**10,493**	**7,456**	**2,639**	**20,588**	20,082
	Interest rates[(a)]	**0.47-1.00%**	**0.53-4.61%**	**1.30-7.28%**	**0.47-7.28%**	0.26-8.00%
Subordinated debt:	Fixed rate	**$ 1,472**	**$ 3,647**	**$ 1,461**	**$ 6,580**	$ 6,928
	Variable rate	**1,150**	**–**	**–**	**1,150**	2,362
	Interest rates[(a)]	**0.83-5.88%**	**6.00%**	**4.38-8.25%**	**0.83-8.25%**	0.57-8.25%
	Subtotal	**$ 23,451**	**$ 69,111**	**$ 12,887**	**$ 105,449**	$ 100,117
Junior subordinated debt:	Fixed rate	**$ –**	**$ –**	**$ 717**	**$ 717**	$ 2,185
	Variable rate	**–**	**–**	**3,252**	**3,252**	3,250
	Interest rates[(a)]	**–%**	**–%**	**0.83-8.75%**	**0.83-8.75%**	0.73-8.75%
	Subtotal	**$ –**	**$ –**	**$ 3,969**	**$ 3,969**	$ 5,435
Total long-term debt[(b)(c)(d)]		**$ 50,623**	**$ 149,895**	**$ 88,133**	**$ 288,651** [(f)(g)]	$ 276,379
Long-term beneficial interests:						
	Fixed rate	**$ 1,674**	**$ 10,931**	**$ 1,594**	**$ 14,199**	$ 13,949
	Variable rate	**3,393**	**10,642**	**2,323**	**16,358**	21,418
	Interest rates	**0.45-5.16%**	**0.37-5.23%**	**0.00-15.94%**	**0.00-15.94%**	0.05-15.93%
Total long-term beneficial interests[(e)]		**$ 5,067**	**$ 21,573**	**$ 3,917**	**$ 30,557**	$ 35,367

(a) The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2015, for total long-term debt was (0.19)% to 8.88%, versus the contractual range of 0.16% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(b) Included long-term debt of $76.6 billion and $69.2 billion secured by assets totaling $171.6 billion and $156.7 billion at December 31, 2015 and 2014, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

(c) Included $33.1 billion and $30.2 billion of long-term debt accounted for at fair value at December 31, 2015 and 2014, respectively.
(d) Included $5.5 billion and $2.9 billion of outstanding zero-coupon notes at December 31, 2015 and 2014, respectively. The aggregate principal amount of these notes at their respective maturities is $16.2 billion and $7.5 billion, respectively. The aggregate principal amount reflects the contractual principal payment at maturity, which may exceed the contractual principal payment at the Firm's next call date, if applicable.
(e) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included $787 million and $2.2 billion accounted for at fair value at December 31, 2015 and 2014, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $11.3 billion and $17.0 billion at December 31, 2015 and 2014, respectively.
(f) At December 31, 2015, long-term debt in the aggregate of $39.1 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective instruments.
(g) The aggregate carrying values of debt that matures in each of the five years subsequent to 2015 is $50.6 billion in 2016, $49.5 billion in 2017, $39.2 billion in 2018, $30.4 billion in 2019 and $30.7 billion in 2020.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 2.34% and 2.42% as of December 31, 2015 and 2014, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 1.64% and 1.50% as of December 31, 2015 and 2014, respectively.

JPMorgan Chase & Co. has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes. These guarantees rank on parity with the Firm's other unsecured and unsubordinated indebtedness. The amount of such guaranteed long-term debt was $152 million and $352 million at December 31, 2015 and 2014, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price.

Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities
At December 31, 2015, the Firm had outstanding eight wholly owned Delaware statutory business trusts ("issuer trusts") that had issued trust preferred securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling $4.0 billion and $5.4 billion at December 31, 2015 and 2014, respectively, were reflected on the Firm's Consolidated balance sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt." The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated balance sheets at December 31, 2015 and 2014. Beginning in 2014, the debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, began being phased out from inclusion as Tier 1 capital under Basel III. As of December 31, 2015 and 2014, $992 million and $2.7 billion of these debentures qualified as Tier 1 capital, while $3.0 billion and $2.7 billion qualified as Tier 2 capital.

The following is a summary of the outstanding trust preferred securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2015.

December 31, 2015 (in millions)	Amount of trust preferred securities issued by trust[a]	Principal amount of debenture issued to trust[b]	Issue date	Stated maturity of trust preferred securities and debentures	Earliest redemption date	Interest rate of trust preferred securities and debentures	Interest payment/ distribution dates
BANK ONE Capital III	**$ 474**	**$ 717**	**2000**	**2030**	**Any time**	**8.75%**	**Semiannually**
Chase Capital II	**483**	**496**	**1997**	**2027**	**Any time**	**LIBOR + 0.50%**	**Quarterly**
Chase Capital III	**296**	**304**	**1997**	**2027**	**Any time**	**LIBOR + 0.55%**	**Quarterly**
Chase Capital VI	**242**	**248**	**1998**	**2028**	**Any time**	**LIBOR + 0.625%**	**Quarterly**
First Chicago NBD Capital I	**249**	**256**	**1997**	**2027**	**Any time**	**LIBOR + 0.55%**	**Quarterly**
J.P. Morgan Chase Capital XIII	**466**	**477**	**2004**	**2034**	**Any time**	**LIBOR + 0.95%**	**Quarterly**
JPMorgan Chase Capital XXI	**836**	**832**	**2007**	**2037**	**Any time**	**LIBOR + 0.95%**	**Quarterly**
JPMorgan Chase Capital XXIII	**644**	**639**	**2007**	**2047**	**Any time**	**LIBOR + 1.00%**	**Quarterly**
Total	**$ 3,690**	**$ 3,969**					

(a) Represents the amount of trust preferred securities issued to the public by each trust, including unamortized original-issue discount.
(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

On April 2, 2015, the Firm redeemed $1.5 billion, or 100% of the liquidation amount, of the guaranteed capital debt securities ("trust preferred securities") of JPMorgan Chase Capital XXIX trust preferred securities. On May 8, 2013, the Firm redeemed approximately $5.0 billion, or 100% of the liquidation amount, of the following eight series of trust preferred securities: JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX and XXIV, and BANK ONE Capital VI. Other income for the year ended December 31, 2013, reflected a modest loss related to the redemption of trust preferred securities.

Note 22 – Preferred stock

At December 31, 2015 and 2014, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's non-cumulative preferred stock outstanding as of December 31, 2015 and 2014.

	Shares at December 31,[a]		Carrying value (in millions) at December 31,		Issue date	Contractual rate in effect at December 31, 2015	Earliest redemption date	Date at which dividend rate becomes floating	Floating annual rate of three-month LIBOR plus:
	2015	2014	**2015**	2014					
Fixed-rate:									
Series O	**125,750**	125,750	**$ 1,258**	$ 1,258	8/27/2012	**5.500%**	9/1/2017	NA	NA
Series P	**90,000**	90,000	**900**	900	2/5/2013	**5.450**	3/1/2018	NA	NA
Series T	**92,500**	92,500	**925**	925	1/30/2014	**6.700**	3/1/2019	NA	NA
Series W	**88,000**	88,000	**880**	880	6/23/2014	**6.300**	9/1/2019	NA	NA
Series Y	**143,000**	–	**1,430**	–	2/12/2015	**6.125**	3/1/2020	NA	NA
Series AA	**142,500**	–	**1,425**	–	6/4/2015	**6.100**	9/1/2020	NA	NA
Series BB	**115,000**	–	**1,150**	–	7/29/2015	**6.150**	9/1/2020	NA	NA
Fixed-to-floating-rate:									
Series I	**600,000**	600,000	**6,000**	6,000	4/23/2008	**7.900%**	4/30/2018	4/30/2018	LIBOR + 3.47 %
Series Q	**150,000**	150,000	**1,500**	1,500	4/23/2013	**5.150**	5/1/2023	5/1/2023	LIBOR + 3.25
Series R	**150,000**	150,000	**1,500**	1,500	7/29/2013	**6.000**	8/1/2023	8/1/2023	LIBOR + 3.30
Series S	**200,000**	200,000	**2,000**	2,000	1/22/2014	**6.750**	2/1/2024	2/1/2024	LIBOR + 3.78
Series U	**100,000**	100,000	**1,000**	1,000	3/10/2014	**6.125**	4/30/2024	4/30/2024	LIBOR + 3.33
Series V	**250,000**	250,000	**2,500**	2,500	6/9/2014	**5.000**	7/1/2019	7/1/2019	LIBOR + 3.32
Series X	**160,000**	160,000	**1,600**	1,600	9/23/2014	**6.100**	10/1/2024	10/1/2024	LIBOR + 3.33
Series Z	**200,000**	–	**2,000**	–	4/21/2015	**5.300**	5/1/2020	5/1/2020	LIBOR + 3.80
Total preferred stock	**2,606,750**	2,006,250	**$ 26,068**	$ 20,063					

(a) Represented by depositary shares.

Each series of preferred stock has a liquidation value and redemption price per share of $10,000, plus any accrued but unpaid dividends.

Dividends on fixed-rate preferred stock are payable quarterly. Dividends on fixed-to-floating-rate preferred stock are payable semiannually while at a fixed rate, and will become payable quarterly after converting to a floating rate.

On September 1, 2013, the Firm redeemed all of the outstanding shares of its 8.625% Non-Cumulative Preferred Stock, Series J at their stated redemption value.

Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. All outstanding preferred stock series except Series I may also be redeemed following a "capital treatment event", as described in the terms of each series. Any redemption of the Firm's preferred stock is subject to non-objection from the Board of Governors of the Federal Reserve System (the "Federal Reserve").

Note 23 – Common stock

At December 31, 2015 and 2014, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of $1 per share.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2015, 2014 and 2013 were as follows.

Year ended December 31, (in millions)	**2015**	2014	2013
Total issued – balance at January 1 and December 31	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(390.1)**	(348.8)	(300.9)
Purchase of treasury stock	**(89.8)**	(82.3)	(96.1)
Issued from treasury:			
Employee benefits and compensation plans	**32.8**	39.8	47.1
Issuance of shares for warrant exercise	**4.7**	–	–
Employee stock purchase plans	**1.0**	1.2	1.1
Total issued from treasury	**38.5**	41.0	48.2
Total treasury – balance at December 31	**(441.4)**	(390.1)	(348.8)
Outstanding at December 31	**3,663.5**	3,714.8	3,756.1

At December 31, 2015, 2014, and 2013, respectively, the Firm had 47.4 million, 59.8 million and 59.8 million warrants outstanding to purchase shares of common stock (the "Warrants"). The Warrants are currently traded on the New York Stock Exchange, and they are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. The original warrant exercise price was $42.42 per share. The number of shares issuable upon the exercise of each warrant and the warrant exercise price is subject to adjustment upon the occurrence of certain events, including, but not limited to, the extent to which regular quarterly cash dividends exceed $0.38 per share. As a result of the Firm's quarterly common stock dividend exceeding $0.38 per share commencing with the second quarter of 2014, the exercise price of the Warrants has been adjusted each subsequent quarter, and was $42.284 as of December 31, 2015. There has been no change in the number of shares issuable upon exercise.

On March 11, 2015, in conjunction with the Federal Reserve's release of its 2015 Comprehensive Capital Analysis and Review ("CCAR") results, the Firm's Board of Directors has authorized a $6.4 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2015, $2.7 billion (on a settlement-date basis) of authorized repurchase capacity remained under the program. This authorization includes shares repurchased to offset issuances under the Firm's equity-based compensation plans.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2015, 2014 and 2013, on a settlement-date basis. There were no warrants repurchased during the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
Total number of shares of common stock repurchased	**89.8**	82.3	96.1
Aggregate purchase price of common stock repurchases	**$ 5,616**	$ 4,760	$ 4,789

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity — for example, during internal trading "blackout periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. For additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on page 20.

As of December 31, 2015, approximately 195 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the Warrants, as discussed above.

Note 24 – Earnings per share

Earnings per share ("EPS") is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. Options issued under employee benefit plans that have an antidilutive effect are excluded from the computation of diluted EPS.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions, except per share amounts)	**2015**	2014	2013
Basic earnings per share			
Net income	**$ 24,442**	$ 21,745	$ 17,886
Less: Preferred stock dividends	**1,515**	1,125	805
Net income applicable to common equity	**22,927**	20,620	17,081
Less: Dividends and undistributed earnings allocated to participating securities	**521**	543	524
Net income applicable to common stockholders	**$ 22,406**	$ 20,077	$ 16,557
Total weighted-average basic shares outstanding	**3,700.4**	3,763.5	3,782.4
Net income per share	**$ 6.05**	$ 5.33	$ 4.38
Diluted earnings per share			
Net income applicable to common stockholders	**$ 22,406**	$ 20,077	$ 16,557
Total weighted-average basic shares outstanding	**3,700.4**	3,763.5	3,782.4
Add: Employee stock options, SARs and warrants[(a)]	**32.4**	34.0	32.5
Total weighted-average diluted shares outstanding[(b)]	**3,732.8**	3,797.5	3,814.9
Net income per share	**$ 6.00**	$ 5.29	$ 4.34

(a) Excluded from the computation of diluted EPS (due to the antidilutive effect) were certain options issued under employee benefit plans. The aggregate number of shares issuable upon the exercise of such options was not material for the year ended December 31, 2015, and 1 million and 6 million for the years ended December 31, 2014 and 2013, respectively.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

Year ended December 31, (in millions)	Unrealized gains/(losses) on investment securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2012	$ 6,868	$ (95)	$ 120	$ (2,791)	$ 4,102
Net change	(4,070)	(41)	(259)	1,467	(2,903)
Balance at December 31, 2013	$ 2,798	$ (136)	$ (139)	$ (1,324)	$ 1,199
Net change	1,975	(11)	44	(1,018)	990
Balance at December 31, 2014	$ 4,773	$ (147)	$ (95)	$ (2,342)	$ 2,189
Net change	**(2,144)**	**(15)**	**51**	**111**	**(1,997)**
Balance at December 31, 2015	**$ 2,629**	**$ (162)**	**$ (44)**	**$ (2,231)**	**$ 192**

(a) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS including, as of the date of transfer during 2014, $9 million of net unrealized losses related to AFS securities that were transferred to HTM. Subsequent to transfer, includes any net unamortized unrealized gains and losses related to the transferred securities.

The following table presents the before- and after-tax changes in the components of other comprehensive income/(loss).

	2015			2014			2013		
Year ended December 31, (in millions)	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:									
Net unrealized gains/(losses) arising during the period	**$(3,315)**	**$ 1,297**	**$(2,018)**	$ 3,193	$(1,170)	$ 2,023	$(5,987)	$ 2,323	$(3,664)
Reclassification adjustment for realized (gains)/losses included in net income[a]	**(202)**	**76**	**(126)**	(77)	29	(48)	(667)	261	(406)
Net change	**(3,517)**	**1,373**	**(2,144)**	3,116	(1,141)	1,975	(6,654)	2,584	(4,070)
Translation adjustments:									
Translation[b]	**(1,876)**	**682**	**(1,194)**	(1,638)	588	(1,050)	(807)	295	(512)
Hedges[b]	**1,885**	**(706)**	**1,179**	1,698	(659)	1,039	773	(302)	471
Net change	**9**	**(24)**	**(15)**	60	(71)	(11)	(34)	(7)	(41)
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**(97)**	**35**	**(62)**	98	(39)	59	(525)	206	(319)
Reclassification adjustment for realized (gains)/losses included in net income[c][e]	**180**	**(67)**	**113**	(24)	9	(15)	101	(41)	60
Net change	**83**	**(32)**	**51**	74	(30)	44	(424)	165	(259)
Defined benefit pension and OPEB plans:									
Prior service credits arising during the period	**–**	**–**	**–**	(53)	21	(32)	–	–	–
Net gains/(losses) arising during the period	**29**	**(47)**	**(18)**	(1,697)	688	(1,009)	2,055	(750)	1,305
Reclassification adjustments included in net income[d]:									
Amortization of net loss	**282**	**(106)**	**176**	72	(29)	43	321	(124)	197
Prior service costs/(credits)	**(36)**	**14**	**(22)**	(44)	17	(27)	(43)	17	(26)
Foreign exchange and other	**33**	**(58)**	**(25)**	39	(32)	7	(14)	5	(9)
Net change	**308**	**(197)**	**111**	(1,683)	665	(1,018)	2,319	(852)	1,467
Total other comprehensive income/(loss)	**$(3,117)**	**$ 1,120**	**$(1,997)**	$ 1,567	$ (577)	$ 990	$(4,793)	$ 1,890	$(2,903)

(a) The pretax amount is reported in securities gains in the Consolidated statements of income.
(b) Reclassifications of pretax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. The amounts were not material for the periods presented.
(c) The pretax amounts are predominantly recorded in net interest income in the Consolidated statements of income.
(d) The pretax amount is reported in compensation expense in the Consolidated statements of income.
(e) In 2015, the Firm reclassified approximately $150 million of net losses from AOCI to other income because the Firm determined that it is probable that the forecasted interest payment cash flows will not occur. For additional information, see Note 6.

Note 26 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

Effective tax rate and expense

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2015, 2014 and 2013, is presented in the following table.

Effective tax rate

Year ended December 31,	**2015**	2014	2013
Statutory U.S. federal tax rate	**35.0%**	35.0%	35.0%
Increase/(decrease) in tax rate resulting from:			
U.S. state and local income taxes, net of U.S. federal income tax benefit	**1.5**	2.7	2.2
Tax-exempt income	**(3.3)**	(3.1)	(3.0)
Non-U.S. subsidiary earnings[(a)]	**(3.9)**	(2.0)	(4.8)
Business tax credits	**(3.7)**	(3.3)	(3.4)
Nondeductible legal expense	**0.8**	2.3	7.8
Tax audit resolutions	**(5.7)**	(1.4)	(0.6)
Other, net	**(0.3)**	(1.0)	(0.3)
Effective tax rate	**20.4%**	29.2%	32.9%

(a) Predominantly includes earnings of U.K. subsidiaries that are deemed to be reinvested indefinitely.

The components of income tax expense/(benefit) included in the Consolidated statements of income were as follows for each of the years ended December 31, 2015, 2014, and 2013.

Income tax expense/(benefit)

Year ended December 31, (in millions)	**2015**	2014	2013
Current income tax expense/(benefit)			
U.S. federal	**$ 3,160**	$ 2,382	$ (654)
Non-U.S.	**1,220**	1,353	1,308
U.S. state and local	**547**	857	(4)
Total current income tax expense/ (benefit)	**4,927**	4,592	650
Deferred income tax expense/(benefit)			
U.S. federal	**1,213**	3,890	7,216
Non-U.S.	**(95)**	71	10
U.S. state and local	**215**	401	913
Total deferred income tax expense/(benefit)	**1,333**	4,362	8,139
Total income tax expense	**$ 6,260**	$ 8,954	$ 8,789

Total income tax expense includes $2.4 billion, $451 million and $531 million of tax benefits recorded in 2015, 2014, and 2013, respectively, as a result of tax audit resolutions. In 2013, the relationship between current and deferred income tax expense was largely driven by the reversal of significant deferred tax assets as well as prior-year tax adjustments and audit resolutions.

Tax effect of items recorded in stockholders' equity

The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The tax effect of all items recorded directly to stockholders' equity resulted in a increase of $1.5 billion in 2015, a decrease of $140 million in 2014, and an increase of $2.1 billion in 2013.

Results from Non-U.S. earnings

The following table presents the U.S. and non-U.S. components of income before income tax expense for the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
U.S.	**$ 23,191**	$ 23,422	$ 17,990
Non-U.S.[(a)]	**7,511**	7,277	8,685
Income before income tax expense	**$ 30,702**	$ 30,699	$ 26,675

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Based on JPMorgan Chase's ongoing review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill

these requirements and needs, the Firm has determined that the undistributed earnings of certain of its subsidiaries would be indefinitely reinvested to fund current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. For 2015, pretax earnings of $3.5 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2015, the cumulative amount of undistributed pretax earnings in these subsidiaries were $34.6 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be $8.2 billion at December 31, 2015.

These undistributed earnings are related to subsidiaries located predominantly in the U.K. where the 2015 statutory tax rate was 20.25%.

Affordable housing tax credits

The Firm recognized $1.6 billion, $1.6 billion and $1.5 billion of tax credits and other tax benefits associated with investments in affordable housing projects within income tax expense for the years 2015, 2014 and 2013, respectively. The amount of amortization of such investments reported in income tax expense under the current period presentation during these years was $1.1 billion, $1.1 billion and $989 million, respectively. The carrying value of these investments, which are reported in other assets on the Firm's Consolidated balance sheets, was $7.7 billion and $7.3 billion at December 31, 2015 and 2014, respectively. The amount of commitments related to these investments, which are reported in accounts payable and other liabilities on the Firm's Consolidated balance sheets, was $2.0 billion and $1.8 billion at December 31, 2015 and 2014, respectively.

Deferred taxes

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2015 and 2014.

December 31, (in millions)		**2015**		2014
Deferred tax assets				
Allowance for loan losses	**$**	**5,343**	$	5,756
Employee benefits		**2,972**		3,378
Accrued expenses and other		**7,299**		8,637
Non-U.S. operations		**5,365**		5,106
Tax attribute carryforwards		**2,602**		570
Gross deferred tax assets		**23,581**		23,447
Valuation allowance		**(735)**		(820)
Deferred tax assets, net of valuation allowance	**$**	**22,846**	$	22,627
Deferred tax liabilities				
Depreciation and amortization	**$**	**3,167**	$	3,073
Mortgage servicing rights, net of hedges		**4,968**		5,533
Leasing transactions		**3,042**		2,495
Non-U.S. operations		**4,285**		4,444
Other, net		**4,419**		5,392
Gross deferred tax liabilities		**19,881**		20,937
Net deferred tax assets	**$**	**2,965**	$	1,690

JPMorgan Chase has recorded deferred tax assets of $2.6 billion at December 31, 2015, in connection with U.S. federal, state and local, and non-U.S. net operating loss ("NOL") carryforwards and foreign tax credit carryforwards. At December 31, 2015, total U.S. federal NOL carryforwards were approximately $5.2 billion, state and local NOL carryforwards were $509 million, and non-U.S. NOL carryforwards were $288 million. If not utilized, the U.S. federal NOLs will expire between 2025 and 2034 and the state and local and non-U.S. NOL carryforwards will expire between 2016 and 2017. Non-U.S. tax credit carryforwards were $704 million and will expire by 2023.

The valuation allowance at December 31, 2015, was due to losses associated with non-U.S. subsidiaries.

Unrecognized tax benefits

At December 31, 2015, 2014 and 2013, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $3.5 billion, $4.9 billion and $5.5 billion, respectively, of which $2.1 billion, $3.5 billion and $3.7 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated statements of income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service as summarized in the Tax examination status table below. As JPMorgan Chase is presently under audit by a number of taxing authorities, it is reasonably possible that over the next 12 months the resolution of these examinations may increase or decrease the gross balance of unrecognized tax benefits by as much as approximately $800 million. Upon settlement of an audit, the change in the unrecognized tax benefit balance would result from payment or income statement recognition.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2015, 2014 and 2013.

Year ended December 31, (in millions)	**2015**	2014	2013
Balance at January 1,	**$ 4,911**	$ 5,535	$ 7,158
Increases based on tax positions related to the current period	**408**	810	542
Increases based on tax positions related to prior periods	**1,028**	477	88
Decreases based on tax positions related to prior periods	**(2,646)**	(1,902)	(2,200)
Decreases related to cash settlements with taxing authorities	**(204)**	(9)	(53)
Balance at December 31,	**$ 3,497**	$ 4,911	$ 5,535

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $(156) million, $17 million and $(184) million in 2015, 2014 and 2013, respectively.

At December 31, 2015 and 2014, in addition to the liability for unrecognized tax benefits, the Firm had accrued $578 million and $1.2 billion, respectively, for income tax-related interest and penalties.

Tax examination status

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many states throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2015.

December 31, 2015	Periods under examination	Status
JPMorgan Chase – U.S.	2003 – 2005	Field examination completed; at Appellate level
JPMorgan Chase – U.S.	2006 – 2010	Field examination completed, JPMorgan Chase filed amended returns and intends to appeal
JPMorgan Chase – U.S.	2011 – 2013	Field Examination
JPMorgan Chase – New York State	2008 – 2011	Field Examination
JPMorgan Chase – California	2011 – 2012	Field Examination
JPMorgan Chase – U.K.	2006 – 2012	Field examination of certain select entities

Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A.") is subject to examination and regulation by the Office of the Comptroller of the Currency. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC.

The Federal Reserve requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average required amount of reserve balances deposited by the Firm's bank subsidiaries with various Federal Reserve Banks was approximately $14.4 billion and $10.6 billion in 2015 and 2014, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase & Co. ("Parent Company") and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans provided by any banking subsidiary to the Parent Company or to any particular affiliate, together with certain other transactions with such affiliate, (collectively referred to as "covered transactions"), are generally limited to 10% of the banking subsidiary's total capital, as determined by the risk-based capital guidelines; the aggregate amount of covered transactions between any banking subsidiary and all of its affiliates is limited to 20% of the banking subsidiary's total capital.

The principal sources of JPMorgan Chase's income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the Office of the Comptroller of the Currency ("OCC") and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2016, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, approximately $25 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2016 will be supplemented by the banking subsidiaries' earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2015 and 2014, cash in the amount of $12.6 billion and $16.8 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. Also, as of December 31, 2015 and 2014, the Firm had receivables within other assets of $16.2 billion and $14.9 billion, respectively, consisting of cash deposited with clearing organizations for the benefit of customers. Securities with a fair value of $20.0 billion and $10.1 billion, respectively, were also restricted in relation to customer activity. In addition, as of December 31, 2015 and 2014, the Firm had other restricted cash of $3.7 billion and $3.3 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes.

Note 28 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

Basel III capital rules, for large and internationally active U.S. bank holding companies and banks, including the Firm and its insured depository institution ("IDI") subsidiaries, revised, among other things, the definition of capital and introduced a new common equity tier 1 capital ("CET1 capital") requirement. Basel III presents two comprehensive methodologies for calculating risk-weighted assets ("RWA"), a general (Standardized) approach, which replaced Basel I RWA effective January 1, 2015 ("Basel III Standardized") and an advanced approach, which replaced Basel II RWA ("Basel III Advanced"); and sets out minimum capital ratios and overall capital adequacy standards. Certain of the requirements of Basel III are subject to phase-in periods that began on January 1, 2014 and continue through the end of 2018 ("transitional period").

There are three categories of risk-based capital under the Basel III Transitional rules: CET1 capital, as well as Tier 1 capital and Tier 2 capital. CET1 capital predominantly includes common stockholders' equity (including capital for AOCI related to debt and equity securities classified as AFS as well as for defined benefit pension and OPEB plans), less certain deductions for goodwill, MSRs and deferred tax assets that arise from NOL and tax credit carryforwards. Tier 1 capital predominantly consists of CET1 capital as well as perpetual preferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses. Total capital is Tier 1 capital plus Tier 2 capital.

The following tables present the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant national bank subsidiaries under both Basel III Standardized Transitional and Basel III Advanced Transitional at December 31, 2015 and 2014.

	JPMorgan Chase & Co.[f]			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2015**	Dec 31, 2014	**Dec 31, 2015**	Dec 31, 2014
Regulatory capital				
CET1 capital	**$ 175,398**	$ 164,426	**$ 175,398**	$ 164,426
Tier 1 capital[a]	**200,482**	186,263	**200,482**	186,263
Total capital	**234,413**	221,117	**224,616**	210,576
Assets				
Risk-weighted[b]	**1,465,262**	1,472,602	**1,485,336**	1,608,240
Adjusted average[c]	**2,361,177**	2,464,915	**2,361,177**	2,464,915
Capital ratios[d]				
CET1	**12.0%**	11.2%	**11.8%**	10.2%
Tier 1[a]	**13.7**	12.6	**13.5**	11.6
Total	**16.0**	15.0	**15.1**	13.1
Tier 1 leverage[e]	**8.5**	7.6	**8.5**	7.6

	JPMorgan Chase Bank, N.A.[f]			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2015**	Dec 31, 2014	**Dec 31, 2015**	Dec 31, 2014
Regulatory capital				
CET1 capital	**$ 168,857**	$ 156,567	**$ 168,857**	$ 156,567
Tier 1 capital[a]	**169,222**	156,891	**169,222**	156,891
Total capital	**183,262**	173,322	**176,423**	166,326
Assets				
Risk-weighted[b]	**1,264,056**	1,230,358	**1,249,607**	1,330,175
Adjusted average[c]	**1,913,448**	1,968,131	**1,913,448**	1,968,131
Capital ratios[d]				
CET1	**13.4%**	12.7%	**13.5%**	11.8%
Tier 1[a]	**13.4**	12.8	**13.5**	11.8
Total	**14.5**	14.1	**14.1**	12.5
Tier 1 leverage[e]	**8.8**	8.0	**8.8**	8.0

	Chase Bank USA, N.A.[f]			
	Basel III Standardized Transitional		Basel III Advanced Transitional	
(in millions, except ratios)	**Dec 31, 2015**	Dec 31, 2014	**Dec 31, 2015**	Dec 31, 2014
Regulatory capital				
CET1 capital	$ 15,419	$ 14,556	$ 15,419	$ 14,556
Tier 1 capital[a]	15,419	14,556	15,419	14,556
Total capital	21,418	20,517	20,069	19,206
Assets				
Risk-weighted[b]	105,807	103,468	181,775	157,565
Adjusted average[c]	134,152	128,111	134,152	128,111
Capital ratios[d]				
CET1	14.6%	14.1%	8.5%	9.2%
Tier 1[a]	14.6	14.1	8.5	9.2
Total	20.2	19.8	11.0	12.2
Tier 1 leverage[e]	11.5	11.4	11.5	11.4

(a) At December 31, 2015, trust preferred securities included in Basel III Tier 1 capital were $992 million and $420 million for JPMorgan Chase and JPMorgan Chase Bank, N.A., respectively. At December 31, 2015 Chase Bank USA, N.A. had no trust preferred securities.

(b) Effective January 1, 2015, the Basel III Standardized RWA is calculated under the Basel III definition of the Standardized approach. Prior periods were based on Basel I (inclusive of Basel 2.5).

(c) Adjusted average assets, for purposes of calculating the Tier 1 leverage ratio, includes total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for goodwill and other intangible assets, defined benefit pension plan assets, and deferred tax assets related to net operating loss carryforwards.

(d) For each of the risk-based capital ratios, the capital adequacy of the Firm and its national bank subsidiaries are evaluated against the Basel III approach, Standardized or Advanced, resulting in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

(e) The Tier 1 leverage ratio is not a risk-based measure of capital. This ratio is calculated by dividing Tier 1 capital by adjusted average assets.

(f) Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both non-taxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from non-taxable business combinations of $105 million and $130 million at December 31, 2015, and 2014, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $3.0 billion and $2.7 billion at December 31, 2015, and 2014, respectively.

Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of CET1, Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Bank subsidiaries also are subject to these capital requirements by their respective primary regulators. The following table presents the minimum ratios to which the Firm and its national bank subsidiaries are subject as of December 31, 2015.

	Minimum capital ratios[a]	Well-capitalized ratios	
		BHC[b]	IDI[c]
Capital ratios			
CET1	4.5%	–%	6.5%
Tier 1	6.0	6.0	8.0
Total	8.0	10.0	10.0
Tier 1 leverage	4.0	–	5.0

(a) As defined by the regulations issued by the Federal Reserve, OCC and FDIC and to which the Firm and its national bank subsidiaries are subject.
(b) Represents requirements for bank holding companies pursuant to regulations issued by the Federal Reserve.
(c) Represents requirements for bank subsidiaries pursuant to regulations issued under the FDIC Improvement Act.

As of December 31, 2015 and 2014, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

Note 29 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for probable credit losses inherent in wholesale and certain consumer lending-commitments, an allowance for credit losses on lending-related commitments is maintained. See Note 15 for further information regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2015 and 2014. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. In addition, the Firm typically closes credit card lines when the borrower is 60 days or more past due. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower.

Off-balance sheet lending-related financial instruments, guarantees and other commitments

By remaining maturity at December 31, (in millions)	Contractual amount 2015: Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Contractual amount 2014: Total	Carrying value[i] 2015	Carrying value[i] 2014
Lending-related								
Consumer, excluding credit card:								
Home equity – senior lien	**$ 1,546**	**$ 3,817**	**$ 726**	**$ 4,743**	**$ 10,832**	$ 11,807	**$ –**	$ –
Home equity – junior lien	**2,375**	**4,354**	**657**	**4,538**	**11,924**	14,859	**–**	–
Prime mortgage[a]	**12,992**	**–**	**–**	**–**	**12,992**	8,579	**–**	–
Subprime mortgage	**–**	**–**	**–**	**–**	**–**	–	**–**	–
Auto	**8,907**	**1,160**	**80**	**90**	**10,237**	10,462	**2**	2
Business banking	**11,085**	**699**	**92**	**475**	**12,351**	11,894	**12**	11
Student and other	**4**	**3**	**–**	**135**	**142**	552	**–**	–
Total consumer, excluding credit card	**36,909**	**10,033**	**1,555**	**9,981**	**58,478**	58,153	**14**	13
Credit card	**515,518**	**–**	**–**	**–**	**515,518**	525,963	**–**	–
Total consumer[b]	**552,427**	**10,033**	**1,555**	**9,981**	**573,996**	584,116	**14**	13
Wholesale:								
Other unfunded commitments to extend credit[c][d][e]	**85,861**	**89,925**	**140,640**	**6,899**	**323,325**	318,278	**649**	491
Standby letters of credit and other financial guarantees[c][d][e]	**16,083**	**14,287**	**5,819**	**2,944**	**39,133**	44,272	**548**	671
Other letters of credit[c]	**3,570**	**304**	**67**	**–**	**3,941**	4,331	**2**	1
Total wholesale[f][g]	**105,514**	**104,516**	**146,526**	**9,843**	**366,399**	366,881	**1,199**	1,163
Total lending-related	**$ 657,941**	**$ 114,549**	**$ 148,081**	**$ 19,824**	**$ 940,395**	$ 950,997	**$ 1,213**	$ 1,176
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[h]	**$ 183,329**	**$ –**	**$ –**	**$ –**	**$ 183,329**	$ 171,059	**$ –**	$ –
Derivatives qualifying as guarantees	**3,194**	**285**	**11,160**	**39,145**	**53,784**	53,589	**222**	80
Unsettled reverse repurchase and securities borrowing agreements	**42,482**	**–**	**–**	**–**	**42,482**	40,993	**–**	–
Unsettled repurchase and securities lending agreements	**21,798**	–	–	–	**21,798**	42,578	**–**	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	**NA**	**NA**	**NA**	**NA**	**NA**	NA	**148**	275
Loans sold with recourse	**NA**	**NA**	**NA**	**NA**	**4,274**	6,063	**82**	102
Other guarantees and commitments[i]	**369**	**2,603**	**1,075**	**1,533**	**5,580**	5,720	**(94)**	(121)

(a) Includes certain commitments to purchase loans from correspondents.
(b) Predominantly all consumer lending-related commitments are in the U.S.
(c) At December 31, 2015 and 2014, reflects the contractual amount net of risk participations totaling $385 million and $243 million, respectively, for other unfunded commitments to extend credit; $11.2 billion and $13.0 billion, respectively, for standby letters of credit and other financial guarantees; and $341 million and $469 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(d) At December 31, 2015 and 2014, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other nonprofit entities of $12.3 billion and $14.8 billion, respectively, within other unfunded commitments to extend credit; and $9.6 billion and $13.3 billion, respectively, within standby letters of credit and other financial guarantees. Other unfunded commitments to extend credit also include liquidity facilities to nonconsolidated municipal bond VIEs; see Note 16.
(e) Effective in 2015, commitments to issue standby letters of credit, including those that could be issued under multipurpose facilities, are presented as other unfunded commitments to extend credit. Previously, such commitments were presented as standby letters of credit and other financial guarantees. At December 31, 2014, these commitments were $45.6 billion. Prior period amounts have been revised to conform with current period presentation.
(f) At December 31, 2015 and 2014, the U.S. portion of the contractual amount of total wholesale lending-related commitments was 77% and 73%, respectively.
(g) Effective January 1, 2015, the Firm no longer includes within its disclosure of wholesale lending-related commitments the unused amount of advised uncommitted lines of credit as it is within the Firm's discretion whether or not to make a loan under these lines, and the Firm's approval is generally required prior to funding. Prior period amounts have been revised to conform with the current period presentation.
(h) At December 31, 2015 and 2014, collateral held by the Firm in support of securities lending indemnification agreements was $190.6 billion and $177.1 billion, respectively. Securities lending collateral consist of primarily cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development ("OECD") and U.S. government agencies.
(i) At December 31, 2015 and 2014, included unfunded commitments of $50 million and $147 million, respectively, to third-party private equity funds; and $871 million and $961 million, respectively, to other equity investments. These commitments included $73 million and $150 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3. In addition, at December 31, 2015 and 2014, included letters of credit hedged by derivative transactions and managed on a market risk basis of $4.6 billion and $4.5 billion, respectively.
(j) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

Other unfunded commitments to extend credit
Other unfunded commitments to extend credit generally consist of commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors, as well as committed liquidity facilities to clearing organizations. The Firm also issues commitments under multipurpose facilities which could be drawn upon in several forms, including the issuance of a standby letter of credit.

Also included in other unfunded commitments to extend credit are commitments to noninvestment-grade counterparties in connection with leveraged finance activities, which were $32.1 billion and $23.4 billion at December 31, 2015 and 2014, respectively. For further information, see Note 3 and Note 4.

The Firm acts as a settlement and custody bank in the U.S. tri-party repurchase transaction market. In its role as settlement and custody bank, the Firm is exposed to the intra-day credit risk of its cash borrower clients, usually broker-dealers. This exposure arises under secured clearance advance facilities that the Firm extends to its clients (i.e. cash borrowers); these facilities contractually limit the Firm's intra-day credit risk to the facility amount and must be repaid by the end of the day. As of December 31, 2015 and 2014, the secured clearance advance facility maximum outstanding commitment amount was $2.9 billion and $12.6 billion, respectively.

Guarantees
U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and financial guarantees, securities lending indemnifications, certain indemnification agreements included within third-party contractual arrangements and certain derivative contracts.

As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2015 and 2014, excluding the allowance for credit losses on lending-related commitments, are discussed below.

Standby letters of credit and other financial guarantees
Standby letters of credit ("SBLC") and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were $550 million and $672 million at December 31, 2015 and 2014, respectively, which were classified in accounts payable and other liabilities on the Consolidated balance sheets; these carrying values included $123 million and $118 million, respectively, for the allowance for lending-related commitments, and $427 million and $554 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers, as of December 31, 2015 and 2014.

Standby letters of credit, other financial guarantees and other letters of credit

	2015		2014	
December 31, (in millions)	Standby letters of credit and other financial guarantees[(b)]	Other letters of credit	Standby letters of credit and other financial guarantees[(b)]	Other letters of credit
Investment-grade[(a)]	**$ 31,751**	**$ 3,290**	$ 37,709	$ 3,476
Noninvestment-grade[(a)]	**7,382**	**651**	6,563	855
Total contractual amount	**$ 39,133**	**$ 3,941**	$ 44,272	$ 4,331
Allowance for lending-related commitments	**$ 121**	**$ 2**	$ 117	$ 1
Commitments with collateral	**18,825**	**996**	20,750	1,509

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.
(b) Effective in 2015, commitments to issue standby letters of credit, including those that could be issued under multipurpose facilities, are presented as other unfunded commitments to extend credit. Previously, such commitments were presented as standby letters of credit and other financial guarantees. At December 31, 2014, these commitments were $45.6 billion. Prior period amounts have been revised to conform with current period presentation.

Securities lending indemnifications
Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

Derivatives qualifying as guarantees
In addition to the contracts described above, the Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less. Derivatives deemed to be guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivatives deemed to be guarantees are recorded on the Consolidated balance sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was $53.8 billion and $53.6 billion at December 31, 2015 and 2014, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was $28.4 billion and $27.5 billion at December 31, 2015 and 2014, respectively, and the maximum exposure to loss was $3.0 billion and $2.9 billion at December 31, 2015 and 2014, respectively. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value of derivatives that the Firm deems to be guarantees were derivative payables of $236 million and $102 million and derivative receivables of $14 million and $22 million at December 31, 2015 and 2014, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6.

Unsettled reverse repurchase and securities borrowing agreements, and unsettled repurchase and securities lending agreements
In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements, which are secured financing agreements. Such agreements settle at a future date. At settlement, these commitments result in the Firm advancing cash to and receiving securities collateral from the counterparty. The Firm also enters into repurchase agreements and securities lending agreements. At settlement, these commitments result in the Firm receiving cash from and providing securities collateral to the counterparty. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated balance sheets until settlement date. These agreements predominantly consist of agreements with regular-way settlement periods. For a further discussion of securities purchased under resale agreements and securities borrowed, and securities sold under repurchase agreements and securities loaned, see Note 13.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability
In connection with the Firm's mortgage loan sale and securitization activities with U.S. GSEs, as described in Note 16, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm has been, and may be, required to repurchase loans and/or indemnify U.S. GSEs (e.g., with "make-whole" payments to reimburse U.S. GSEs for their realized losses on liquidated loans). To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued interest on such loans and certain expense. The carrying values of the repurchase liabilities were $148 million and $275 million at December 31, 2015 and 2014, respectively.

Private label securitizations
The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

On November 15, 2013, the Firm announced that it had reached a $4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trusts issued by J.P.Morgan, Chase, and Bear Stearns ("RMBS Trust Settlement") to resolve all representation and warranty claims, as well as all servicing claims, on all trusts issued by J.P. Morgan, Chase, and Bear Stearns between 2005 and 2008. For further information see Note 31.

In addition, from 2005 to 2008, Washington Mutual made certain loan level representations and warranties in connection with approximately $165 billion of residential mortgage loans that were originally sold or deposited into private-label securitizations by Washington Mutual. Of the $165 billion, approximately $81 billion has been repaid. In addition, approximately $50 billion of the principal amount of such loans has liquidated with an average loss severity of 59%. Accordingly, the remaining outstanding principal balance of these loans as of December 31, 2015, was approximately $33 billion, of which $6 billion was 60 days or more past due. The Firm believes that any repurchase obligations related to these loans remain with the FDIC receivership.

For additional information regarding litigation, see Note 31.

Loans sold with recourse
The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2015 and 2014, the unpaid principal balance of loans sold with recourse totaled $4.3 billion and $6.1 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, was $82 million and $102 million at December 31, 2015 and 2014, respectively.

Other off-balance sheet arrangements

Indemnification agreements – general
In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Card charge-backs
Commerce Solutions, Card's merchant services business, is a global leader in payment processing and merchant acquiring.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is primarily liable for the amount of each processed card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Commerce Solutions will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Commerce Solutions is unable to collect the amount from the merchant, Commerce Solutions will bear the loss for the amount credited or refunded to the cardmember. Commerce Solutions mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Commerce Solutions does not have sufficient collateral from the merchant to provide customer refunds; and (3) Commerce Solutions does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would recognize the loss.

Commerce Solutions incurred aggregate losses of $12 million, $10 million, and $14 million on $949.3 billion, $847.9 billion, and $750.1 billion of aggregate volume processed for the years ended December 31, 2015, 2014 and 2013, respectively. Incurred losses from merchant charge-backs are charged to other expense, with the offset recorded in a valuation allowance against accrued interest and accounts receivable on the Consolidated balance sheets. The carrying value of the valuation allowance was $20 million and $4 million at December 31, 2015 and 2014, respectively, which the Firm believes, based on historical experience and the collateral held by Commerce Solutions of $136 million and $174 million at December 31, 2015 and 2014, respectively, is representative of the payment or performance risk to the Firm related to charge-backs.

Clearing Services – Client Credit Risk
The Firm provides clearing services for clients by entering into securities purchases and sales and derivative transactions, with CCPs, including ETDs such as futures and options, as well as OTC-cleared derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin. Variation margin is posted on a daily basis based on the value of clients' derivative contracts. Initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As clearing member, the Firm is exposed to the risk of nonperformance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Firm can also cease providing clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of non-performance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as a clearing member.

The Firm reflects its exposure to nonperformance risk of the client through the recognition of margin payables or receivables to clients and CCPs, but does not reflect the clients' underlying securities or derivative contracts on its Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as a clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

For information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements, see Note 6.

Exchange & Clearing House Memberships
The Firm is a member of several securities and derivative exchanges and clearing houses, both in the U.S. and other countries, and it provides clearing services. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may be a full pro-rata share of the residual losses after applying the guarantee fund. Additionally, certain clearing houses require the Firm as a member to pay a pro rata share of losses resulting from the clearing house's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. It is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

Guarantees of subsidiaries
In the normal course of business, JPMorgan Chase & Co. ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated balance sheets or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes. These guarantees are not included in the table on page 291 of this Note. For additional information, see Note 21.

JPMorgan Chase Financial Company LLC ("JPMFC"), a direct, 100%-owned finance subsidiary of the Parent Company, was formed on September 30, 2015, for the purpose of issuing debt and other securities in offerings to investors. Any securities issued by JPMFC will be fully and unconditionally guaranteed by the Parent Company, and these guarantees will rank on a parity with the Firm's unsecured and unsubordinated indebtedness. As of December 31, 2015, no securities had been issued by JPMFC.

Note 30 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2015, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2015.

Year ended December 31, (in millions)	
2016	$ 1,668
2017	1,647
2018	1,447
2019	1,263
2020	1,125
After 2020	4,679
Total minimum payments required	11,829
Less: Sublease rentals under noncancelable subleases	(1,889)
Net minimum payment required	$ 9,940

Total rental expense was as follows.

Year ended December 31, (in millions)	**2015**	2014	2013
Gross rental expense	**$ 2,015**	$ 2,255	$ 2,187
Sublease rental income	**(411)**	(383)	(341)
Net rental expense	**$ 1,604**	$ 1,872	$ 1,846

Pledged assets

The Firm may pledge financial assets that it owns to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, and to collateralize repurchase and other securities financing agreements. Certain of these pledged assets may be sold or repledged by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated balance sheets. At December 31, 2015 and 2014, the Firm had pledged assets of $385.6 billion and $324.5 billion, respectively, at Federal Reserve Banks and FHLBs. In addition, as of December 31, 2015 and 2014, the Firm had pledged $50.7 billion and $60.1 billion, respectively, of financial assets that may not be sold or repledged by the secured parties. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities and long-term debt, see Note 13 and Note 21, respectively. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	**2015**	2014
Securities	**$ 124.3**	$ 118.7
Loans	**298.6**	248.2
Trading assets and other	**144.9**	169.0
Total assets pledged	**$ 567.8**	$ 535.9

Collateral

At December 31, 2015 and 2014, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $748.5 billion and $761.7 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $580.9 billion and $596.8 billion, respectively, were sold or repledged, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales and to collateralize deposits and derivative agreements.

Note 31 – Litigation

Contingencies

As of December 31, 2015, the Firm and its subsidiaries and affiliates are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from $0 to approximately $3.6 billion at December 31, 2015. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Firm believes that an estimate of reasonably possible loss can be made. For certain matters, the Firm does not believe that such an estimate can be made. The Firm's estimate of the aggregate range of reasonably possible losses involves significant judgment, given the number, variety and varying stages of the proceedings (including the fact that many are in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings, particularly proceedings that could result from government investigations. Accordingly, the Firm's estimate will change from time to time, and actual losses may vary significantly.

Set forth below are descriptions of the Firm's material legal proceedings.

Auto Dealer Regulatory Matter. The U.S. Department of Justice ("DOJ") is investigating potential statistical disparities in markups charged to borrowers of different races and ethnicities by automobile dealers on loans originated by those dealers and purchased by the Firm.

CIO Litigation. The Firm has been sued in a consolidated shareholder class action, a consolidated putative class action brought under the Employee Retirement Income Security Act ("ERISA") and seven shareholder derivative actions brought in Delaware state court and in New York federal and state courts relating to 2012 losses in the synthetic credit portfolio managed by the Firm's Chief Investment Office ("CIO"). A settlement of the shareholder class action, under which the Firm will pay $150 million, has been preliminarily approved by the court. The putative ERISA class action has been dismissed, and plaintiffs have filed a notice of appeal. Six of the seven shareholder derivative actions have been dismissed.

Credit Default Swaps Investigations and Litigation. In July 2013, the European Commission (the "EC") filed a Statement of Objections against the Firm (including various subsidiaries) and other industry members in connection with its ongoing investigation into the credit default swaps ("CDS") marketplace. The EC asserted that between 2006 and 2009, a number of investment banks acted collectively through the International Swaps and Derivatives Association ("ISDA") and Markit Group Limited ("Markit") to foreclose exchanges from the potential market for exchange-traded credit derivatives. In December 2015, the EC announced the closure of its investigation as to the Firm and other investment banks.

Separately, the Firm and other defendants have entered separate agreements to settle a consolidated putative class action filed in the United States District Court for the Southern District of New York on behalf of purchasers and sellers of CDS. The complaint in this action had alleged that the defendant investment banks and dealers, including the Firm, as well as Markit and/or ISDA, collectively prevented new entrants into the market for exchange-traded CDS products. These settlements are subject to Court approval.

Custody Assets Investigation. The U.K. Financial Conduct Authority ("FCA") has closed its previously-reported investigation concerning compliance by JPMorgan Chase Bank, N.A., London branch and J.P. Morgan Europe Limited with the FCA's rules regarding the provision of custody services relating to the administration of client assets.

Foreign Exchange Investigations and Litigation. The Firm previously reported settlements with certain government authorities relating to its foreign exchange ("FX") sales and trading activities and controls related to those activities. FX-related investigations and inquiries by other, non-U.S. government authorities, including competition authorities, remain ongoing, and the Firm is cooperating with those matters.

The Firm is also one of a number of foreign exchange dealers defending a class action filed in the United States District Court for the Southern District of New York by U.S.-based plaintiffs, principally alleging violations of federal antitrust laws based on an alleged conspiracy to manipulate foreign exchange rates (the "U.S. class action"). In January 2015, the Firm entered into a settlement agreement in the U.S. class action. Following this settlement, a number of additional putative class actions were filed seeking damages for persons who transacted FX futures and options on futures (the "exchanged-based actions"), consumers who purchased foreign currencies at allegedly inflated rates (the "consumer actions"), and participants or beneficiaries of qualified ERISA plans (the "ERISA actions"). In July 2015, the plaintiffs in the U.S. class action filed an amended complaint, and the Court consolidated the exchange-based

actions into the U.S. class action. The Firm has entered into a revised settlement agreement to resolve the consolidated U.S. class action, including the exchange-based actions, and that agreement is subject to Court approval. The consumer actions and ERISA actions remain pending.

In September 2015, two class actions were filed in Canada against the Firm as well as a number of other FX dealers, principally for alleged violations of the Canadian Competition Act based on an alleged conspiracy to fix the prices of currency purchased in the FX market. The first action was filed in the province of Ontario, and seeks to represent all persons in Canada who transacted any FX instrument. The second action seeks to represent only those persons in Quebec who engaged in FX transactions.

General Motors Litigation. JPMorgan Chase Bank, N.A. participated in, and was the Administrative Agent on behalf of a syndicate of lenders on, a $1.5 billion syndicated Term Loan facility ("Term Loan") for General Motors Corporation ("GM"). In July 2009, in connection with the GM bankruptcy proceedings, the Official Committee of Unsecured Creditors of Motors Liquidation Company ("Creditors Committee") filed a lawsuit against JPMorgan Chase Bank, N.A., in its individual capacity and as Administrative Agent for other lenders on the Term Loan, seeking to hold the underlying lien invalid based on the filing of a UCC-3 termination statement relating to the Term Loan. In March 2013, the Bankruptcy Court granted JPMorgan Chase Bank, N.A.'s motion for summary judgment and dismissed the Creditors Committee's complaint on the grounds that JPMorgan Chase Bank, N.A. did not authorize the filing of the UCC-3 termination statement at issue. The Creditors Committee appealed the Bankruptcy Court's dismissal of its claim to the United States Court of Appeals for the Second Circuit. In January 2015, the Court of Appeals reversed the Bankruptcy Court's dismissal of the Creditors Committee's claim and remanded the case to the Bankruptcy Court with instructions to enter partial summary judgment for the Creditors Committee as to the termination statement. The proceedings in the Bankruptcy Court continue with respect to, among other things, additional defenses asserted by JPMorgan Chase Bank, N.A. and the value of additional collateral on the Term Loan that was unaffected by the filing of the termination statement at issue. In addition, certain Term Loan lenders filed cross-claims against JPMorgan Chase Bank, N.A. in the Bankruptcy Court seeking indemnification and asserting various claims.

Interchange Litigation. A group of merchants and retail associations filed a series of class action complaints alleging that Visa and MasterCard, as well as certain banks, conspired to set the price of credit and debit card interchange fees, enacted respective rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. The parties have entered into an agreement to settle the cases for a cash payment of $6.1 billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of the end of the opt-out period. The agreement also provides for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. In December 2013, the Court issued a decision granting final approval of the settlement. A number of merchants appealed, and oral argument was held in September 2015. Certain merchants and trade associations have also filed a motion with the District Court seeking to set aside the approval of the class settlement on the basis of alleged improper communications between one of MasterCard's former outside counsel and one of plaintiffs' outside counsel. That motion remains pending. Certain merchants that opted out of the class settlement have filed actions against Visa and MasterCard, as well as against the Firm and other banks. Defendants' motion to dismiss those actions was denied in July 2014.

Investment Management Litigation. The Firm is defending two pending cases that are being coordinated for pre-trial purposes, alleging that investment portfolios managed by J.P. Morgan Investment Management ("JPMIM") were inappropriately invested in securities backed by residential real estate collateral. Plaintiffs Assured Guaranty (U.K.) and Ambac Assurance UK Limited claim that JPMIM is liable for total losses of more than $1 billion in market value of these securities. Discovery has been completed. In January 2016, plaintiffs filed a joint partial motion for summary judgment in the coordinated actions.

Lehman Brothers Bankruptcy Proceedings. In May 2010, Lehman Brothers Holdings Inc. ("LBHI") and its Official Committee of Unsecured Creditors (the "Committee") filed a complaint (and later an amended complaint) against JPMorgan Chase Bank, N.A. in the United States Bankruptcy Court for the Southern District of New York that asserted both federal bankruptcy law and state common law claims, and sought, among other relief, to recover $7.9 billion in collateral (after deducting $700 million of returned collateral) that was transferred to JPMorgan Chase Bank, N.A. in the weeks preceding LBHI's bankruptcy. The amended complaint also sought unspecified damages on the grounds that JPMorgan Chase Bank, N.A.'s collateral requests hastened LBHI's bankruptcy. The Bankruptcy Court dismissed the claims in the amended complaint that sought to void the allegedly constructively fraudulent and preferential transfers made to the Firm during September 2008, but did not dismiss the other claims, including claims for duress and fraud. The Firm filed counterclaims against LBHI, including alleging that LBHI fraudulently induced the Firm to make large extensions of credit against inappropriate collateral in connection with the Firm's role as the clearing bank for Lehman Brothers Inc. ("LBI"), LBHI's broker-dealer subsidiary. These extensions of credit left the Firm with more than $25 billion in claims against the estate of LBI, which was repaid principally through collateral posted by LBHI and LBI. In September 2015, the District Court, to which the case had been transferred from the Bankruptcy Court, granted summary judgment in favor

of JPMorgan Chase Bank, N.A. on most of the claims against it that the Bankruptcy Court had not previously dismissed, including the claims for duress and fraud. The District Court also denied LBHI's motion for summary judgment on certain of its claims and for dismissal of the Firm's counterclaims. The claims that remained following the District Court's ruling challenged the propriety of the Firm's post-petition payment, from collateral posted by LBHI, of approximately $1.9 billion of derivatives, repo and securities lending claims.

In the Bankruptcy Court proceedings, LBHI and several of its subsidiaries that had been Chapter 11 debtors had filed a separate complaint and objection to derivatives claims asserted by the Firm alleging that the amount of the derivatives claims had been overstated and challenging certain set-offs taken by JPMorgan Chase entities to recover on the claims. In January 2015, LBHI filed claims objections with respect to guaranty claims asserted by the Firm arising from close-outs of derivatives transactions with LBI and one of its affiliates, and a claim objection with respect to derivatives close-out claims acquired by the Firm in the Washington Mutual transaction.

In January 2016, the parties reached an agreement, approved by the Bankruptcy Court, under which the Firm will pay $1.42 billion to settle all of the claims, counterclaims and claims objections, including all appeal rights, except for the claims specified in the following paragraph. One *pro se* objector is seeking to appeal the settlement.

The settlement did not resolve the following remaining matters: In the Bankruptcy Court proceedings, LBHI and the Committee filed an objection to the claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to clearing advances made to LBI, principally on the grounds that the Firm had not conducted the sale of the securities collateral held for its claims in a commercially reasonable manner. In January 2015, LBHI brought two claims objections relating to securities lending claims and a group of other smaller claims. Discovery with respect to these objections is ongoing.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the DOJ, the U.S. Commodity Futures Trading Commission ("CFTC"), the U.S. Securities and Exchange Commission ("SEC") and various state attorneys general, as well as the EC, the FCA, the Canadian Competition Bureau, the Swiss Competition Commission and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association ("BBA") in connection with the setting of the BBA's London Interbank Offered Rate ("LIBOR") for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates is submitted to the European Banking Federation ("EBF") in connection with the setting of the EBF's Euro Interbank Offered Rates ("EURIBOR") and to the Japanese Bankers' Association for the setting of Tokyo Interbank Offered Rates ("TIBOR"), as well as processes for the setting of U.S. dollar ISDAFIX rates and other reference rates in various parts of the world during similar time periods. The Firm is responding to and continuing to cooperate with these inquiries. As previously reported, the Firm has resolved EC inquiries relating to Yen LIBOR and Swiss Franc LIBOR. In May 2014, the EC issued a Statement of Objections outlining its case against the Firm (and others) as to EURIBOR, to which the Firm has filed a response and made oral representations. Other inquiries have been discontinued without any action against JPMorgan Chase, including by the FCA and the Canadian Competition Bureau.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and putative class actions filed in various United States District Courts, in which plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR and/or EURIBOR rates by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are affected by changes in U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR or EURIBOR and assert a variety of claims including antitrust claims seeking treble damages. These matters are in various stages of litigation.

The U.S. dollar LIBOR-related putative class actions and most U.S. dollar LIBOR-related individual actions were consolidated for pre-trial purposes in the United States District Court for the Southern District of New York. The Court dismissed certain claims, including the antitrust claims, and permitted other claims under the Commodity Exchange Act and common law to proceed. Certain plaintiffs appealed the dismissal of the antitrust claims, and the United States Court of Appeals for the Second Circuit dismissed the appeal for lack of jurisdiction. In January 2015, the United States Supreme Court reversed the decision of the Court of Appeals, holding that plaintiffs have the jurisdictional right to appeal, and remanded the case to the Court of Appeals for further proceedings. The Court of Appeals heard oral argument on remand in November 2015.

The Firm is one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. Plaintiffs primarily assert claims under the federal antitrust laws and Commodities Exchange Act.

Madoff Litigation. Various subsidiaries of the Firm, including J.P. Morgan Securities plc, have been named as defendants in lawsuits filed in Bankruptcy Court in New York arising out of the liquidation proceedings of Fairfield Sentry Limited and Fairfield Sigma Limited, so-called Madoff feeder funds.

These actions seek to recover payments made by the funds to defendants totaling approximately $155 million. All but two of these actions have been dismissed.

In addition, a putative class action was brought by investors in certain feeder funds against JPMorgan Chase in the United States District Court for the Southern District of New York, as was a motion by separate potential class plaintiffs to add claims against the Firm and certain subsidiaries to an already pending putative class action in the same court. The allegations in these complaints largely track those previously raised -- and resolved as to the Firm -- by the court-appointed trustee for Bernard L. Madoff Investment Securities LLC. The District Court dismissed these complaints and the United States Court of Appeals for the Second Circuit affirmed the District Court's decision. The United States Supreme Court denied plaintiffs' petition for a writ of certiorari in March 2015. Plaintiffs subsequently served a motion in the Court of Appeals seeking to have the Court reconsider its prior decision in light of another recent appellate decision. That motion was denied in June 2015.

The Firm is a defendant in five other Madoff-related individual investor actions pending in New York state court. The allegations in all of these actions are essentially identical, and involve claims against the Firm for, among other things, aiding and abetting breach of fiduciary duty, conversion and unjust enrichment. In August 2014, the Court dismissed all claims against the Firm. In January 2016, the Appellate Court affirmed the dismissal.

A putative class action was filed in the United States District Court for the District of New Jersey by investors who were net winners (i.e., Madoff customers who had taken more money out of their accounts than had been invested) in Madoff's Ponzi scheme and were not included in a prior class action settlement. These plaintiffs allege violations of the federal securities law, federal and state racketeering statutes and multiple common law and statutory claims including breach of trust, aiding and abetting embezzlement, unjust enrichment, conversion and commercial bad faith. A similar action was filed in the United States District Court for the Middle District of Florida, although it was not styled as a class action, and included claims pursuant to Florida statutes. The Firm moved to transfer both the Florida and New Jersey actions to the United States District Court for the Southern District of New York. The Florida court denied the transfer motion, but subsequently granted the Firm's motion to dismiss the case in September 2015. Plaintiffs have filed a notice of appeal, which is pending. In addition, the same plaintiffs have re-filed their dismissed state claims in Florida state court. The New Jersey court granted the transfer motion to the Southern District of New York, and the Firm has moved to dismiss the case pending in New York.

Three shareholder derivative actions have also been filed in New York federal and state court against the Firm, as nominal defendant, and certain of its current and former Board members, alleging breach of fiduciary duty in connection with the Firm's relationship with Bernard Madoff and the alleged failure to maintain effective internal controls to detect fraudulent transactions. The actions seek declaratory relief and damages. All three actions have been dismissed. The plaintiff in one action did not appeal, the dismissal has been affirmed on appeal in another action, and one appeal remains pending.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. The Firm and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of mortgage-backed securities ("MBS"). These cases include actions by individual MBS purchasers and actions by monoline insurance companies that guaranteed payments of principal and interest for particular tranches of MBS offerings. Following the settlements referred to below, there are currently pending and tolled investor claims involving MBS with an original principal balance of approximately $4.2 billion, of which $2.6 billion involves JPMC, Bear Stearns or Washington Mutual as issuer and $1.6 billion involves JPMC, Bear Stearns or Washington Mutual solely as underwriter. The Firm and certain of its current and former officers and Board members have also been sued in shareholder derivative actions relating to the Firm's MBS activities, and trustees have asserted or have threatened to assert claims that loans in securitization trusts should be repurchased.

Issuer Litigation – Class Actions. JPMC has fully resolved all pending putative class actions on behalf of purchasers of MBS.

Issuer Litigation – Individual Purchaser Actions. The Firm is defending individual actions brought against JPMC, Bear Stearns and Washington Mutual as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings). The Firm has settled a number of these actions. Several actions remain pending in federal and state courts across the U.S. and are in various stages of litigation.

Monoline Insurer Litigation. The Firm has settled two pending actions relating to a monoline insurer's guarantees of principal and interest on certain classes of 11 different Bear Stearns MBS offerings. This settlement fully resolves all pending actions by monoline insurers against the Firm relating to RMBS issued and/or sponsored by the Firm.

Underwriter Actions. In actions against the Firm involving offerings where the Firm was solely an underwriter of other issuers' MBS offerings, the Firm has contractual rights to indemnification from the issuers. However, those indemnity rights may prove effectively unenforceable in various situations, such as where the issuers are now defunct. Currently there is one such action pending against the Firm relating to a single offering of another issuer.

Repurchase Litigation. The Firm is defending a number of actions brought by trustees, securities administrators or

master servicers of various MBS trusts on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' fees and costs and other remedies. Deutsche Bank National Trust Company, acting as trustee for various MBS trusts, has filed such a suit against JPMorgan Chase Bank, N.A. and the Federal Deposit Insurance Corporation (the "FDIC") in connection with a significant number of MBS issued by Washington Mutual; that case is described in the Washington Mutual Litigations section below. Other repurchase actions, each specific to one or more MBS transactions issued by JPMC and/or Bear Stearns, are in various stages of litigation.

In addition, the Firm and a group of 21 institutional MBS investors made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns providing for the payment of $4.5 billion and the implementation of certain servicing changes by JPMC, to resolve all repurchase and servicing claims that have been asserted or could have been asserted with respect to 330 MBS trusts created between 2005 and 2008. The offer does not resolve claims relating to Washington Mutual MBS. The trustees (or separate and successor trustees) for this group of 330 trusts have accepted the settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance is subject to a judicial approval proceeding initiated by the trustees and pending in New York state court. The judicial approval hearing was held in January 2016, and the parties are awaiting a decision. An investor in some of the trusts for which the settlement has been accepted has intervened in the judicial approval proceeding to challenge the trustees' allocation of the settlement among the trusts. Separately, in October 2015, JPMC reached agreements to resolve repurchase and servicing claims for four trusts among the 16 that were previously excluded from the trustee settlement. In December 2015, the court approved the trustees' decision to accept these separate settlements. The trustees are seeking to obtain certain remaining approvals necessary to effectuate these settlements.

Additional actions have been filed against third-party trustees that relate to loan repurchase and servicing claims involving trusts sponsored by JPMC, Bear Stearns and Washington Mutual.

Derivative Actions. Shareholder derivative actions relating to the Firm's MBS activities have been filed against the Firm, as nominal defendant, and certain of its current and former officers and members of its Board of Directors, in New York state court and California federal court. Two of the New York actions have been dismissed, one of which is on appeal. A consolidated action in California federal court has been dismissed without prejudice for lack of personal jurisdiction and plaintiffs are pursuing discovery relating to jurisdiction.

Government Enforcement Investigations and Litigation. The Firm is responding to an ongoing investigation being conducted by the DOJ's Criminal Division and two United States Attorney's Offices relating to MBS offerings securitized and sold by the Firm and its subsidiaries. The Firm has also received subpoenas and informal requests for information from state authorities concerning the issuance and underwriting of MBS-related matters. The Firm continues to respond to these MBS-related regulatory inquiries.

In addition, the Firm continues to cooperate with investigations by the DOJ, including the United States Attorney's Office for the District of Connecticut, and by the SEC Division of Enforcement and the Office of the Special Inspector General for the Troubled Asset Relief Program, all of which relate to, among other matters, communications with counterparties in connection with certain secondary market trading in residential and commercial MBS.

The Firm has entered into agreements with a number of entities that purchased MBS that toll applicable limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims. There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation.

Mortgage-Related Investigations and Litigation. One shareholder derivative action has been filed in New York Supreme Court against the Firm's Board of Directors alleging that the Board failed to exercise adequate oversight as to wrongful conduct by the Firm regarding mortgage servicing. In December 2014, the court granted defendants' motion to dismiss the complaint and in January 2016, the dismissal was affirmed on appeal.

The Civil Division of the United States Attorney's Office for the Southern District of New York is conducting an investigation concerning the Firm's compliance with the Fair Housing Act and Equal Credit Opportunity Act in connection with its mortgage lending practices. In addition, three municipalities have commenced litigation against the Firm alleging violations of an unfair competition law or the Fair Housing Act. The municipalities seek, among other things, civil penalties for the unfair competition claim, and, for the Fair Housing Act claims, damages resulting from lost tax revenue and increased municipal costs associated with foreclosed properties. Two of the municipal actions are stayed, and a motion to dismiss is pending in the remaining action.

In March 2015, JPMorgan Chase Bank, N.A entered into a settlement agreement with the Executive Office for United States Bankruptcy Trustees and the United States Trustee Program (collectively, the "Bankruptcy Trustee") to resolve issues relating to mortgage payment change notices and escrow statements in bankruptcy proceedings. In January 2016, the OCC determined that, among other things, the mortgage payment change notices issues that were the subject of the settlement with the Bankruptcy Trustee violated the 2011 mortgage servicing-related consent order

entered into by JPMorgan Chase Bank, N.A. and the OCC (as amended in 2013 and 2015), and assessed a $48 million civil money penalty. The OCC concurrently terminated that consent order.

Municipal Derivatives Litigation. Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions. The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than $3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

Petters Bankruptcy and Related Matters. JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid certain putative transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. The actions collectively seek recovery of approximately $450 million. Defendants have moved to dismiss the complaints in the actions filed by the Petters bankruptcy trustees.

Proprietary Products Investigations and Litigation. In December 2015, JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC agreed to a settlement with the SEC, and JPMorgan Chase Bank, N.A. agreed to a settlement with the CFTC, regarding disclosures to clients concerning conflicts associated with the Firm's sale and use of proprietary products, such as J.P. Morgan mutual funds, in the Firm's wealth management businesses, and the U.S. Private Bank's disclosures concerning the use of hedge funds that pay placement agent fees to JPMorgan Chase broker-dealer affiliates. As part of the settlements, JPMorgan Chase Bank, N.A. and J.P. Morgan Securities LLC paid penalties, disgorgement and interest totaling approximately $307 million. The Firm continues to cooperate with inquiries from other government authorities concerning disclosure of conflicts associated with the Firm's sale and use of proprietary products. A putative class action filed in the United States District Court for the Northern District of Illinois on behalf of financial advisory clients from 2007 to the present whose funds were invested in proprietary funds and who were charged investment management fees, was dismissed by the Court. Plaintiffs' appeal of the dismissal is pending.

Referral Hiring Practices Investigations. Various regulators are investigating, among other things, the Firm's compliance with the Foreign Corrupt Practices Act and other laws with respect to the Firm's hiring practices related to candidates referred by clients, potential clients and government officials, and its engagement of consultants in the Asia Pacific region. The Firm is responding to and cooperating with these investigations.

Washington Mutual Litigations. Proceedings related to Washington Mutual's failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC and amended to include JPMorgan Chase Bank, N.A. as a defendant, asserting an estimated $6 billion to $10 billion in damages based upon alleged breaches of certain representations and warranties given by certain Washington Mutual affiliates in connection with mortgage securitization agreements. The case includes assertions that JPMorgan Chase Bank, N.A. may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. In June 2015, the court ruled in favor of JPMorgan Chase Bank, N.A. on the question of whether the Firm or the FDIC bears responsibility for Washington Mutual Bank's repurchase obligations, holding that JPMorgan Chase Bank, N.A. assumed only those liabilities that were reflected on Washington Mutual Bank's financial accounting records as of September 25, 2008, and only up to the amount of the book value reflected therein. The FDIC is appealing that ruling and the case has otherwise been stayed pending the outcome of that appeal.

Certain holders of Washington Mutual Bank debt filed an action against JPMorgan Chase which alleged that by acquiring substantially all of the assets of Washington Mutual Bank from the FDIC, JPMorgan Chase Bank, N.A. caused Washington Mutual Bank to default on its bond obligations. JPMorgan Chase and the FDIC moved to dismiss this action and the District Court dismissed the case except as to the plaintiffs' claim that JPMorgan Chase tortiously interfered with the plaintiffs' bond contracts with Washington Mutual Bank prior to its closure. The action has

been stayed pending a decision on JPMorgan Chase's motion to dismiss the plaintiffs' remaining claim.

JPMorgan Chase has also filed complaints in the United States District Court for the District of Columbia against the FDIC, in its corporate capacity as well as in its capacity as receiver for Washington Mutual Bank, asserting multiple claims for indemnification under the terms of the Purchase & Assumption Agreement between JPMorgan Chase and the FDIC relating to JPMorgan Chase's purchase of most of the assets and certain liabilities of Washington Mutual Bank.

Wendel. Since 2012, the French criminal authorities have been investigating a series of transactions entered into by senior managers of Wendel Investissement ("Wendel") during the period from 2004 through 2007 to restructure their shareholdings in Wendel. JPMorgan Chase Bank, N.A., Paris branch provided financing for the transactions to a number of managers of Wendel in 2007. In April 2015, JPMorgan Chase Bank, N.A. was notified that the authorities were formally investigating the role of its Paris branch in the transactions, including alleged criminal tax abuse. JPMorgan Chase is responding to and cooperating with the investigation. In addition, civil proceedings have been commenced against JPMorgan Chase Bank, N.A. by a number of the managers. The claims are separate, involve different allegations and are at various stages of proceedings.

* * *

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings and inquiries. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and inquiries, and it intends to defend itself vigorously in all such matters. Additional legal proceedings and inquiries may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downward, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2015, 2014 and 2013, the Firm incurred legal expense of $3.0 billion, $2.9 billion and $11.1 billion, respectively. There is no assurance that the Firm's litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued; as a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

Note 32 – International operations

The following table presents income statement- and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33.

The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the U.S.

As of or for the year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income before income tax expense	Net income	Total assets	
2015						
Europe/Middle East and Africa	**$ 14,206**	**$ 8,871**	**$ 5,335**	**$ 4,158**	**$ 347,647**	[d]
Asia and Pacific	**6,151**	**4,241**	**1,910**	**1,285**	**138,747**	
Latin America and the Caribbean	**1,923**	**1,508**	**415**	**253**	**48,185**	
Total international	**22,280**	**14,620**	**7,660**	**5,696**	**534,579**	
North America[a]	**71,263**	**48,221**	**23,042**	**18,746**	**1,817,119**	
Total	**$ 93,543**	**$ 62,841**	**$ 30,702**	**$ 24,442**	**$ 2,351,698**	
2014						
Europe/Middle East and Africa	$ 16,013	$ 10,123	$ 5,890	$ 3,935	$ 481,328	[d]
Asia and Pacific	6,083	4,478	1,605	1,051	147,357	
Latin America and the Caribbean	2,047	1,626	421	269	44,567	
Total international	24,143	16,227	7,916	5,255	673,252	
North America[a]	70,969	48,186	22,783	16,490	1,899,022	
Total	$ 95,112	$ 64,413	$ 30,699	$ 21,745	$ 2,572,274	
2013						
Europe/Middle East and Africa	$ 15,585	$ 9,069	$ 6,516	$ 4,842	$ 514,747	[d]
Asia and Pacific	6,168	4,248	1,920	1,254	145,999	
Latin America and the Caribbean	2,251	1,626	625	381	41,473	
Total international	24,004	14,943	9,061	6,477	702,219	
North America[a]	73,363	55,749	17,614	11,409	1,712,660	
Total	$ 97,367	$ 70,692	$ 26,675	$ 17,886	$ 2,414,879	

(a) Substantially reflects the U.S.
(b) Revenue is composed of net interest income and noninterest revenue.
(c) Expense is composed of noninterest expense and the provision for credit losses.
(d) Total assets for the U.K. were approximately $306 billion, $434 billion, and $451 billion at December 31, 2015, 2014 and 2013, respectively.

Note 33 – Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 80–82. For a further discussion concerning JPMorgan Chase's business segments, see Business Segment Results on pages 83–84.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

Consumer & Community Banking
Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking (including Consumer Banking/Chase Wealth Management and Business Banking), Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Commerce Solutions & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios consisting of residential mortgages and home equity loans. Card issues credit cards to consumers and small businesses, offers payment processing services to merchants, and provides auto loans and leases and student loan services.

Corporate & Investment Bank
The Corporate & Investment Bank ("CIB"), which consists of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Banking offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Banking also includes Treasury Services, which provides transaction services, consisting of cash management and liquidity solutions. Markets & Investor Services is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes Securities Services, a leading global custodian which provides custody, fund accounting and administration, and securities lending products principally for asset managers, insurance companies and public and private investment funds.

Commercial Banking
Commercial Banking ("CB") delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from $20 million to $2 billion. In addition, CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

Asset Management
Asset Management ("AM"), with client assets of $2.4 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in many major markets throughout the world. AM offers investment management across most major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions for a broad range of clients' investment needs. For Global Wealth Management clients, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

Corporate
The Corporate segment consists of Treasury and Chief Investment Office ("CIO") and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Enterprise Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expenses that are subject to allocation to the businesses.

Segment results

The following tables provide a summary of the Firm's segment results as of or for the years ended December 31, 2015, 2014 and 2013 on a managed basis. Total net revenue (noninterest revenue and net interest income) for each of the segments is presented on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit).

Preferred stock dividend allocation

As part of its funds transfer pricing process, the Firm allocates substantially all of the cost of its outstanding preferred stock to its reportable business segments, while retaining the balance of the cost in Corporate. This cost is included as a reduction to net income applicable to common equity to be consistent with the presentation of firmwide results.

Business segment capital allocation changes

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital to its lines of business, and updates the equity allocations to its lines of business as refinements are implemented. Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III Advanced Fully Phased-In rules) and economic risk. The amount of capital assigned to each business is referred to as equity.

Segment results and reconciliation

As of or for the year ended December 31, (in millions, except ratios)	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking		
	2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013
Noninterest revenue	**$ 15,592**	$ 15,937	$ 17,552	**$ 23,693**	$ 23,420	$ 23,736	**$ 2,365**	$ 2,349	$ 2,298
Net interest income	**28,228**	28,431	28,985	**9,849**	11,175	10,976	**4,520**	4,533	4,794
Total net revenue	**43,820**	44,368	46,537	**33,542**	34,595	34,712	**6,885**	6,882	7,092
Provision for credit losses	**3,059**	3,520	335	**332**	(161)	(232)	**442**	(189)	85
Noninterest expense	**24,909**	25,609	27,842	**21,361**	23,273	21,744	**2,881**	2,695	2,610
Income/(loss) before income tax expense/(benefit)	**15,852**	15,239	18,360	**11,849**	11,483	13,200	**3,562**	4,376	4,397
Income tax expense/(benefit)	**6,063**	6,054	7,299	**3,759**	4,575	4,350	**1,371**	1,741	1,749
Net income/(loss)	**$ 9,789**	$ 9,185	$ 11,061	**$ 8,090**	$ 6,908	$ 8,850	**$ 2,191**	$ 2,635	$ 2,648
Average common equity	**$ 51,000**	$ 51,000	$ 46,000	**$ 62,000**	$ 61,000	$ 56,500	**$ 14,000**	$ 14,000	$ 13,500
Total assets	**502,652**	455,634	452,929	**748,691**	861,466	843,248	**200,700**	195,267	190,782
Return on common equity	**18%**	18%	23%	**12%**	10%	15%	**15%**	18%	19%
Overhead ratio	**57**	58	60	**64**	67	63	**42**	39	37

(a) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

(table continued from previous page)

Asset Management			Corporate			Reconciling Items[a]			Total		
2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013	**2015**	2014	2013
$ 9,563	$ 9,588	$ 9,029	**$ 800**	$ 1,972	$ 3,093	**$ (1,980)**	$ (1,788)	$ (1,660)	**$ 50,033**	$ 51,478	$ 54,048
2,556	2,440	2,376	**(533)**	(1,960)	(3,115)	**(1,110)**	(985)	(697)	**43,510**	43,634	43,319
12,119	12,028	11,405	**267**	12	(22)	**(3,090)**	(2,773)	(2,357)	**93,543**	95,112	97,367
4	4	65	**(10)**	(35)	(28)	**–**	–	–	**3,827**	3,139	225
8,886	8,538	8,016	**977**	1,159	10,255	**–**	–	–	**59,014**	61,274	70,467
3,229	3,486	3,324	**(700)**	(1,112)	(10,249)	**(3,090)**	(2,773)	(2,357)	**30,702**	30,699	26,675
1,294	1,333	1,241	**(3,137)**	(1,976)	(3,493)	**(3,090)**	(2,773)	(2,357)	**6,260**	8,954	8,789
$ 1,935	$ 2,153	$ 2,083	**$ 2,437**	$ 864	$ (6,756)	**$ –**	$ –	$ –	**$ 24,442**	$ 21,745	$ 17,886
$ 9,000	$ 9,000	$ 9,000	**$ 79,690**	$ 72,400	$ 71,409	**$ –**	$ –	$ –	**$ 215,690**	$ 207,400	$ 196,409
131,451	128,701	122,414	**768,204**	931,206	805,506	**NA**	NA	NA	**2,351,698**	2,572,274	2,414,879
21%	23%	23%	**NM**	NM	NM	**NM**	NM	NM	**11%**	10%	9%
73	71	70	**NM**	NM	NM	**NM**	NM	NM	**63**	64	72

Note 34 – Parent company

Parent company – Statements of income and comprehensive income

Year ended December 31, (in millions)	2015	2014	2013
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	$ 10,653	$ –	$ 1,175
Nonbank[a]	8,172	14,716	876
Interest income from subsidiaries	443	378	757
Other interest income	234	284	303
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	1,438	779	318
Nonbank	(2,945)	52	2,065
Other income/(loss)	3,316	508	(1,380)
Total income	21,311	16,717	4,114
Expense			
Interest expense to subsidiaries and affiliates[a]	98	169	309
Other interest expense	3,720	3,645	4,031
Other noninterest expense	2,611	827	9,597
Total expense	6,429	4,641	13,937
Income (loss) before income tax benefit and undistributed net income of subsidiaries	14,882	12,076	(9,823)
Income tax benefit	1,640	1,430	4,301
Equity in undistributed net income of subsidiaries	7,920	8,239	23,408
Net income	$ 24,442	$ 21,745	$ 17,886
Other comprehensive income, net	(1,997)	990	(2,903)
Comprehensive income	$ 22,445	$ 22,735	$ 14,983

Parent company – Balance sheets

December 31, (in millions)	2015	2014
Assets		
Cash and due from banks	$ 74	$ 211
Deposits with banking subsidiaries	65,799	95,884
Trading assets	13,830	18,222
Available-for-sale securities	3,154	3,321
Loans	1,887	2,260
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	32,454	33,810
Nonbank	58,674	52,626
Investments (at equity) in subsidiaries and affiliates:		
Bank and bank holding company	225,613	215,732
Nonbank[a]	34,205	41,173
Other assets	18,088	18,200
Total assets	$ 453,778	$ 481,439
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates[a]	$ 11,310	$ 17,381
Other borrowed funds, primarily commercial paper	3,722	49,586
Other liabilities	11,940	11,918
Long-term debt[b][c]	179,233	170,827
Total liabilities[c]	206,205	249,712
Total stockholders' equity	247,573	231,727
Total liabilities and stockholders' equity	$ 453,778	$ 481,439

Parent company – Statements of cash flows

Year ended December 31, (in millions)	2015	2014	2013
Operating activities			
Net income	$ 24,442	$ 21,745	$ 17,886
Less: Net income of subsidiaries and affiliates[a]	26,745	22,972	25,496
Parent company net loss	(2,303)	(1,227)	(7,610)
Cash dividends from subsidiaries and affiliates[a]	17,023	14,714	1,917
Other operating adjustments	2,483	(1,681)	3,217
Net cash provided by/(used in) operating activities	17,203	11,806	(2,476)
Investing activities			
Net change in:			
Deposits with banking subsidiaries	30,085	(31,040)	10,679
Available-for-sale securities:			
Proceeds from paydowns and maturities	120	12,076	61
Purchases	–	–	(12,009)
Other changes in loans, net	321	(319)	(713)
Advances to and investments in subsidiaries and affiliates, net	(81)	3,306	14,469
All other investing activities, net	153	32	22
Net cash provided by/(used in) investing activities	30,598	(15,945)	12,509
Financing activities			
Net change in:			
Borrowings from subsidiaries and affiliates[a]	(4,062)	4,454	(2,715)
Other borrowed funds	(47,483)	(5,778)	(7,297)
Proceeds from the issuance of long-term debt	42,121	40,284	31,303
Payments of long-term debt	(30,077)	(31,050)	(21,510)
Proceeds from issuance of preferred stock	5,893	8,847	3,873
Redemption of preferred stock	–	–	(1,800)
Treasury stock and warrants repurchased	(5,616)	(4,760)	(4,789)
Dividends paid	(7,873)	(6,990)	(6,056)
All other financing activities, net	(840)	(921)	(994)
Net cash provided by/(used in) financing activities	(47,937)	4,086	(9,985)
Net increase/(decrease) in cash and due from banks	(137)	(53)	48
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	211	264	216
Cash and due from banks at the end of the year, primarily with bank subsidiaries	$ 74	$ 211	$ 264
Cash interest paid	$ 3,873	$ 3,921	$ 4,409
Cash income taxes paid, net	8,251	200	2,390

(a) Affiliates include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $2 million, $2 million and $5 million from the issuer trusts in 2015, 2014 and 2013, respectively. For further discussion on these issuer trusts, see Note 21.

(b) At December 31, 2015, long-term debt that contractually matures in 2016 through 2020 totaled $27.2 billion, $26.0 billion, $21.1 billion, $11.5 billion and $22.2 billion, respectively.

(c) For information regarding the Parent's guarantees of its subsidiaries' obligations, see Notes 21 and 29.

Selected quarterly financial data (unaudited)

(Table continued on next page)

As of or for the period ended	2015				2014			
(in millions, except per share, ratio, headcount data and where otherwise noted)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	$ 22,885	$ 22,780	$ 23,812	$ 24,066	$ 22,750	$ 24,469	$ 24,678	$ 23,215
Total noninterest expense	14,263	15,368	14,500	14,883	15,409	15,798	15,431	14,636
Pre-provision profit	8,622	7,412	9,312	9,183	7,341	8,671	9,247	8,579
Provision for credit losses	1,251	682	935	959	840	757	692	850
Income before income tax expense	7,371	6,730	8,377	8,224	6,501	7,914	8,555	7,729
Income tax expense	1,937	(74)	2,087	2,310	1,570	2,349	2,575	2,460
Net income	$ 5,434	$ 6,804	$ 6,290	$ 5,914	$ 4,931	$ 5,565	$ 5,980	$ 5,269
Per common share data								
Net income: Basic	$ 1.34	$ 1.70	$ 1.56	$ 1.46	$ 1.20	$ 1.37	$ 1.47	$ 1.29
Diluted	1.32	1.68	1.54	1.45	1.19	1.35	1.46	1.28
Average shares: Basic	3,674.2	3,694.4	3,707.8	3,725.3	3,730.9	3,755.4	3,780.6	3,787.2
Diluted	3,704.6	3,725.6	3,743.6	3,757.5	3,765.2	3,788.7	3,812.5	3,823.6
Market and per common share data								
Market capitalization	$ 241,899	$ 224,438	$ 250,581	$ 224,818	$ 232,472	$ 225,188	$ 216,725	$ 229,770
Common shares at period-end	3,663.5	3,681.1	3,698.1	3,711.1	3,714.8	3,738.2	3,761.3	3,784.7
Share price[a]:								
High	$ 69.03	$ 70.61	$ 69.82	$ 62.96	$ 63.49	$ 61.85	$ 61.29	$ 61.48
Low	58.53	50.07	59.65	54.27	54.26	54.96	52.97	54.20
Close	66.03	60.97	67.76	60.58	62.58	60.24	57.62	60.71
Book value per share	60.46	59.67	58.49	57.77	56.98	56.41	55.44	53.97
Tangible book value per share ("TBVPS")[b]	48.13	47.36	46.13	45.45	44.60	44.04	43.08	41.65
Cash dividends declared per share	0.44	0.44	0.44	0.40	0.40	0.40	0.40	0.38
Selected ratios and metrics								
Return on common equity ("ROE")	9%	12%	11%	11%	9%	10%	11%	10%
Return on tangible common equity ("ROTCE")[b]	11	15	14	14	11	13	14	13
Return on assets ("ROA")	0.90	1.11	1.01	0.94	0.78	0.90	0.99	0.89
Overhead ratio	62	67	61	62	68	65	63	63
Loans-to-deposits ratio	65	64	61	56	56	56	57	57
HQLA (in billions)[c]	$ 496	$ 505	$ 532	$ 614	$ 600	$ 572	$ 576	$ 538
CET1 capital ratio[d]	11.8%	11.5%	11.2%	10.7%	10.2%	10.2%	9.8%	10.9%
Tier 1 capital ratio[d]	13.5	13.3	12.8	12.1	11.6	11.5	11.0	12.0
Total capital ratio[d]	15.1	14.9	14.4	13.6	13.1	12.8	12.5	14.5
Tier 1 leverage ratio	8.5	8.4	8.0	7.5	7.6	7.6	7.6	7.3
Selected balance sheet data (period-end)								
Trading assets	$ 343,839	$ 361,708	$ 377,870	$ 398,981	$ 398,988	$ 410,657	$ 392,543	$ 375,204
Securities	290,827	306,660	317,795	331,136	348,004	366,358	361,918	351,850
Loans	837,299	809,457	791,247	764,185	757,336	743,257	746,983	730,971
Core Loans	732,093	698,988	674,767	641,285	628,785	607,617	603,440	582,206
Total assets	2,351,698	2,416,635	2,449,098	2,576,619	2,572,274	2,526,158	2,519,494	2,476,152
Deposits	1,279,715	1,273,106	1,287,332	1,367,887	1,363,427	1,334,534	1,319,751	1,282,705
Long-term debt[e]	288,651	292,503	286,240	280,123	276,379	268,265	269,472	274,053
Common stockholders' equity	221,505	219,660	216,287	214,371	211,664	210,876	208,520	204,246
Total stockholders' equity	247,573	245,728	241,205	235,864	231,727	230,939	226,983	219,329
Headcount	234,598	235,678	237,459	241,145	241,359	242,388	245,192	246,994

(Table continued from previous page)

As of or for the period ended	2015				2014			
(in millions, except ratio data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 14,341**	**$ 14,201**	**$ 14,535**	**$ 14,658**	$ 14,807	$ 15,526	$ 15,974	$ 16,485
Allowance for loan losses to total retained loans	**1.63%**	**1.67%**	**1.78%**	**1.86%**	1.90%	2.02%	2.08%	2.20%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[f]	**1.37**	**1.40**	**1.45**	**1.52**	1.55	1.63	1.69	1.75
Nonperforming assets	**$ 7,034**	**$ 7,294**	**$ 7,588**	**$ 7,714**	$ 7,967	$ 8,390	$ 9,017	$ 9,473
Net charge-offs	**1,064**	**963**	**1,007**	**1,052**	1,218	1,114	1,158	1,269
Net charge-off rate	**0.52%**	**0.49%**	**0.53%**	**0.57%**	0.65%	0.60%	0.64%	0.71%

Note: Effective October 1, 2015, and January 1, 2015, JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") adopted new accounting guidance, retrospectively, related to (1) the presentation of debt issuance costs, and (2) investments in affordable housing projects that qualify for the low-income housing tax credit, respectively. For additional information, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82 , Accounting and Reporting Developments on page 170, and Note 1.

(a) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange.
(b) TBVPS and ROTCE are non-GAAP financial measures. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82.
(c) HQLA represents the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR") for 4Q15, 3Q15, 2Q15 and 1Q15 and the estimated amounts for 4Q14 and 3Q14 prior to the effective date of the final rule and under the Basel III liquidity coverage ratio ("Basel III LCR") for 2Q14 and 1Q14. For additional information, see HQLA on page 160.
(d) As of December 31, 2015, September 30, 2015, June 30, 2015, March 31, 2015, December 31, 2014, September 30, 2014, and June 30, 2014, the ratios presented are calculated under the U.S. Basel III transitional rules. As of March 31, 2015 the ratio presented is calculated under Basel III Standardized Transitional rules. All periods shown represent the Collins Floor. See Capital Management on pages 149–158 for additional information on Basel III and non-GAAP financial measures of regulatory capital.
(e) Included unsecured long-term debt of $211.8 billion, $214.6 billion, $209.1 billion, $209.0 billion, $207.0 billion, $204.2 billion, $205.1 billion and $205.6 respectively, for the periods presented.
(f) Excludes the impact of residential real estate PCI loans, a non-GAAP financial measure. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 80–82. For further discussion, see Allowance for credit losses on pages 130–132.

Active foreclosures: Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

Allowance for loan losses to total loans: Represents period-end allowance for loan losses divided by retained loans.

Alternative assets: The following types of assets constitute alternative investments – hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

Assets under management: Represent assets actively managed by AM on behalf of its Private Banking, Institutional and Retail clients. Includes "Committed capital not Called," on which AM earns fees.

Beneficial interests issued by consolidated VIEs: Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

Benefit obligation: Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

Central counterparty ("CCP"): A CCP is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

Chase Liquid℠ cards: Refers to a prepaid, reloadable card product.

Client advisors: Investment product specialists, including private client advisors, financial advisors, financial advisor associates, senior financial advisors, independent financial advisors and financial advisor associate trainees, who advise clients on investment options, including annuities, mutual funds, stock trading services, etc., sold by the Firm or by third-party vendors through retail branches, Chase Private Client locations and other channels.

Client assets: Represent assets under management as well as custody, brokerage, administration and deposit accounts.

Client deposits and other third party liabilities: Deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of client cash management programs. During the third quarter 2015 the Firm completed the discontinuation of its commercial paper customer sweep cash management program.

Client investment managed accounts: Assets actively managed by Chase Wealth Management on behalf of clients. The percentage of managed accounts is calculated by dividing managed account assets by total client investment assets.

Commercial Card provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Core loans: Loans considered central to the Firm's ongoing businesses; core loans exclude loans classified as trading assets, runoff portfolios, discontinued portfolios and portfolios the Firm has an intent to exit.

Credit cycle: A period of time over which credit quality improves, deteriorates and then improves again (or vice versa). The duration of a credit cycle can vary from a couple of years to several years.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

Deposit margin/deposit spread: Represents net interest income expressed as a percentage of average deposits.

Distributed denial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

Exchange-traded derivatives: Derivative contracts that are executed on an exchange and settled via a central clearing house.

Fee share: Proportion of fee revenue based on estimates of investment banking fees generated across the industry from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking fee competitive analysis and volume-based league tables for the above noted industry products.

FICO score: A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

Forward points: Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., "spot rate") to determine the forward exchange rate.

Group of Seven ("G7") nations: Countries in the G7 are Canada, France, Germany, Italy, Japan, the U.K. and the U.S.

G7 government bonds: Bonds issued by the government of one of the G7 nations.

Headcount-related expense: Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

Home equity – senior lien: Represents loans and commitments where JPMorgan Chase holds the first security interest on the property.

Home equity – junior lien: Represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

Impaired loan: Impaired loans are loans measured at amortized cost, for which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms of the agreement. Impaired loans include the following:

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

Interchange income: A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

LLC: Limited Liability Company.

Loan-to-value ("LTV") ratio: For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area ("MSA") level. These MSA-level home price indices consist of actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all available lien positions, as well as unused lines, related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Master netting agreement: An agreement between two counterparties who have multiple contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Mortgage origination channels:

Retail – Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high combined loan-to-value ("CLTV") ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm's Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is

deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records who meet specific underwriting requirements, including prescriptive requirements related to income and overall debt levels. New prime mortgage borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans that, prior to mid-2008, were offered to certain customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

N/A: Data is not applicable or available for the period presented.

Net charge-off/(recovery) rate: Represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

Net production revenue: Includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue includes the following components:

Operating revenue predominantly represents the return on Mortgage Servicing's MSR asset and includes:

- Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and
- The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

Risk management represents the components of Mortgage Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities.

Net yield on interest-earning assets: The average rate for interest-earning assets less the average rate paid for all sources of funds.

NM: Not meaningful.

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected or when principal and interest has been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfaction, predominantly real estate owned and other commercial and personal property.

Over-the-counter ("OTC") derivatives: Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

Over-the-counter cleared ("OTC-cleared") derivatives: Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

Overhead ratio: Noninterest expense as a percentage of total net revenue.

Participating securities: Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, "dividends"), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

Personal bankers: Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

Pre-provision profit/(loss): Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

Pretax margin: Represents income before income tax expense divided by total net revenue, which is, in management's view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AM against the performance of their respective competitors.

Principal transactions revenue: Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, private equity investments, and physical commodities used in market making and client-driven activities. In addition, Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specified risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives.

Purchased credit-impaired ("PCI") loans: Represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the Financial Accounting Standards Board ("FASB"). The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

Real assets: Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

Real estate investment trust ("REIT"): A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly- or privately-held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated balance sheets.

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e., excludes loans held-for-sale and loans at fair value).

Revenue wallet: Proportion of fee revenue based on estimates of investment banking fees generated across the industry (i.e., the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

Risk-weighted assets ("RWA"): Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated on a generally consistent basis between Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5.

Sales specialists: Retail branch office and field personnel, including relationship managers and loan officers, who specialize in marketing and sales of various business banking products (i.e., business loans, letters of credit, deposit accounts, Commerce Solutions, etc.) and mortgage products to existing and new clients.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm's capital from the investment.

Short sale: A short sale is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage and the related lien is released upon receipt of such proceeds.

Structural interest rate risk: Represents interest rate risk of the non-trading assets and liabilities of the Firm.

Structured notes: Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

Troubled debt restructuring ("TDR"): A TDR is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the U.S.

U.S. government-sponsored enterprises ("U.S. GSEs") and U.S. GSE obligations: In the U.S., GSEs are quasi-governmental, privately-held entities established by Congress to improve the flow of credit to specific sectors of the economy and provide certain essential services to the public. U.S. GSEs include Fannie Mae and Freddie Mac, but do not include Ginnie Mae, which is directly owned by the U.S. Department of Housing and Urban Development. U.S. GSE obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury.

Value-at-risk ("VaR"): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank ("Washington Mutual") from the FDIC.

Consolidated average balance sheet, interest and rates

Provided below is a summary of JPMorgan Chase's consolidated average balances, interest rates and interest differentials on a taxable-equivalent basis for the years 2013 through 2015. Income computed on a taxable-equivalent basis is the income reported in the Consolidated statements of income, adjusted to present interest income and average rates earned on assets exempt from income taxes (primarily federal taxes) on a basis comparable with other taxable investments. The incremental tax rate used for calculating the taxable-equivalent adjustment was approximately 38% in 2015, 2014 and 2013. A substantial portion of JPMorgan Chase's securities are taxable.

(Table continued on next page)

Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2015 Average balance	2015 Interest[e]	2015 Average rate
Assets			
Deposits with banks	$ 427,963	$ 1,250	0.29%
Federal funds sold and securities purchased under resale agreements	206,637	1,592	0.77
Securities borrowed	105,273	(532) [f]	(0.50)
Trading assets	206,385	6,694	3.24
Taxable securities	273,730	6,550	2.39
Non-taxable securities[a]	42,125	2,556	6.07
Total securities	315,855	9,106	2.88 [h]
Loans	787,318	33,321 [g]	4.23
Other assets[b]	38,811	652	1.68
Total interest-earning assets	2,088,242	52,083	2.49
Allowance for loan losses	(13,885)		
Cash and due from banks	22,042		
Trading assets – equity instruments	105,489		
Trading assets – derivative receivables	73,290		
Goodwill	47,445		
Mortgage servicing rights	6,902		
Other intangible assets:			
Purchased credit card relationships	25		
Other intangibles	1,067		
Other assets	138,792		
Total assets	$ 2,469,409		
Liabilities			
Interest-bearing deposits	$ 872,572	$ 1,252	0.14%
Federal funds purchased and securities loaned or sold under repurchase agreements	192,510	609	0.32
Commercial paper	38,140	110	0.29
Trading liabilities – debt, short-term and other liabilities[c]	207,810	622	0.30
Beneficial interests issued by consolidated variable interest entities ("VIEs")	49,200	435	0.88
Long-term debt	284,940	4,435	1.56
Total interest-bearing liabilities	1,645,172	7,463	0.45
Noninterest-bearing deposits	423,216		
Trading liabilities – equity instruments	17,282		
Trading liabilities – derivative payables	64,716		
All other liabilities, including the allowance for lending-related commitments	79,293		
Total liabilities	2,229,679		
Stockholders' equity			
Preferred stock	24,040		
Common stockholders' equity	215,690		
Total stockholders' equity	239,730 [d]		
Total liabilities and stockholders' equity	$ 2,469,409		
Interest rate spread			2.04%
Net interest income and net yield on interest-earning assets		$ 44,620	2.14

(a) Represents securities which are tax exempt for U.S. Federal Income Tax purposes.
(b) Includes margin loans.
(c) Includes brokerage customer payables.
(d) The ratio of average stockholders' equity to average assets was 9.7% for 2015, 9.2% for 2014, and 8.7% for 2013. The return on average stockholders' equity, based on net income, was 10.2% for 2015, 9.7% for 2014, and 8.6% for 2013.
(e) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.
(f) Negative interest income and yield for the years ended December 31, 2015, 2014 and 2013, is the result of increased client-driven demand for certain securities combined with the impact of low interest rates; the offset of this stock borrow activity is reflected as lower net interest expense reported within short-term and other liabilities.
(g) Fees and commissions on loans included in loan interest amounted to $936 million in 2015, $1.1 billion in 2014, and $1.3 billion in 2013.
(h) The annualized rate for securities based on amortized cost was 2.94% in 2015, 2.82% in 2014, and 2.37% in 2013, and does not give effect to changes in fair value that are reflected in accumulated other comprehensive income/(loss).
(i) Reflects a benefit from the favorable market environments for dollar-roll financings.

Within the Consolidated average balance sheets, interest and rates summary, the principal amounts of nonaccrual loans have been included in the average loan balances used to determine the average interest rate earned on loans. For additional information on nonaccrual loans, including interest accrued, see Note 14.

(Table continued from previous page)

2014			2013		
Average balance	Interest[e]	Average rate	Average balance	Interest[e]	Average rate
$ 358,072	$ 1,157	0.32%	$ 268,968	$ 918	0.34%
230,489	1,642	0.71	231,567	1,940	0.84
116,540	(501) [f]	(0.43)	118,300	(127) [f]	(0.11)
210,609	7,386	3.51	227,769	8,191	3.60
318,970	7,617	2.39	333,285	6,916	2.07
34,359	2,158	6.28	23,558	1,369	5.81
353,329	9,775	2.77 [h]	356,843	8,285	2.32 [h]
739,175	32,394 [g]	4.38	726,450	33,621 [g]	4.63
40,879	663	1.62	40,334	538	1.33
2,049,093	52,516	2.56	1,970,231	53,366	2.71
(15,418)			(19,819)		
25,650			35,919		
116,650			112,680		
67,123			72,629		
48,029			48,102		
8,387			8,840		
62			214		
1,316			1,736		
146,343			149,058		
$ 2,447,235			$ 2,379,590		
$ 868,838	$ 1,633	0.19%	$ 822,781	$ 2,067	0.25%
208,560	604 [i]	0.29 [i]	238,551	582 [i]	0.24 [i]
59,916	134	0.22	53,717	112	0.21
220,137	712	0.32	202,894	1,104	0.54
47,974	405	0.84	54,798	478	0.87
269,814	4,409	1.63	263,603	5,007	1.90
1,675,239	7,897	0.47	1,636,344	9,350	0.57
395,463			366,361		
16,246			14,218		
54,758			64,553		
81,111			90,745		
2,222,817			2,172,221		
17,018			10,960		
207,400			196,409		
224,418 [d]			207,369 [d]		
$ 2,447,235			$ 2,379,590		
		2.09%			2.14%
	$ 44,619	2.18		$ 44,016	2.23

Interest rates and interest differential analysis of net interest income – U.S. and non-U.S.

Presented below is a summary of interest rates and interest differentials segregated between U.S. and non-U.S. operations for the years 2013 through 2015. The segregation of U.S. and non-U.S. components is based on the location of the office recording the transaction. Intracompany funding generally consists of dollar-denominated deposits originated in various locations that are centrally managed by JPMorgan Chase's Treasury unit.

(Table continued on next page)

Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2015 Average balance	2015 Interest	2015 Average rate
Interest-earning assets			
Deposits with banks:			
U.S.	$ 388,833	$ 1,021	0.26%
Non-U.S.	39,130	229	0.59
Federal funds sold and securities purchased under resale agreements:			
U.S.	118,945	900	0.76
Non-U.S.	87,692	692	0.79
Securities borrowed:			
U.S.	78,815	(562) [b]	(0.71)
Non-U.S.	26,458	30	0.11
Trading assets – debt instruments:			
U.S.	106,465	3,572	3.35
Non-U.S.	99,920	3,122	3.12
Securities:			
U.S.	200,240	6,676	3.33
Non-U.S.	115,615	2,430	2.10
Loans:			
U.S.	699,664	31,468	4.50
Non-U.S.	87,654	1,853	2.11
Other assets, predominantly U.S.	38,811	652	1.68
Total interest-earning assets	2,088,242	52,083	2.49
Interest-bearing liabilities			
Interest-bearing deposits:			
U.S.	638,756	761	0.12
Non-U.S.	233,816	491	0.21
Federal funds purchased and securities loaned or sold under repurchase agreements:			
U.S.	140,609	366	0.26
Non-U.S.	51,901	243	0.47
Trading liabilities – debt, short-term and other liabilities:			
U.S.	166,838	(394) [b]	(0.24)
Non-U.S.	79,112	1,126	1.42
Beneficial interests issued by consolidated VIEs, predominantly U.S.	49,200	435	0.88
Long-term debt:			
U.S.	273,033	4,386	1.61
Non-U.S.	11,907	49	0.41
Intracompany funding:			
U.S.	(50,517)	7	–
Non-U.S.	50,517	(7)	–
Total interest-bearing liabilities	1,645,172	7,463	0.45
Noninterest-bearing liabilities[a]	443,070		
Total investable funds	$ 2,088,242	$ 7,463	0.36%
Net interest income and net yield:		$ 44,620	2.14%
U.S.		38,033	2.34
Non-U.S.		6,587	1.42
Percentage of total assets and liabilities attributable to non-U.S. operations:			
Assets			24.7
Liabilities			21.1

(a) Represents the amount of noninterest-bearing liabilities funding interest-earning assets.
(b) Negative interest income and yield, for the years ended December 31, 2015, 2014 and 2013 is a result of increased client-driven demand for certain securities combined with the impact of low interest rates; the offset of this stock borrow activity is reflected as lower net interest expense reported within trading liabilities – debt, short-term and other liabilities.
(c) Reflects a benefit from the favorable market environments for dollar-roll financings.

For further information, see the “Net interest income” discussion in Consolidated Results of Operations on pages 72–74.

(Table continued from previous page)

2014			2013		
Average balance	Interest	Average rate	Average balance	Interest	Average rate
$ 328,145	$ 825	0.25%	$ 233,850	$ 572	0.24%
29,927	332	1.11	35,118	346	0.99
125,812	719	0.57	129,600	793	0.61
104,677	923	0.88	101,967	1,147	1.13
77,228	(573) [b]	(0.74)	69,377	(376) [b]	(0.54)
39,312	72	0.18	48,923	249	0.51
109,678	4,045	3.69	120,985	4,301	3.56
100,931	3,341	3.31	106,784	3,890	3.64
193,856	6,586	3.40	170,473	4,795	2.81
159,473	3,189	2.00	186,370	3,490	1.87
635,846	30,165	4.74	617,043	31,235	5.06
103,329	2,229	2.16	109,407	2,386	2.18
40,879	663	1.62	40,334	538	1.33
2,049,093	52,516	2.56	1,970,231	53,366	2.71
620,708	813	0.13	582,282	1,067	0.18
248,130	820	0.33	240,499	1,000	0.42
146,025	130 [c]	0.09 [c]	161,256	103 [c]	0.06 [c]
62,535	474	0.76	77,295	479	0.62
194,771	(284) [b]	(0.15)	176,870	5 [b]	–
85,282	1,130	1.33	79,741	1,211	1.52
47,974	405	0.84	54,798	478	0.87
256,726	4,366	1.70	250,477	4,949	1.98
13,088	43	0.33	13,126	58	0.45
(122,467)	(176)	–	(181,109)	(339)	–
122,467	176	–	181,109	339	–
1,675,239	7,897	0.47	1,636,344	9,350	0.57
373,854			333,887		
$ 2,049,093	$ 7,897	0.39%	$ 1,970,231	$ 9,350	0.47%
	44,619	2.18%		44,016	2.23%
	37,018	2.46		35,492	2.59
	7,601	1.39		8,524	1.42
		28.9			32.6
		22.6			23.5

Changes in net interest income, volume and rate analysis

The table below presents an analysis of the effect on net interest income of volume and rate changes for the periods 2015 versus 2014 and 2014 versus 2013. In this analysis, when the change cannot be isolated to either volume or rate, it has been allocated to volume.

	2015 versus 2014			2014 versus 2013		
	Increase/(decrease) due to change in:			Increase/(decrease) due to change in:		
Year ended December 31, (On a taxable-equivalent basis: in millions)	Volume	Rate	Net change	Volume	Rate	Net change
Interest-earning assets						
Deposits with banks:						
U.S.	**$ 163**	**$ 33**	**$ 196**	$ 230	$ 23	$ 253
Non-U.S.	**53**	**(156)**	**(103)**	(56)	42	(14)
Federal funds sold and securities purchased under resale agreements:						
U.S.	**(58)**	**239**	**181**	(22)	(52)	(74)
Non-U.S.	**(137)**	**(94)**	**(231)**	31	(255)	(224)
Securities borrowed:						
U.S.	**(12)**	**23**	**11**	(58)	(139)	(197)
Non-U.S.	**(14)**	**(28)**	**(42)**	(16)	(161)	(177)
Trading assets – debt instruments:						
U.S.	**(100)**	**(373)**	**(473)**	(413)	157	(256)
Non-U.S.	**(27)**	**(192)**	**(219)**	(197)	(352)	(549)
Securities:						
U.S.	**226**	**(136)**	**90**	785	1,006	1,791
Non-U.S.	**(918)**	**159**	**(759)**	(543)	242	(301)
Loans:						
U.S.	**2,829**	**(1,526)**	**1,303**	905	(1,975)	(1,070)
Non-U.S.	**(324)**	**(52)**	**(376)**	(135)	(22)	(157)
Other assets, predominantly U.S.	**(36)**	**25**	**(11)**	8	117	125
Change in interest income	**1,645**	**(2,078)**	**(433)**	519	(1,369)	(850)
Interest-bearing liabilities						
Interest-bearing deposits:						
U.S.	**10**	**(62)**	**(52)**	37	(291)	(254)
Non-U.S.	**(31)**	**(298)**	**(329)**	36	(216)	(180)
Federal funds purchased and securities loaned or sold under repurchase agreements:						
U.S.	**(12)**	**248**	**236**	(21)	48	27
Non-U.S.	**(50)**	**(181)**	**(231)**	(113)	108	(5)
Trading liabilities – debt, short-term and other liabilities						
U.S.	**66**	**(176)**	**(110)**	(27)	(262)	(289)
Non-U.S.	**(81)**	**77**	**(4)**	71	(152)	(81)
Beneficial interests issued by consolidated VIEs, predominantly U.S.	**11**	**19**	**30**	(57)	(16)	(73)
Long-term debt:						
U.S.	**251**	**(231)**	**20**	118	(701)	(583)
Non-U.S.	**(4)**	**10**	**6**	1	(16)	(15)
Intercompany funding:						
U.S.	**(1)**	**184**	**183**	72	91	163
Non-U.S.	**1**	**(184)**	**(183)**	(72)	(91)	(163)
Change in interest expense	**160**	**(594)**	**(434)**	45	(1,498)	(1,453)
Change in net interest income	**$ 1,485**	**$ (1,484)**	**$ 1**	$ 474	$ 129	$ 603

Securities portfolio

For information regarding the securities portfolio as of December 31, 2015 and 2014, and for the years ended December 31, 2015 and 2014, see Note 12. For the available-for-sale securities portfolio, at December 31, 2013, the fair value and amortized cost of U.S. Treasury and government agency obligations was $99.2 billion and $97.7 billion, respectively; the fair value and amortized cost of all other available-for-sale securities was $230.8 billion and $227.7 billion, respectively; and the total fair value and amortized cost of the total available-for-sale securities portfolio was $330.0 billion and $325.4 billion, respectively.

At December 31, 2013, the fair value and amortized cost of U.S. Treasury and government agency obligations in the held-to-maturity securities portfolio was $22.8 billion and $23.1 billion, respectively; the fair value and amortized cost of all other held-to-maturity securities was $920 million; and the total fair value and amortized cost of the total held-to-maturity securities portfolio was $23.7 billion and $24.0 billion, respectively.

Loan portfolio

The table below presents loans by portfolio segment and loan class that are presented in Credit Risk Management on page 114, pages 115–121 and page 122, and in Note 14, at the periods indicated.

December 31, (in millions)	**2015**	2014	2013	2012	2011
U.S. consumer, excluding credit card loans					
Home equity	**$ 60,548**	$ 69,837	$ 76,790	$ 88,356	$ 100,497
Mortgage	**192,714**	139,973	129,008	123,277	128,709
Auto	**60,255**	54,536	52,757	49,913	47,426
Other	**31,304**	31,028	30,508	31,074	31,795
Total U.S. consumer, excluding credit card loans	**344,821**	295,374	289,063	292,620	308,427
Credit card Loans					
U.S. credit card loans	**131,132**	129,067	125,308	125,277	129,587
Non-U.S. credit card loans	**331**	1,981	2,483	2,716	2,690
Total credit card loans	**131,463**	131,048	127,791	127,993	132,277
Total consumer loans	**476,284**	426,422	416,854	420,613	440,704
U.S. wholesale loans					
Commercial and industrial	**83,739**	78,664	79,436	77,900	65,958
Real estate	**90,836**	77,022	67,815	59,369	53,230
Financial institutions	**12,708**	13,743	11,087	10,708	8,489
Government agencies	**9,838**	7,574	8,316	7,962	7,236
Other	**67,925**	49,838	48,158	50,948	52,126
Total U.S. wholesale loans	**265,046**	226,841	214,812	206,887	187,039
Non-U.S. wholesale loans					
Commercial and industrial	**30,385**	34,782	36,447	36,674	31,108
Real estate	**4,577**	2,224	1,621	1,757	1,748
Financial institutions	**17,188**	21,099	22,813	26,564	30,262
Government agencies	**1,788**	1,122	2,146	1,586	583
Other	**42,031**	44,846	43,725	39,715	32,276
Total non-U.S. wholesale loans	**95,969**	104,073	106,752	106,296	95,977
Total wholesale loans					
Commercial and industrial	**114,124**	113,446	115,883	114,574	97,066
Real estate	**95,413**	79,246	69,436	61,126	54,978
Financial institutions	**29,896**	34,842	33,900	37,272	38,751
Government agencies	**11,626**	8,696	10,462	9,548	7,819
Other	**109,956**	94,684	91,883	90,663	84,402
Total wholesale loans	**361,015**	330,914	321,564	313,183	283,016
Total loans[(a)]	**$ 837,299**	$ 757,336	$ 738,418	$ 733,796	$ 723,720
Memo:					
Loans held-for-sale	**$ 1,646**	$ 7,217	$ 12,230	$ 4,406	$ 2,626
Loans at fair value	**2,861**	2,611	2,011	2,555	2,097
Total loans held-for-sale and loans at fair value	**$ 4,507**	$ 9,828	$ 14,241	$ 6,961	$ 4,723

(a) Loans (other than purchased credit-impaired loans and those for which the fair value option have been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs. These amounts were not material as of December 31, 2015, 2014, 2013, 2012 and 2011.

Maturities and sensitivity to changes in interest rates

The table below sets forth, at December 31, 2015, wholesale loan maturity and distribution between fixed and floating interest rates based on the stated terms of the loan agreements. The table below also presents loans by loan class that are presented in Wholesale credit portfolio on pages 122–129 and Note 14. The table does not include the impact of derivative instruments.

December 31, 2015 (in millions)	Within 1 year [(a)]	1-5 years	After 5 years	Total
U.S.				
Commercial and industrial	$ 13,641	$ 57,210	$ 12,888	$ 83,739
Real estate	7,173	19,823	63,840	90,836
Financial institutions	8,093	4,044	571	12,708
Government agencies	1,040	3,140	5,658	9,838
Other	24,196	41,795	1,934	67,925
Total U.S.	54,143	126,012	84,891	265,046
Non-U.S.				
Commercial and industrial	9,061	15,913	5,411	30,385
Real estate	1,895	2,626	56	4,577
Financial institutions	13,114	4,072	2	17,188
Government agencies	803	252	733	1,788
Other	32,901	8,532	598	42,031
Total non-U.S.	57,774	31,395	6,800	95,969
Total wholesale loans	$ 111,917	$ 157,407	$ 91,691	$ 361,015
Loans at fixed interest rates		$ 8,982	$ 62,274	
Loans at variable interest rates		148,425	29,417	
Total wholesale loans		$ 157,407	$ 91,691	

(a) Includes demand loans and overdrafts.

Risk elements

The following tables set forth nonperforming assets, contractually past-due assets, and accruing restructured loans by portfolio segment and loan class that are presented in Credit Risk Management on page 114, pages 115–116 and page 122, at the periods indicated.

December 31, (in millions)	**2015**	2014	2013	2012	2011
Nonperforming assets					
U.S. nonaccrual loans:					
Consumer, excluding credit card loans	$ 5,413	$ 6,509	$ 7,496	$ 9,174	$ 7,411
Credit card loans	–	–	–	1	1
Total U.S. nonaccrual consumer loans	5,413	6,509	7,496	9,175	7,412
Wholesale:					
Commercial and industrial	315	184	317	702	936
Real estate	175	237	338	520	886
Financial institutions	4	12	19	60	76
Government agencies	–	–	1	–	–
Other	86	59	97	153	234
Total U.S. wholesale nonaccrual loans	580	492	772	1,435	2,132
Total U.S. nonaccrual loans	5,993	7,001	8,268	10,610	9,544
Non-U.S. nonaccrual loans:					
Consumer, excluding credit card loans	–	–	–	–	–
Credit card loans	–	–	–	–	–
Total non-U.S. nonaccrual consumer loans	–	–	–	–	–
Wholesale:					
Commercial and industrial	314	21	116	131	79
Real estate	63	23	88	89	–
Financial institutions	6	7	8	–	–
Government agencies	–	–	–	5	16
Other	53	81	60	57	354
Total non-U.S. wholesale nonaccrual loans	436	132	272	282	449
Total non-U.S. nonaccrual loans	436	132	272	282	449
Total nonaccrual loans	6,429	7,133	8,540	10,892	9,993
Derivative receivables	204	275	415	239	297
Assets acquired in loan satisfactions	401	559	751	775	1,025
Nonperforming assets	$ 7,034	$ 7,967	$ 9,706	$ 11,906	$ 11,315
Memo:					
Loans held-for-sale	$ 101	$ 95	$ 26	$ 18	$ 110
Loans at fair value	25	21	197	265	73
Total loans held-for-sale and loans at fair value	$ 126	$ 116	$ 223	$ 283	$ 183

December 31, (in millions)	2015	2014	2013	2012	2011
Contractually past-due loans[a]					
U.S. loans:					
Consumer, excluding credit card loans	**$ 290**	$ 367	$ 428	$ 525	$ 551
Credit card loans	**944**	893	997	1,268	1,867
Total U.S. consumer loans	**1,234**	1,260	1,425	1,793	2,418
Wholesale:					
Commercial and industrial	**6**	14	14	19	–
Real estate	**15**	33	14	69	84
Financial institutions	**1**	–	–	6	2
Government agencies	**6**	–	–	–	–
Other	**28**	26	16	30	6
Total U.S. wholesale loans	**56**	73	44	124	92
Total U.S. loans	**1,290**	1,333	1,469	1,917	2,510
Non-U.S. loans:					
Consumer, excluding credit card loans	**–**	–	–	–	–
Credit card loans	**–**	2	25	34	36
Total non-U.S. consumer loans	**–**	2	25	34	36
Wholesale:					
Commercial and industrial	**1**	–	–	–	–
Real estate	**–**	–	–	–	–
Financial institutions	**10**	–	6	–	–
Government agencies	**–**	–	–	–	–
Other	**–**	3	–	14	8
Total non-U.S. wholesale loans	**11**	3	6	14	8
Total non-U.S. loans	**11**	5	31	48	44
Total contractually past due loans	**$ 1,301**	$ 1,338	$ 1,500	$ 1,965	$ 2,554

(a) Represents accruing loans past-due 90 days or more as to principal and interest, which are not characterized as nonaccrual loans.

December 31, (in millions)	2015	2014	2013	2012	2011
Accruing restructured loans[a]					
U.S.:					
Consumer, excluding credit card loans	**$ 5,980**	$ 7,814	$ 9,173	$ 9,033	$ 7,310
Credit card loans[b]	**1,465**	2,029	3,115	4,762	7,214
Total U.S. consumer loans	**7,445**	9,843	12,288	13,795	14,524
Wholesale:					
Commercial and industrial	**12**	10	–	29	68
Real estate	**28**	31	27	7	48
Financial institutions	**–**	–	–	–	2
Other	**–**	1	3	–	6
Total U.S. wholesale loans	**40**	42	30	36	124
Total U.S.	**7,485**	9,885	12,318	13,831	14,648
Non-U.S.:					
Consumer, excluding credit card loans	**–**	–	–	–	–
Credit card loans[b]	**–**	–	–	–	–
Total non-U.S. consumer loans	**–**	–	–	–	–
Wholesale:					
Commercial and industrial	**–**	–	–	24	48
Real estate	**–**	–	–	–	–
Other	**–**	–	–	–	–
Total non-U.S. wholesale loans	**–**	–	–	24	48
Total non-U.S.	**–**	–	–	24	48
Total accruing restructured notes	**$ 7,485**	$ 9,885	$ 12,318	$ 13,855	$ 14,696

(a) Represents performing loans modified in troubled debt restructurings in which an economic concession was granted by the Firm and the borrower has demonstrated its ability to repay the loans according to the terms of the restructuring. As defined in U.S. GAAP, concessions include the reduction of interest rates or the deferral of interest or principal payments, resulting from deterioration in the borrowers' financial condition. Excludes nonaccrual assets and contractually past-due assets, which are included in the sections above.

(b) Includes credit card loans that have been modified in a troubled debt restructuring.

For a discussion of nonaccrual loans, past-due loan accounting policies, and accruing restructured loans see Credit Risk Management on pages 112–132, and Note 14.

Impact of nonaccrual loans and accruing restructured loans on interest income

The negative impact on interest income from nonaccrual loans represents the difference between the amount of interest income that would have been recorded on such nonaccrual loans according to their original contractual terms had they been performing and the amount of interest that actually was recognized on a cash basis. The negative impact on interest income from accruing restructured loans represents the difference between the amount of interest income that would have been recorded on such loans according to their original contractual terms and the amount of interest that actually was recognized under the modified terms. The following table sets forth this data for the years specified. The change in foregone interest income from 2013 through 2015 was primarily driven by the change in the levels of nonaccrual loans.

Year ended December 31, (in millions)	**2015**	2014	2013
Nonaccrual loans			
U.S.:			
Consumer, excluding credit card:			
Gross amount of interest that would have been recorded at the original terms	**$ 513**	$ 563	$ 719
Interest that was recognized in income	**(225)**	(268)	(298)
Total U.S. consumer, excluding credit card	**288**	295	421
Credit card:			
Gross amount of interest that would have been recorded at the original terms	**–**	–	–
Interest that was recognized in income	**–**	–	–
Total U.S. credit card	**–**	–	–
Total U.S. consumer	**288**	295	421
Wholesale:			
Gross amount of interest that would have been recorded at the original terms	**24**	28	29
Interest that was recognized in income	**(10)**	(9)	(9)
Total U.S. wholesale	**14**	19	20
Negative impact – U.S.	**302**	314	441
Non-U.S.:			
Consumer, excluding credit card:			
Gross amount of interest that would have been recorded at the original terms	**–**	–	–
Interest that was recognized in income	**–**	–	–
Total non-U.S. consumer, excluding credit card	**–**	–	–
Credit card:			
Gross amount of interest that would have been recorded at the original terms	**–**	–	–
Interest that was recognized in income	**–**	–	–
Total non-U.S. credit card	**–**	–	–
Total non-U.S. consumer	**–**	–	–
Wholesale:			
Gross amount of interest that would have been recorded at the original terms	**13**	7	36
Interest that was recognized in income	**(6)**	–	–
Total non-U.S. wholesale	**7**	7	36
Negative impact – non-U.S.	**7**	7	36
Total negative impact on interest income	**$ 309**	$ 321	$ 477

Year ended December 31, (in millions)	2015	2014	2013
Accruing restructured loans			
U.S.:			
Consumer, excluding credit card:			
Gross amount of interest that would have been recorded at the original terms	**$ 485**	$ 629	$ 758
Interest that was recognized in income	**(286)**	(339)	(395)
Total U.S. consumer, excluding credit card	**199**	290	363
Credit card:			
Gross amount of interest that would have been recorded at the original terms	**260**	377	602
Interest that was recognized in income	**(82)**	(123)	(198)
Total U.S. credit card	**178**	254	404
Total U.S. consumer	**377**	544	767
Wholesale:			
Gross amount of interest that would have been recorded at the original terms	**2**	–	1
Interest that was recognized in income	**(2)**	–	(1)
Total U.S. wholesale	**–**	–	–
Negative impact – U.S.	**377**	544	767
Non-U.S.:			
Consumer, excluding credit card:			
Gross amount of interest that would have been recorded at the original terms	**–**	–	–
Interest that was recognized in income	**–**	–	–
Total non-U.S. consumer, excluding credit card	**–**	–	–
Credit card:			
Gross amount of interest that would have been recorded at the original terms	**–**	–	–
Interest that was recognized in income	**–**	–	–
Total non-U.S. credit card	**–**	–	–
Total non-U.S. consumer	**–**	–	–
Wholesale:			
Gross amount of interest that would have been recorded at the original terms	**–**	–	–
Interest that was recognized in income	**–**	–	–
Total non-U.S. wholesale	**–**	–	–
Negative impact – non-U.S.	**–**	–	–
Total negative impact on interest income	**$ 377**	$ 544	$ 767

Cross-border outstandings

Cross-border disclosure is based on the Federal Financial Institutions Examination Council's ("FFIEC") guidelines governing the determination of cross-border risk.

The reporting of country exposure under the FFIEC bank regulatory requirements provides information on the distribution, by country and sector, of claims on, and liabilities to, foreign residents held by U.S. banks and bank holding companies and is used by the regulatory agencies to determine the presence of credit and related risks, including transfer and country risk. Country location under the FFIEC bank regulatory reporting is based on where the entity or counterparty is legally established.

JPMorgan Chase's total cross-border exposure tends to fluctuate greatly, and the amount of exposure at year-end tends to be a function of timing rather than representing a consistent trend. For a further discussion of JPMorgan Chase's country risk exposure, see Country Risk Management on pages 140–141.

The following table lists all countries in which JPMorgan Chase's cross-border outstandings exceed 0.75% of consolidated assets as of the dates specified.

Cross-border outstandings exceeding 0.75% of total assets[a]

(in millions)	December 31,	Governments	Banks	Other[b]	Net local country assets	Total cross-border outstandings[c]	Commitments[d]	**Total exposure**
Cayman Islands	**2015**	**$ –**	**$ 153**	**$ 76,160**	**$ 35**	**$ 76,348**	**$ 12,708**	**$ 89,056**
	2014	2	199	73,708	115	74,024	25,886	99,910
	2013	9	232	70,006	–	70,247	21,928	92,175
France	**2015**	**$ 9,139**	**$ 5,780**	**$ 21,199**	**$ 2,890**	**$ 39,008**	**$ 127,159**	**$ 166,167**
	2014	13,544	8,670	23,254	2,222	47,690	188,703	236,393
	2013	10,512	12,448	38,415	2,486	63,861	235,173	299,034
Japan	**2015**	**$ 367**	**$ 12,556**	**$ 3,972**	**$ 29,348**	**$ 46,243**	**$ 47,069**	**$ 93,312**
	2014	522	11,211	3,922	24,257	39,912	67,480	107,392
	2013	957	16,286	12,972	30,811	61,026	60,310	121,336
Germany	**2015**	**$ 19,817**	**$ 2,028**	**$ 8,455**	**$ –**	**$ 30,300**	**$ 106,104**	**$ 136,404**
	2014	22,772	4,524	8,522	–	35,818	173,121	208,939
	2013	25,514	4,078	7,057	–	36,649	214,375	251,024
Netherlands	**2015**	**$ 1,717**	**$ 1,688**	**$ 10,736**	**$ –**	**$ 14,141**	**$ 52,029**	**$ 66,170**
	2014	1,551	3,157	24,792	–	29,500	86,039	115,539
	2013	1,024	4,349	32,765	–	38,138	97,797	135,935
Italy	**2015**	**$ 12,313**	**$ 3,618**	**$ 6,331**	**$ 732**	**$ 22,994**	**$ 89,712**	**$ 112,706**
	2014	14,297	5,293	5,221	550	25,361	128,269	153,630
	2013	10,302	4,440	5,643	1,524	21,909	135,711	157,620
Ireland	**2015**	**$ 67**	**$ 952**	**$ 12,436**	**$ –**	**$ 13,455**	**$ 8,024**	**$ 21,479**
	2014	131	4,007	13,613	–	17,751	12,734	30,485
	2013	99	4,175	13,878	–	18,152	11,709	29,861
Spain	**2015**	**$ 2,385**	**$ 4,704**	**$ 4,629**	**$ 887**	**$ 12,605**	**$ 45,838**	**$ 58,443**
	2014	1,887	6,290	4,458	79	12,714	71,501	84,215
	2013	2,549	9,332	9,543	217	21,641	80,137	101,778

(a) Prior periods were revised to conform with the current presentation.
(b) Consists primarily of commercial and industrial.
(c) Outstandings include loans and accrued interest receivable, interest-bearing deposits with banks, acceptances, resale agreements, other monetary assets, cross-border trading debt and equity instruments, fair value of foreign exchange and derivative contracts, and local country assets, net of local country liabilities. The amounts associated with foreign exchange and derivative contracts are presented after taking into account the impact of legally enforceable master netting agreements.
(d) Commitments include outstanding letters of credit, undrawn commitments to extend credit, and the gross notional value of credit derivatives where JPMorgan Chase is a protection seller.

Summary of loan and lending-related commitments loss experience

The tables below summarize the changes in the allowance for loan losses and the allowance for lending-related commitments during the periods indicated. For a further discussion, see Allowance for credit losses on pages 130–132, and Note 15.

Allowance for loan losses

Year ended December 31, (in millions)	2015	2014	2013	2012	2011
Balance at beginning of year	$ 14,185	$ 16,264	$ 21,936	$ 27,609	$ 32,266
U.S. charge-offs					
U.S. consumer, excluding credit card	1,658	2,132	2,754	4,805	5,419
U.S. credit card	3,475	3,682	4,358	5,624	8,017
Total U.S. consumer charge-offs	5,133	5,814	7,112	10,429	13,436
U.S. wholesale:					
Commercial and industrial	63	44	150	131	197
Real estate	6	14	51	114	221
Financial institutions	5	14	1	8	102
Government agencies	–	25	1	–	–
Other	6	22	9	56	149
Total U.S. wholesale charge-offs	80	119	212	309	669
Total U.S. charge-offs	5,213	5,933	7,324	10,738	14,105
Non-U.S. charge-offs					
Non-U.S. consumer, excluding credit card	–	–	–	–	–
Non-U.S. credit card	13	149	114	131	151
Total non-U.S. consumer charge-offs	13	149	114	131	151
Non-U.S. wholesale:					
Commercial and industrial	5	27	5	8	1
Real estate	–	4	11	6	142
Financial institutions	–	–	–	–	6
Government agencies	–	–	–	4	–
Other	10	1	13	19	98
Total non-U.S. wholesale charge-offs	15	32	29	37	247
Total non-U.S. charge-offs	28	181	143	168	398
Total charge-offs	5,241	6,114	7,467	10,906	14,503
U.S. recoveries					
U.S. consumer, excluding credit card	(704)	(814)	(847)	(508)	(547)
U.S. credit card	(364)	(383)	(568)	(782)	(1,211)
Total U.S. consumer recoveries	(1,068)	(1,197)	(1,415)	(1,290)	(1,758)
U.S. wholesale:					
Commercial and industrial	(32)	(49)	(27)	(335)	(60)
Real estate	(20)	(27)	(56)	(64)	(93)
Financial institutions	(8)	(12)	(90)	(37)	(207)
Government agencies	(8)	–	–	(2)	–
Other	(3)	(36)	(6)	(21)	(36)
Total U.S. wholesale recoveries	(71)	(124)	(179)	(459)	(396)
Total U.S. recoveries	(1,139)	(1,321)	(1,594)	(1,749)	(2,154)
Non-U.S. recoveries					
Non-U.S. consumer, excluding credit card	–	–	–	–	–
Non-U.S. credit card	(2)	(19)	(25)	(29)	(32)
Total non-U.S. consumer recoveries	(2)	(19)	(25)	(29)	(32)
Non-U.S. wholesale:					
Commercial and industrial	(10)	–	(29)	(16)	(14)
Real estate	–	–	–	(2)	(14)
Financial institutions	(2)	(14)	(10)	(7)	(38)
Government agencies	–	–	–	–	–
Other	(2)	(1)	(7)	(40)	(14)
Total non-U.S. wholesale recoveries	(14)	(15)	(46)	(65)	(80)
Total non-U.S. recoveries	(16)	(34)	(71)	(94)	(112)
Total recoveries	(1,155)	(1,355)	(1,665)	(1,843)	(2,266)
Net charge-offs	4,086	4,759	5,802	9,063	12,237
Write-offs of purchased credit-impaired ("PCI") loans[(a)]	208	533	53	–	–
Provision for loan losses	3,663	3,224	188	3,387	7,612
Other	1	(11)	(5)	3	(32)
Balance at year-end	$ 13,555	$ 14,185	$ 16,264	$ 21,936	$ 27,609

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

Allowance for lending-related commitments

Year ended December 31, (in millions)	**2015**	2014	2013	2012	2011
Balance at beginning of year	**$ 622**	$ 705	$ 668	$ 673	$ 717
Provision for lending-related commitments	**164**	(85)	37	(2)	(38)
Net charge-offs	**–**	–	–	–	–
Other	**–**	2	–	(3)	(6)
Balance at year-end	**$ 786**	$ 622	$ 705	$ 668	$ 673

Loan loss analysis

As of or for the year ended December 31, (in millions, except ratios)	**2015**	2014	2013	2012	2011
Balances					
Loans – average	**$ 787,318**	$ 739,175	$ 726,450	$ 722,384	$ 693,523
Loans – year-end	**837,299**	757,336	738,418	733,796	723,720
Net charge-offs[(a)]	**4,086**	4,759	5,802	9,063	12,237
Allowance for loan losses:					
U.S.	**$ 12,704**	$ 13,472	$ 15,382	$ 20,946	$ 26,621
Non-U.S.	**851**	713	882	990	988
Total allowance for loan losses	**$ 13,555**	$ 14,185	$ 16,264	$ 21,936	$ 27,609
Nonaccrual loans	**$ 6,429**	$ 7,133	$ 8,540	$ 10,892	$ 9,993
Ratios					
Net charge-offs to:					
Loans retained – average	**0.52%**	0.65%	0.81%	1.26%	1.78%
Allowance for loan losses	**30.14**	33.55	35.67	41.32	44.32
Allowance for loan losses to:					
Loans retained – year-end[(b)]	**1.63**	1.90	2.25	3.02	3.84
Nonaccrual loans retained	**215**	202	196	207	281

(a) There were no net charge-offs/(recoveries) on lending-related commitments in 2015, 2014, 2013, 2012 or 2011.
(b) The allowance for loan losses as a percentage of retained loans declined from 2011 to 2015, due to an improvement in credit quality of the consumer and wholesale credit portfolios. For a more detailed discussion of the 2013 through 2015 provision for credit losses, see Provision for credit losses on page 132.

Deposits

The following table provides a summary of the average balances and average interest rates of JPMorgan Chase's various deposits for the years indicated.

Year ended December 31,	Average balances			Average interest rates		
(in millions, except interest rates)	**2015**	2014	2013	**2015**	2014	2013
U.S. offices						
Noninterest-bearing	**$ 403,143**	$ 376,947	$ 346,765	**–%**	–%	–%
Interest-bearing						
Demand	**78,516**	75,553	63,045	**0.11**	0.10	0.09
Savings	**475,142**	459,186	429,289	**0.07**	0.10	0.13
Time	**85,098**	86,007	89,948	**0.38**	0.35	0.51
Total interest-bearing deposits	**638,756**	620,746	582,282	**0.12**	0.13	0.18
Total deposits in U.S. offices	**1,041,899**	997,693	929,047	**0.07**	0.08	0.11
Non-U.S. offices						
Noninterest-bearing	**20,073**	18,516	19,596	**–**	–	–
Interest-bearing						
Demand	**185,331**	208,364	196,300	**0.13**	0.22	0.22
Savings	**2,418**	2,179	1,374	**0.11**	0.13	0.11
Time	**46,067**	37,549	42,825	**0.54**	0.97	1.32
Total interest-bearing deposits	**233,816**	248,092	240,499	**0.21**	0.33	0.42
Total deposits in non-U.S. offices	**253,889**	266,608	260,095	**0.19**	0.31	0.38
Total deposits	**$ 1,295,788**	$ 1,264,301	$ 1,189,142	**0.10%**	0.13%	0.17%

At December 31, 2015, other U.S. time deposits in denominations of $100,000 or more totaled $58.4 billion, substantially all of which mature in three months or less. In addition, the table below presents the maturities for U.S. time certificates of deposit in denominations of $100,000 or more.

By remaining maturity at December 31, 2015 (in millions)	Three months or less	Over three months but within six months	Over six months but within 12 months	Over 12 months	Total
U.S. time certificates of deposit ($100,000 or more)	**$ 7,520**	**$ 1,537**	**$ 1,770**	**$ 1,745**	**$ 12,572**

Short-term and other borrowed funds

The following table provides a summary of JPMorgan Chase's short-term and other borrowed funds for the years indicated.

As of or for the year ended December 31, (in millions, except rates)	**2015**	2014	2013
Federal funds purchased and securities loaned or sold under repurchase agreements:			
Balance at year-end	**$ 152,678**	$ 192,101	$ 181,163
Average daily balance during the year	**192,510**	208,560	238,551
Maximum month-end balance	**212,112**	228,162	272,718
Weighted-average rate at December 31	**0.39%**	0.27%	0.31%
Weighted-average rate during the year	**0.32**	0.29	0.24
Commercial paper:			
Balance at year-end	**$ 15,562**	$ 66,344	$ 57,848
Average daily balance during the year	**38,140**	59,916	53,717
Maximum month-end balance	**64,012**	66,344	58,835
Weighted-average rate at December 31	**0.55%**	0.22%	0.22%
Weighted-average rate during the year	**0.29**	0.22	0.21
Other borrowed funds:[(a)]			
Balance at year-end	**$ 80,126**	$ 96,455	$ 92,774
Average daily balance during the year	**93,001**	100,189	93,937
Maximum month-end balance	**99,226**	107,950	103,526
Weighted-average rate at December 31	**1.89%**	1.73%	2.49%
Weighted-average rate during the year	**1.84**	1.89	2.27
Short-term beneficial interests:[(b)]			
Commercial paper and other borrowed funds:			
Balance at year-end	**$ 11,322**	$ 16,953	$ 17,786
Average daily balance during the year	**15,608**	14,073	22,245
Maximum month-end balance	**17,137**	17,026	28,559
Weighted-average rate at December 31	**0.41%**	0.23%	0.29%
Weighted-average rate during the year	**0.32**	0.30	0.26

(a) Includes interest-bearing securities sold but not yet purchased.
(b) Included on the Consolidated balance sheets in beneficial interests issued by consolidated variable interest entities.

Federal funds purchased represent overnight funds. Securities loaned or sold under repurchase agreements generally mature between one day and three months. Commercial paper generally is issued in amounts not less than $100,000, and with maturities of 270 days or less. Other borrowed funds consist of demand notes, term federal funds purchased, and various other borrowings that generally have maturities of one year or less.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on behalf of the undersigned, thereunto duly authorized.

JPMorgan Chase & Co.
(Registrant)

By: /s/ JAMES DIMON

(James Dimon
Chairman and Chief Executive Officer)

February 23, 2016

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacity and on the date indicated. JPMorgan Chase & Co. does not exercise the power of attorney to sign on behalf of any Director.

	Capacity	Date
/s/ JAMES DIMON (James Dimon)	Director, Chairman and Chief Executive Officer (Principal Executive Officer)	
/s/ LINDA B. BAMMANN (Linda B. Bammann)	Director	
/s/ JAMES A. BELL (James A. Bell)	Director	
/s/ CRANDALL C. BOWLES (Crandall C. Bowles)	Director	
/s/ STEPHEN B. BURKE (Stephen B. Burke)	Director	
/s/ JAMES S. CROWN (James S. Crown)	Director	February 23, 2016
/s/ TIMOTHY P. FLYNN (Timothy P. Flynn)	Director	
/s/ LABAN P. JACKSON, JR. (Laban P. Jackson, Jr.)	Director	
/s/ MICHAEL A. NEAL (Michael A. Neal)	Director	
/s/ LEE R. RAYMOND (Lee R. Raymond)	Director	
/s/ WILLIAM C. WELDON (William C. Weldon)	Director	
/s/ MARIANNE LAKE (Marianne Lake)	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	
/s/ MARK W. O'DONOVAN (Mark W. O'Donovan)	Managing Director and Corporate Controller (Principal Accounting Officer)	

Exhibit 10.21

JPMORGAN CHASE & CO. LONG-TERM INCENTIVE PLAN
TERMS AND CONDITIONS OF JANUARY 19, 2016
RESTRICTED STOCK UNIT AWARD
OPERATING COMMITTEE (Protection-Based Vesting Provisions)

Award Agreement

These terms and conditions are made part of the Award Agreement dated as of January 19, 2016 ("Grant Date") awarding restricted stock units pursuant to the terms of the JPMorgan Chase & Co. Long-Term Incentive Plan ("Plan"). To the extent the terms of the Award Agreement (all references to which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other agreement, whether written or oral, that may have been entered into by the Firm and you relating to this award.

This award was granted on the Grant Date subject to the Award Agreement. **Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of the Grant Date.** If you decline the award, it will be cancelled as of the Grant Date.

Capitalized terms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan.

JPMorgan Chase & Co. will be referred to throughout the Award Agreement as "JPMorgan Chase," and together with its subsidiaries as the "Firm."

Form and Purpose of Award

Each restricted stock unit represents a non-transferable right to receive one share of Common Stock as of the applicable vesting date as set forth in your Award Agreement.

The purpose of this award is to motivate your future performance for services to be provided during the vesting period and to align your interests with those of the Firm and its shareholders.

Dividend Equivalents

If dividends are paid on Common Stock while restricted stock units under this award are outstanding, you will be paid an amount equal to the dividend paid on one share of Common Stock, multiplied by the number of restricted stock units outstanding under this award.

Protection-Based Vesting

This award is intended and expected to vest on the applicable vesting date, provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "--Job Elimination," "--Full Career Eligibility," "--Government Office" or "--Disability." However, vesting is subject to these terms and conditions (including, but not limited to, sections captioned "Recapture Provisions" and "Remedies" and the following protection-based vesting provisions).

Up to a total of fifty percent of your award ("At Risk restricted stock units") may be cancelled under (i) and (ii):

(i) The Chief Executive Officer of JPMorgan Chase ("CEO") determines in his or her sole discretion that cancellation of all or portion of the At Risk restricted stock units is appropriate in light of any one or a combination of the following factors:

- Your performance in relation to the priorities for your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained period of time. Among the factors the CEO may consider in assessing performance are net income, total net revenue, return on equity, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms.
- For any calendar year ending during the vesting period, JPMorgan Chase's annual pre-provision net income at the Firm level is negative.
- Awards granted to participants in a Line of Business, for which you exercise, or during the vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.

(ii) To the extent that the full number of At Risk restricted stock units have not been cancelled pursuant to the circumstances described in (i) above, then any remaining At Risk restricted stock units scheduled to vest on January 13, 2019 will be cancelled if, for the three calendar years preceding that date, the Firm does not meet the Firmwide Financial Threshold, unless the CEO determines in his or her sole discretion that it is appropriate that some or all of such At Risk restricted stock units should vest with respect to a particular individual or individuals due to extraordinary circumstances.

In the event that your employment terminates due to "Job Elimination," "Full Career Eligibility," Government Office" or "Disability" entitling you to continued vesting in your award (or acceleration in the case of Government Office), the cancellation circumstances described in (i) and (ii) above will continue to apply to your At Risk restricted stock units.

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee of the Board of Directors of JPMorgan Chase ("Committee"). In the case of an award to the CEO, all such determinations shall be made by the Committee.

Vesting Period

The period from the Grant Date to the last vesting date is the "vesting period." (See subsections captioned "--Amendment" pursuant to which the Firm may extend the vesting period and "--No Ownership Rights" pursuant to which the Firm may place restrictions on delivered shares of Common Stock following a vesting date.)

Bonus Recoupment

In consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recoupment Policy or successor policy as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2015 and to this award. You can access this policy as currently in effect through the following link:

http://www.jpmorganchase.com/corporate/About-JPMC/corporate-governance-principles.htm#recoupment

For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy).

Recapture Provisions (Detrimental Conduct, Risk-Related and Other Recapture Provisions)

Notwithstanding any terms of this Award Agreement to the contrary, JPMorgan Chase reserves the right in its sole discretion to cancel up to 100% of your outstanding restricted stock units under this award and, to the extent set forth in "Remedies" below, to recover from you up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares of Common Stock previously distributed (including shares withheld for tax purposes) under this award if the Firm in its sole discretion determines that:

- you engaged in conduct detrimental to the Firm insofar as it causes material financial or reputational harm to the Firm or its business activities, or
- this award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy, or
- this award was based on a material misrepresentation by you, or
- you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, risks and/or concerns with respect to risks material to the Firm or its business activities, or
- your employment was terminated for Cause (see "Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated for Cause.

See subsection captioned "Remedies" for additional information.

JPMorgan Chase's right to cancel and/or recover the value of this award (or any cash bonus) under the JPMorgan Chase Bonus Recoupment Policy and the other provisions of this award relate to the "organizational goals" of the Firm as that term is defined by regulations issued under Section 409A of the Internal Revenue Code ("Code").

Termination of Employment

Except as explicitly set forth below under the subsections captioned "--Job Elimination," "--Full Career Eligibility," "--Government Office" or "--Disability" below or under the section captioned "Death," any restricted stock units outstanding under this award will be cancelled effective on the date your employment with the Firm terminates for any reason.

Subject to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting," "Bonus Recoupment," "Recapture Provisions," "Your Obligations" and "Remedies"), you will be eligible to continue to vest (on the original vesting schedule) with respect to your award following the termination of your employment if one of the following circumstances applies to you:

➢ **Job Elimination**

Job Elimination:

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- the Firm terminated your employment because your job was eliminated, and
- after you are notified that your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and
- you satisfied the Release/Certification Requirements set forth below.

➢ **Full Career Eligibility**

Full Career Eligibility:

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- you voluntarily terminated your employment with the Firm, had completed at least five years of continuous service with the Firm immediately preceding your termination date, and the sum of your age and Recognized Service (as defined below) on your date of termination equaled or exceeded 60 *[for EU Operating Committee members:* and your Recognized Service on your date of termination equaled or exceeded 15 years*]*, and
- you provided at least 90 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which notice period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other employer, and
- continued vesting is appropriate, which determination is made prior to your termination and will be based on your performance and conduct (before and after providing notice), and
- from your date of termination of employment through the applicable vesting date, you do not (i) perform services in any capacity (including self-employment) for a Financial Services Company (as defined below) or (ii) work in your profession (whether or not for a Financial Services Company); provided that you may work for a government, education or Not-for-Profit Organization (as defined below), and
- you satisfy the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may choose to have you continue to provide services during such 90-day period as a condition to continued vesting or shorten the length of the 90-day period at the Firm's discretion, but to a date no earlier than the date you would otherwise meet the age and service requirements *[For EU Operating Committee members:* the date you would otherwise meet the service requirement*]*.

Additional advance notice requirements may apply for employees subject to notice period policies. (See "Notice Period" below.)

➢ **Government Office**

Government Office:

In the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidate for an elective Government Office, as described at the end of these terms and conditions under the section captioned "Government Office."

➢ **Disability**

Disability:

In the event that

- your employment with the Firm terminates because (i) you are unable to return to work while you are receiving benefits under the JPMorgan Chase Long Term Disability Plan, or for non-U.S. employees, under the equivalent JPMorgan Chase-sponsored local country plan (in either case, "LTD Plan"), or (ii) if you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm; provided that you (x) request in writing continued vesting due to such disability within 30 days of the date your employment terminates, and (y) provide any requested supporting documentation and (z) receive the Firm's written consent to such treatment, and
- you satisfy the Release/Certification Requirements set forth below.

Release/ Certification

To qualify for continued vesting after termination of your employment under any of the foregoing circumstances:

- you must timely execute and deliver a release of claims in favor of the Firm, having such form and terms as the Firm shall specify,
- with respect to Full Career Eligibility, prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at least 90 days advance written notification), advise that you are seeking to be treated as an individual eligible for Full Career Eligibility, and receive written consent to such continued vesting,
- with respect to Disability, you must satisfy the notice and documentation described above and receive written consent to such continued vesting, and
- except in the case of a Job Elimination, it is your responsibility to take the appropriate steps to certify to the Firm prior to each vesting date on the authorized form of the Firm that you have complied with the employment restrictions applicable to you (as described herein) from your date of termination of employment through the applicable vesting date and in all cases, otherwise complied with all other terms of the Award Agreement. (See "Your Obligations" below.)

Death

If you die while you are eligible to vest in restricted stock units under this award, the restricted stock units will immediately vest and will be distributed in shares of Common Stock (after applicable tax withholding) to your designated beneficiary on file with the Firm's Stock Administration Department, or if no beneficiary has been designated or survives you, then to your estate. Any shares will be distributed by the later of the end of the calendar year in which you die or the 15th day of the third month following your date of death.

Your Obligations

In consideration of the grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non-Solicitation of Employees and Customers," "--Confidential Information," "--Non-Disparagement," "--Cooperation," "--Compliance with Award Agreement," and "--Notice Period."

- **Non-Solicitation of Employees and Customers** During your employment by the Firm and for one year following the termination of your employment, or if longer, during the vesting period, if you continue to vest after your employment with the Firm terminates, you will not directly or indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Director of Human Resources: (i) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply for employment elsewhere, (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated, unless the individual's employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated for more than six months, (iii) to the fullest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert from doing business with the Firm, any then current customers, suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without the use of the Firm's confidential or proprietary information.

  These restrictions do not apply to authorized actions you take in the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm's policies.

- **Confidential Information** You will not, either during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any confidential information related to the Firm's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or the employment of others, by the Firm, in the case of either (i) or (ii), except as explicitly permitted by the JPMorgan Chase Code of Conduct and applicable policies or law or legal process. In addition, following your termination of employment, you will not, without prior written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has in the JPMorgan Chase Code of Conduct. Nothing in this award precludes you from reporting to the Firm's management or directors or to the government, a regulator or self-regulatory agency conduct you believe to be in violation of the law or responding truthfully to questions or requests from the government, a regulator or in a court of law.

- **Non-Disparagement** You will not, either during your employment with the Firm or thereafter, make or encourage others to make any public statement or release any information in verbal, written, electronic or any other form, that is intended to, or reasonably could be foreseen to, disparage, embarrass or criticize the Firm or its employees, officers, directors or shareholders as a group. This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests for information to the government, a regulator or in a court of law in connection with a legal or regulatory investigation or proceeding.

- **Cooperation** You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-of-pocket expenses incurred by you.

- **Compliance with Award Agreement** You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and you authorize the Firm to disclose the terms of the Award Agreement to any third party who might be affected thereby, including your prospective employer.

- **Notice Period** If you are subject to a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy, that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice that applies to you, as specified by such contract or policy.

  After receipt of your notice, the Firm may choose to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period. During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services for any other employer and shall receive your base salary and certain benefits until your employment terminates. You and the Firm may mutually agree to waive or modify the length of the Notice Period.

  Regardless of whether a Notice Period applies to you, you must comply with the 90-day advance notice period described under the section captioned "Termination of Employment--Full Career Eligibility" in the event you wish to terminate employment under the Full Career Eligibility provision.

Remedies

- **Cancellation** In addition to the cancellation provisions described under the sections captioned "Protection-Based Vesting," "Bonus Recoupment," "Recapture Provisions" and "Termination of Employment," your outstanding restricted stock units under this award may be cancelled if the Firm in its sole discretion determines that:

  - you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or
  - you have failed to return the required forms specified under the section captioned "Release/Certification" within the specified deadline, including the certification required immediately prior to a vesting date under Full Career Eligibility and Disability, or
  - you have violated any of the provisions as set forth above in the section captioned "Your Obligations."

  To the extent provided under "Administrative Provisions-Amendment" below, JPMorgan Chase reserves the right to suspend vesting of this award and/or distribution of shares under this award, including, without limitation, during any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distributions of shares under this award are satisfied. JPMorgan Chase will not be responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be reinstated consistent with Plan administration procedures. See also subsection captioned, "--No Ownership Rights."

- **Recovery** In addition, you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares of Common Stock previously distributed under this award as follows:

  - Payment may be required with respect to any shares of Common Stock distributed within the three year period prior to a notice-of-recovery under this section, if the Firm in its sole discretion determines that:
    - you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment,
    - you violated any of the provisions as set forth above in the section captioned "Your Obligations," or
    - you violated the employment restrictions set forth in the subsection Full Career Eligibility following the termination of your employment.
  - In addition, payment may be required with respect to any shares distributed within the one year period prior to notice of recovery under this section, if the Firm in its sole discretion determines appropriate pursuant to the provisions in the section above captioned "Recapture Provisions."

  Notice-of-recovery under this section is a written (including electronic) notice from the Firm to you either requiring payment under this section or stating that JPMorgan Chase is evaluating requiring payment under this section. Without limiting the foregoing, notice-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic) notice at your last known address maintained in the Firm's employment records. For the avoidance of doubt, a notice-of-recovery that the Firm is evaluating requiring payment under this section shall preserve JPMorgan Chase's rights to require payment as set forth above in all respects and the Firm shall be under no obligation to complete its evaluation other than as the Firm may determine in its sole discretion.

  For purposes of this section, shares distributed under this award include shares withheld for tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this section with respect to shares that are or may be retained by you following a determination of tax liability and that you will not be required to pay amounts with respect to shares representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPMorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

  Payment may be made in shares of Common Stock or in cash. You agree that this repayment will be a recovery of shares to which you were not entitled under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty. You also acknowledge that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations; such right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity.

  Nothing in the section in any way limits your obligations under "Bonus Recoupment."

Administrative Provisions

Withholding Taxes: The Firm, in its sole discretion, may (i) retain from each distribution the number of shares of Common Stock required to satisfy applicable tax obligations (including, to the extent legally permissible, recovery by the Firm of fringe benefit taxes) or (ii) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the vested shares, dividend equivalents and the award. This may include but is not limited to (i) a market sale of a number of such shares on your behalf substantially equal to the withholding or other taxes, (ii) to the extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to the award, vested shares, and/or dividend equivalents, and (iii) retaining vested shares or dividend equivalents until you pay any taxes associated with the award, vested shares and/or the dividend equivalents directly to the competent authorities.

Right to Set Off: The Firm may, to the maximum extent permitted by applicable law (including Section 409A of the Code), retain for itself funds or the Common Stock resulting from any vesting of this award to satisfy any obligation or debt that you owe to the Firm. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt or obligation owed by you under this award without your consent. This restriction on the Firm does not apply to accounts described and authorized in "No Ownership Rights" described below.

No Ownership Rights: Restricted stock units do not convey the rights of ownership of Common Stock and do not carry voting rights. No shares of Common Stock will be issued to you until after the restricted stock units have vested and any applicable restrictions have lapsed. Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its discretion, to establish on your behalf a brokerage account in your name with the Firm and deliver to that brokerage account any vested shares derived from the award and, for avoidance of doubt, you further agree that it shall apply to prior unvested awards.

With respect to any applicable vesting date, JPMorgan Chase may impose for any reason, as of such vesting date for such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to, restricting the sale, transfer, pledge, assignment or encumbrance of such shares of Common Stock. By accepting this award, you acknowledge that during such specified period should there be a determination that the cancellation or recovery provisions of this award (see "Protection-Based Vesting," "Bonus Recoupment," "Recapture Provisions," "Termination of Employment" and "Remedies") apply, then you agree that any shares subject to such restrictions (notwithstanding the limitation set forth in the Right to Set Off section above) may be cancelled in whole or part. See also Amendment section permitting suspension of vesting.

Binding Agreement: The Award Agreement will be binding upon any successor in interest to JPMorgan Chase, by merger or otherwise.

Not a Contract of Employment: Nothing contained in the Award Agreement constitutes a contract of employment or continued employment. Employment is "at-will" and may be terminated by either you or JPMorgan Chase for any reason at any time. This award does not confer any right or entitlement to, nor does the award impose any obligation on the Firm to provide, the same or any similar award in the future and its value is not compensation for purposes of determining severance.

Section 409A Compliance: To the extent that Section 409A of the Code is applicable to this award, distributions of shares and cash hereunder are intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.

Notwithstanding anything herein to the contrary, if you (i) are subject to taxation under the Code, (ii) are a specified employee as defined in the JPMorgan Chase 2005 Deferred Compensation Plan and (iii) have incurred a separation from service (as defined in that Plan) and if any units/shares under this award represent deferred compensation as defined in Section 409A and such shares are distributable to you as a result of your separation from service, then those shares will be delivered to you on first business day of the first calendar month after the expiration of six full months from date of your separation from service. Further, if your award is not subject to a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following (i) each vesting date shall be a payment date for purposes of distributing the vested portion of the award and (ii) each date that JPMorgan Chase specifies for payment of dividends declared on its Common Stock, shall be the payment date(s) for purposes of distributing dividend equivalent payments.

Change in Outstanding Shares: In the event of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, recapitalization, issuance of a new class of common stock, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to stockholders of Common Stock other than regular cash dividends, the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other securities issued or reserved for issuance pursuant to the Plan and to any restricted stock units outstanding under this award for such corporate events.

Interpretation/Administration: The Committee has sole and complete authority to interpret and administer this Award Agreement, including, without limitation, the power to (i) interpret the Plan and the terms of this Award Agreement; (ii) determine the reason for termination of employment; (iii) determine application of the post-employment obligations and cancellation and recovery provisions; (iv) decide all claims arising with respect to this award; and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Director of Human Resources or their respective delegates or nominees shall be binding on all parties.

Notwithstanding anything herein to the contrary, the determinations of the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements are not required to be uniform. By way of clarification, the Committee, the Firm, the Director of Human Resources and their respective delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any time and for any reason; provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except to the extent that the Committee or its delegate considers advisable to (x) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "No Ownership Rights," in either case, to the extent permitted by Section 409A of the Code. This Award Agreement may not be amended except in writing signed by the Director of Human Resources of JPMorgan Chase.

Severability: If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator of competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law.

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity: Upon receipt of satisfactory evidence that applicable United States federal, state, local, foreign or supranational ethics or conflict of interest laws or regulations require you to divest your interest in JPMorgan Chase restricted stock units, the Firm may accelerate the distribution of all or part of your outstanding award effective on or before the required divestiture date; provided that no accelerated distribution shall occur if the Firm determines that such acceleration will violate Section 409A of the Code.

If you have voluntarily terminated your employment and have satisfied the requirements of the "Government Office" section of this award, acceleration shall apply (to extent required) to the percentage of your outstanding award that would continue to vest under that section. In the case of a termination of employment where the award is outstanding as a result of "Job Elimination" or "Full Career Eligibility," then acceleration shall apply, to the extent required, to the full outstanding award.

Notwithstanding accelerated distribution pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the original vesting period and shares had been distributed as scheduled as of each applicable vesting date, including, but not limited to, repayment obligations set forth in "Remedies" and employment restrictions in the case of "Full Career Eligibility" or "Government Office."

Use of Personal Data: By accepting this award, you have acknowledged that the Firm may process your personal data (including sensitive personal data) for purposes, including but not limited to(i) determining your compensation, (ii) payroll activities, including, but not limited to, tax withholding and regulatory reporting, which tax and regulatory reporting and withholding may include, but is not limited to, the United States, your work country (including countries to which you travel on Firm business) and country of residence, (iii) registration of shares and units, (iv) establishing brokerage account on your behalf, and (v) all other lawful purposes related to your employment and this award and that the Firm may provide such data to third party vendors with whom it has contracted to provide such services and/or other bodies, including regulators, supervisory bodies, law enforcement and other government agencies. You are acknowledging and agreeing that your personal data will be transferred to, and processed in, countries and locations that do not have the same data privacy laws and statutory protection for personal data as your work country, country of residence, or country of nationality. If your personal data is subject to data privacy laws or statutory protection for personal data and they so provide for termination of the foregoing authorization, you may terminate the authorization at any time except with respect to tax and regulatory reporting and subject always to the Firm's legal and regulatory obligations. In the event you terminate this authorization, your award will be cancelled.

Governing Law: This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflict of law principles.

Choice of Forum: By accepting this award, you agree that to the extent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in connection with this award or the Plan shall be submitted to arbitration in accordance with the rules of the American Arbitration Association if so elected by the Firm in its sole discretion. In the event such a dispute is not subject to arbitration for any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any objection to personal jurisdiction or to the laying of venue of such dispute and further agree not to commence any action arising out of or relating to this award or the Plan in any other forum.

Waiver of Jury Trial/Class Claims: By accepting this award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (i) to waive the right to a jury trial and (ii) that any judicial proceeding or arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member in a class action, collective action, or other representative or joint action.

Litigation: By accepting any award, you agree that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement where the Firm is the prevailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney fees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Nontransferability: Neither this award or any other outstanding awards of restricted stock units, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hypothecated or subject to any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

Outstanding Awards: The Administrative provisions set forth above shall apply to any award of restricted stock units outstanding as of the date hereof, and such awards are hereby amended.

Definitions

"**Cause**" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules of self-regulatory bodies) related to the Firm's business, (ii) indictment or conviction of a felony, (iii) commission of a fraudulent act, (iv) violation of the JPMorgan Code of Conduct or other Firm policies or misconduct related to your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job function or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee.

"**Financial Services Company**" means a business enterprise that employs you in any capacity (such as an employee, contractor, consultant, advisor, or self-employed individual, whether paid or unpaid) and engages in:

- commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,
- insurance, including but not limited to, guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of the forgoing,
- financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, and hedge funds,
- issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments,
- advising on, or investing in, private equity or real estate, or
- any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute financial services.

"**Firmwide Financial Threshold**" means a cumulative return on tangible common equity for 2016, 2017 and 2018 of not less than 15%. Cumulative return on tangible common equity means (i) the sum of the Firm's reported net income for all three years, divided by (ii) reported year-end tangible equity averaged over the three years.

"**Government Office**" means (i) a full-time position in an elected or appointed office in local, state, or federal government (including equivalent positions outside the U.S. or in a supranational organization), not reasonably anticipated to be a full-career position, or (ii) conducting a bona fide full-time campaign for such an elective public office after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office.

"**Line of Business**" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate Investment Bank). All Corporate Functions (including the functions of the Chief Investment Office) are considered a single Line of Business.

"**Line of Business Financial Threshold**" means the financial threshold set forth below for the following Lines of Business based on the Firm's management reporting system:

Asset Management	Annual negative pre-provision net income
Card Services	Annual negative pre-tax, pre loan loss reserve income
Commercial banking	Annual negative pre-provision net income including loan charge-offs

Corporate Investment Bank	Annual negative pre-provision net income for CIB overall and/or annual negative allocated product revenues (excluding DVA) for:
	• Macro Products:
	  • Currency and Emerging Markets
	  • Rates
	  • Commodities
	• Spread Products
	  • Credit
	  • SPG
	  • Public Finance
	• Equities
	• Investor Services
	• Global Banking

Consumer Banking Business	Annual negative pre-provision net income
Corporate Functions (including Chief Investment Office)	Annual negative pre-provision net income at the Firm level
Mortgage Banking	Annual negative pre-provision net income excluding losses from liquidating portfolios and MSR Trading

"Not-for-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code. Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals. Not-for-Profit Organization shall also mean entities outside the United States exempt from local and national tax laws because they are organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals

"**Recognized Service**" means the period of service as an employee set forth in the Firm's applicable service-related policies.

Government Office

You may be eligible to continue vesting in all or part of your award if you voluntarily resign to accept a Government Office (as defined above) or to become a candidate for an elective Government Office.

Full Career Eligibility:
The "Government Office" subsection of this award does not apply to you if you satisfy the requirement for "--Full Career Eligibility" as of the date that you voluntarily terminate your employment with the Firm.

Eligibility:
Eligibility for continued vesting is conditioned on your providing the Firm:

- At least 60 days' advance written notice of your intention to resign to accept or pursue a Government Office, during which period you must perform in a cooperative and professional manner services requested by the Firm and not provide services for any other employer. The Firm may elect to shorten this notice period at the Firm's discretion.
- Confirmation, in a form satisfactory to the Firm, that vesting in this award pursuant to this provision would not violate any applicable law, regulation or rule.
- Documentation in a form satisfactory to the Firm that your resignation is for the purpose of accepting a Government Office or becoming a candidate for a Government Office.

Portion of Your Awards Subject to Continued vesting:
Subject to the conditions below, the percentage of your outstanding awards that will continue to vest in accordance with this award's original schedule will be based on your years of continuous service completed with the Firm immediately preceding your termination date, as follows:

- 50% if you have at least 3 but less than 4 years of continuous service,
- 75% if you have at least 4 but less than 5 years of continuous service, or
- 100% if you have 5 or more years of continuous service.

The portion of each award subject to continued vesting above is referred to as the "CV Award" and the portion not subject to continued vesting will be cancelled on the date your employment terminates.

Conditions for Continued Vesting of Awards:

- You must remain in a non-elective Government Office for two or more years after your employment with the Firm terminates to receive in full your CV Award; provided that if your non-elective Government Office is for a period less than two years, you will receive the portion of the CV Award with a vesting date during your period of Government Service; or
- In the case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the election. (If you are not elected, see below for employment restrictions.)

Satisfaction of Conditions for Continued Vesting:
For any service in a Government Office, your awards will vest for the time you are engaged in such service, except as described in the section captioned "Administrative Provisions--Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity".

If your service in a Government Office ends two years or more after your employment with the Firm terminates, or in the case of resignation from the Firm to campaign for a Government Office, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards that would have then been outstanding but for an accelerated distribution of shares (as described in the section captioned "Administrative Provisions" **"**Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remainder of the applicable vesting period to the same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as if you had resigned from the Firm having met the requirements for Full Career Eligibility.

Failure to Satisfy Conditions for Continued Vesting:
If you do not satisfy the above "Conditions for Continued Vesting of Awards," any outstanding restricted stock units under each CV Award will be cancelled. You also will be required to repay the Fair Market Value of the number of shares (before tax and other withholdings) of Common Stock distributed to you that would have been outstanding as restricted stock units on the date you failed to satisfy the "Condition for Continued Vesting of Awards" but for their accelerated distribution (as described in the "Administrative Provisions" under the heading **"**Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"). Fair Market Value for this purpose will be determined as the date that the shares were distributed.

JPMORGAN CHASE & CO. LONG-TERM INCENTIVE PLAN
TERMS AND CONDITIONS OF JANUARY 19, 2016
RESTRICTED STOCK UNIT AWARD
OPERATING COMMITTEE (Protection-Based Vesting Provisions)

Award Agreement

These terms and conditions are made part of the Award Agreement dated as of January 19, 2016 ("Grant Date") awarding restricted stock units pursuant to the terms of the JPMorgan Chase & Co. Long-Term Incentive Plan ("Plan"). To the extent the terms of the Award Agreement (all references to which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other agreement, whether written or oral, that may have been entered into by the Firm and you relating to this award.

This award was granted on the Grant Date subject to the Award Agreement. **Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of the Grant Date.** If you decline the award, it will be cancelled as of the Grant Date.

Capitalized terms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan.

JPMorgan Chase & Co. will be referred to throughout the Award Agreement as "JPMorgan Chase," and together with its subsidiaries as the "Firm."

Form and Purpose of Award

Each restricted stock unit represents a non-transferable right to require JPMorgan Chase to transfer one share of Common Stock or (at JPMorgan Chase's option) to pay the amount of the Fair Market Value thereof following the applicable vesting date as set forth in your Award Agreement. Such transfer or payment is hereinafter referred to as a "distribution" and words to a similar effect, such as distributed, should be construed accordingly. Whether the distribution is made in Common Stock or in cash shall be determined by the Firm and if not so determined before the time of the actual distribution shall be made in Common Stock. To the extent which a payment is made not in Common Stock but in cash, the amount of such cash shall be the Fair Market Value of the Common Stock not transferred, calculated at the applicable vesting date.

The purpose of this award is to motivate your future performance for services to be provided during the vesting period and to align your interests with those of the Firm and its shareholders.

Dividend Equivalents

If dividends are paid on Common Stock while restricted stock units under this award are outstanding, you will be paid an amount equal to the dividend paid on one share of Common Stock, multiplied by the number of restricted stock units outstanding under this award.

Protection-Based Vesting

This award is intended and expected to vest on the applicable vesting date, provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "--Job Elimination," "--Full Career Eligibility," "--Government Office" or "--Disability." However, vesting is subject to these terms and conditions (including, but not limited to, sections captioned "Recapture Provisions" and "Remedies" and the following protection-based vesting provisions).

Up to a total of fifty percent of your award ("At Risk restricted stock units") may be cancelled under (i) and (ii):

(i) The Chief Executive Officer of JPMorgan Chase ("CEO") determines in his or her sole discretion that cancellation of all or portion of the At Risk restricted stock units is appropriate in light of any one or a combination of the following factors:

- Your performance in relation to the priorities for your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained period of time. Among the factors the CEO may consider in assessing performance are net income, total net revenue, return on equity, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms.
- For any calendar year ending during the vesting period, JPMorgan Chase's annual pre-provision net income at the Firm level is negative.
- Awards granted to participants in a Line of Business, for which you exercise, or during the vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.

(ii) To the extent that the full number of At Risk restricted stock units have not been cancelled pursuant to the circumstances described in (i) above, then any remaining At Risk restricted stock units scheduled to vest on January 13, 2019 will be cancelled if, for the three calendar years preceding that date, the Firm does not meet the Firmwide Financial Threshold, unless the CEO determines in his or her sole discretion that it is appropriate that some or all of such At Risk restricted stock units should vest with respect to a particular individual or individuals due to extraordinary circumstances.

In the event that your employment terminates due to "Job Elimination," "Full Career Eligibility," Government Office" or "Disability" entitling you to continued vesting in your award (or acceleration in the case of Government Office), the cancellation circumstances described in (i) and (ii) above will continue to apply to your At Risk restricted stock units.

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee of the Board of Directors of JPMorgan Chase ("Committee"). In the case of an award to the CEO, all such determinations shall be made by the Committee.

Vesting Period

The period from the Grant Date to the last vesting date is the "vesting period." (See subsections captioned "--Amendment" pursuant to which the Firm may extend the vesting period and "--No Ownership Rights" pursuant to which the Firm may place restrictions on delivered shares of Common Stock following a vesting date.)

Holding Requirement

As of each vesting date, you shall be entitled to a distribution equal to the Fair Market Value of the number of restricted stock units vesting on such date, less the number being withheld to satisfy tax withholding obligations. You agree that the distribution made to you will be held in an account in your name with restrictions preventing you from transferring, assigning, selling, pledging or otherwise encumbering such distribution for a six month period commencing with the vesting date. Such restrictions shall lapse in event of your death.

Bonus Recoupment

In consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recoupment Policy or successor policy as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2015 and to this award. You can access this policy as currently in effect through the following link:

http://www.jpmorganchase.com/corporate/About-JPMC/corporate-governance-principles.htm#recoupment

For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy).

UK Clawback Policy for Identified Staff

In consideration of grant of this award, and without prejudice to any other provision of this Award Agreement, you agree that you are subject to the JPMorgan Chase Clawback Policy for Identified Staff or successor policy as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2015 and to this award. You can access this policy as currently in effect in My Rewards through the following link:

https://myrewards.jpmchase.net/myrewards

Recapture Provisions (Detrimental Conduct, Risk-Related and Other Recapture Provisions)

Notwithstanding any terms of this Award Agreement to the contrary, JPMorgan Chase reserves the right in its sole discretion to cancel up to 100% of your outstanding restricted stock units under this award and, to the extent set forth in "Remedies" below, to recover from you up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares of Common Stock (or the gross amount of cash in lieu of shares) previously distributed (including shares withheld for tax purposes) under this award if the Firm in its sole discretion determines that:

- you engaged in conduct detrimental to the Firm insofar as it causes material financial or reputational harm to the Firm or its business activities, or
- this award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy, or
- this award was based on a material misrepresentation by you, or
- you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, risks and/or concerns with respect to risks material to the Firm or its business activities, or
- your employment was terminated for Cause (see "Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated for Cause.

See subsection captioned "Remedies" for additional information.

JPMorgan Chase's right to cancel and/or recover the value of this award (or any cash bonus) under the JPMorgan Chase Bonus Recoupment Policy and the other provisions of this award relate to the "organizational goals" of the Firm as that term is defined by regulations issued under Section 409A of the Internal Revenue Code ("Code").

Termination of Employment

Except as explicitly set forth below under the subsections captioned "--Job Elimination," "--Full Career Eligibility," "--Government Office" or "--Disability" below or under the section captioned "Death," any restricted stock units outstanding under this award will be cancelled effective on the date your employment with the Firm terminates for any reason.

Subject to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting," "Bonus Recoupment," "UK Clawback Policy for Identified Staff," "Recapture Provisions," "Your Obligations" and "Remedies"), you will be eligible to continue to vest (on the original vesting schedule) with respect to your award following the termination of your employment if one of the following circumstances applies to you:

➢ **Job Elimination**

Job Elimination:

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- the Firm terminated your employment because your job was eliminated, and
- after you are notified that your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and
- you satisfied the Release/Certification Requirements set forth below.

➢ **Full Career Eligibility**

Full Career Eligibility:

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- you voluntarily terminated your employment with the Firm, had completed at least five years of continuous service with the Firm immediately preceding your termination date, and your Recognized Service (as defined below) on your date of termination equaled or exceeded 15 years, and
- you provided at least 90 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which notice period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other employer, and
- continued vesting is appropriate, which determination is made prior to your termination and will be based on your performance and conduct (before and after providing notice), and
- from your date of termination of employment through the applicable vesting date, you do not (i) perform services in any capacity (including self-employment) for a Financial Services Company (as defined below) or (ii) work in your profession (whether or not for a Financial Services Company); provided that you may work for a government, education or Not-for-Profit Organization (as defined below), and
- you satisfy the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may choose to have you continue to provide services during such 90-day period as a condition to continued vesting or shorten the length of the 90-day period at the Firm's discretion, but to a date no earlier than the date you would otherwise meet the service requirement.

Additional advance notice requirements may apply for employees subject to notice period policies. (See "Notice Period" below.)

➢ **Government Office**

Government Office:

In the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidate for an elective Government Office, as described at the end of these terms and conditions under the section captioned "Government Office."

➢ **Disability**

Disability:

In the event that

- your employment with the Firm terminates because (i) you are unable to return to work while you are receiving benefits under the JPMorgan Chase Long Term Disability Plan, or for non-U.S. employees, under the equivalent JPMorgan Chase-sponsored local country plan (in either case, "LTD Plan"), or (ii) if you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm; provided that you (x) request in writing continued vesting due to such disability within 30 days of the date your employment terminates, and (y) provide any requested supporting documentation and (z) receive the Firm's written consent to such treatment, and
- you satisfy the Release/Certification Requirements set forth below.

Release/ Certification

To qualify for continued vesting after termination of your employment under any of the foregoing circumstances:

- you must timely execute and deliver a release of claims in favor of the Firm, having such form and terms as the Firm shall specify,
- with respect to Full Career Eligibility, prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at least 90 days advance written notification), advise that you are seeking to be treated as an individual eligible for Full Career Eligibility, and receive written consent to such continued vesting,
- with respect to Disability, you must satisfy the notice and documentation described above and receive written consent to such continued vesting, and
- except in the case of a Job Elimination, it is your responsibility to take the appropriate steps to certify to the Firm prior to each vesting date on the authorized form of the Firm that you have complied with the employment restrictions applicable to you (as described herein) from your date of termination of employment through the applicable vesting date and in all cases, otherwise complied with all other terms of the Award Agreement. (See "Your Obligations" below.)

Death

If you die while you are eligible to vest in restricted stock units under this award, the restricted stock units will immediately vest and will be distributed in shares of Common Stock (after applicable tax withholding) to your designated beneficiary on file with the Firm's Stock Administration Department, or if no beneficiary has been designated or survives you, then to your estate. Any shares will be distributed by the later of the end of the calendar year in which you die or the 15th day of the third month following your date of death.

Your Obligations

In consideration of the grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non-Solicitation of Employees and Customers," "--Confidential Information," "--Non-Disparagement," "--Cooperation," "--Compliance with Award Agreement," and "--Notice Period."

- **Non-Solicitation of Employees and Customers** During your employment by the Firm and for one year following the termination of your employment, or if longer, during the vesting period, if you continue to vest after your employment with the Firm terminates, you will not directly or indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Director of Human Resources: (i) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply for employment elsewhere, (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated, unless the individual's employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated for more than six months, (iii) to the fullest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert from doing business with the Firm, any then current customers, suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without the use of the Firm's confidential or proprietary information.

  These restrictions do not apply to authorized actions you take in the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm's policies.

- **Confidential Information** You will not, either during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any confidential information related to the Firm's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or the employment of others, by the Firm, in the case of either (i) or (ii), except as explicitly permitted by the JPMorgan Chase Code of Conduct and applicable policies or law or legal process. In addition, following your termination of employment, you will not, without prior written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has in the JPMorgan Chase Code of Conduct. Nothing in this award precludes you from reporting to the Firm's management or directors or to the government, a regulator or self-regulatory agency conduct you believe to be in violation of the law or responding truthfully to questions or requests from the government, a regulator or in a court of law.

- **Non-Disparagement** You will not, either during your employment with the Firm or thereafter, make or encourage others to make any public statement or release any information in verbal, written, electronic or any other form, that is intended to, or reasonably could be foreseen to, disparage, embarrass or criticize the Firm or its employees, officers, directors or shareholders as a group. This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests for information to the government, a regulator or in a court of law in connection with a legal or regulatory investigation or proceeding.

- **Cooperation** You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-of-pocket expenses incurred by you.

- **Compliance with Award Agreement** You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and you authorize the Firm to disclose the terms of the Award Agreement to any third party who might be affected thereby, including your prospective employer.

- **Notice Period** If you are subject to a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy, that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice that applies to you, as specified by such contract or policy.

  After receipt of your notice, the Firm may choose to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period. During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services for any other employer and shall receive your base salary and certain benefits until your employment terminates. You and the Firm may mutually agree to waive or modify the length of the Notice Period.

  Regardless of whether a Notice Period applies to you, you must comply with the 90-day advance notice period described under the section captioned "Termination of Employment--Full Career Eligibility" in the event you wish to terminate employment under the Full Career Eligibility provision.

Remedies

- **Cancellation** In addition to the cancellation provisions described under the sections captioned "Protection-Based Vesting," "Bonus Recoupment," "UK Clawback Policy for Identified Staff," "Recapture Provisions" and "Termination of Employment," your outstanding restricted stock units under this award may be cancelled if the Firm in its sole discretion determines that:

  - you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or
  - you have failed to return the required forms specified under the section captioned "Release/Certification" within the specified deadline, including the certification required immediately prior to a vesting date under Full Career Eligibility and Disability, or
  - you have violated any of the provisions as set forth above in the section captioned "Your Obligations."

  To the extent provided under "Administrative Provisions-Amendment" below, JPMorgan Chase reserves the right to suspend vesting of this award and/or distribution of shares under this award, including, without limitation, during any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distributions of shares under this award are satisfied. JPMorgan Chase will not be responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be reinstated consistent with Plan administration procedures. See also subsection captioned, "--No Ownership Rights."

- **Recovery** In addition, you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date) of the gross number of shares of Common Stock (or cash in lieu of shares) previously distributed under this award as follows:

  - Payment may be required with respect to any shares of Common Stock or cash distributed within the three year period prior to a notice-of-recovery under this section, if the Firm in its sole discretion determines that:
    - you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment,
    - you violated any of the provisions as set forth above in the section captioned "Your Obligations", or
    - you violated the employment restrictions set forth in the subsection Full Career Eligibility following the termination of your employment.
  - In addition, payment may be required with respect to any shares or cash distributed within the one year period prior to notice of recovery under this section, if the Firm in its sole discretion determines appropriate pursuant to the provisions in the section above captioned "Recapture Provisions."

  Notice-of-recovery under this section is a written (including electronic) notice from the Firm to you either requiring payment under this section or stating that JPMorgan Chase is evaluating requiring payment under this section. Without limiting the foregoing, notice-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic) notice at your last known address maintained in the Firm's employment records. For the avoidance of doubt, a notice-of-recovery that the Firm is evaluating requiring payment under this section shall preserve JPMorgan Chase's rights to require payment as set forth above in all respects and the Firm shall be under no obligation to complete its evaluation other than as the Firm may determine in its sole discretion.

  For purposes of this section, shares or cash distributed under this award include shares or other amounts withheld for tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this section with respect to shares or cash that are or may be retained by you following a determination of tax liability and that you will not be required to pay amounts with respect to shares or other amounts representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPMorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

  Payment may be made in shares of Common Stock (if shares are distributed) or in cash. You agree that this repayment will be a recovery of a distribution to which you were not entitled under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty. You also acknowledge that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations; such right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity.

  Nothing in the section in any way limits your obligations under "Bonus Recoupment" and "UK Clawback Policy for Identified Staff."

Administrative Provisions

Withholding Taxes: The Firm, in its sole discretion, may (i) retain from each distribution the amount required to satisfy applicable tax obligations (including, to the extent legally permissible, recovery by the Firm of fringe benefit taxes) or (ii) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the distribution, dividend equivalents and the award. This may include but is not limited to (i) a market sale of a number of such shares on your behalf substantially equal to the withholding or other taxes, (ii) to the extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to the award, distribution, and/or dividend equivalents, and (iii) retaining vested shares, vested cash or dividend equivalents until you pay any taxes associated with the award, the distribution, vested cash and/or the dividend equivalents directly to the competent authorities.

Right to Set Off: The Firm may, to the maximum extent permitted by applicable law (including Section 409A of the Code), retain for itself funds or the Common Stock resulting from any vesting of this award to satisfy any obligation or debt that you owe to the Firm. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt or obligation owed by you under this award without your consent. This restriction on the Firm does not apply to accounts described and authorized in "No Ownership Rights" described below.

No Ownership Rights: Restricted stock units do not convey the rights of ownership of Common Stock and do not carry voting rights. No distribution will be made to you until after the restricted stock units have vested and any applicable restrictions have lapsed. Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its discretion, to establish on your behalf a brokerage account in your name with the Firm and deliver to that brokerage account any vested shares derived from the award and, for avoidance of doubt, you further agree that it shall apply to prior unvested awards.

With respect to any applicable vesting date, JPMorgan Chase may impose for any reason, as of such vesting date for such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to, restricting the sale, transfer, pledge, assignment or encumbrance of such shares of Common Stock. By accepting this award, you acknowledge that during such specified period should there be a determination that the cancellation or recovery provisions of this award (See "Protection-Based Vesting," "Bonus Recoupment," "Recapture Provisions," "Termination of Employment" and "Remedies") apply, then you agree that any shares subject to such restrictions (notwithstanding the limitation set forth set forth in the Right to Set Off section above) may be cancelled in whole or part. See also Amendment section permitting suspension of vesting.

Binding Agreement: The Award Agreement will be binding upon any successor in interest to JPMorgan Chase, by merger or otherwise.

Not a Contract of Employment: Nothing contained in the Award Agreement constitutes a contract of employment or continued employment. Employment is "at-will" and may be terminated by either you or JPMorgan Chase for any reason at any time. This award does not confer any right or entitlement to, nor does the award impose any obligation on the Firm to provide, the same or any similar award in the future and its value is not compensation for purposes of determining severance.

Section 409A Compliance: To the extent that Section 409A of the Code is applicable to this award, distributions of shares and cash hereunder are intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.

Notwithstanding anything herein to the contrary, if you (i) are subject to taxation under the Code, (ii) are a specified employee as defined in the JPMorgan Chase 2005 Deferred Compensation Plan and (iii) have incurred a separation from service (as defined in that Plan) and if any distribution under this award represents deferred compensation as defined in Section 409A and such amounts are distributable to you as a result of your separation from service, then those amounts will be delivered to you on first business day of the first calendar month after the expiration of six full months from date of your separation from service. Further, if your award is not subject to a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following (i) each vesting date shall be a payment date for purposes of distributing the vested portion of the award and (ii) each date that JPMorgan Chase specifies for payment of dividends declared on its Common Stock, shall be the payment date(s) for purposes of distributing dividend equivalent payments.

Change in Outstanding Shares: In the event of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, recapitalization, issuance of a new class of common stock, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to stockholders of Common Stock other than regular cash dividends, the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other securities issued or reserved for issuance pursuant to the Plan and to any restricted stock units outstanding under this award for such corporate events.

Interpretation/Administration: The Committee has sole and complete authority to interpret and administer this Award Agreement, including, without limitation, the power to (i) interpret the Plan and the terms of this Award Agreement; (ii) determine the reason for termination of employment; (iii) determine application of the post-employment obligations and cancellation and recovery provisions; (iv) decide all claims arising with respect to this award; and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Director of Human Resources or their respective delegates or nominees shall be binding on all parties.

Notwithstanding anything herein to the contrary, the determinations of the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements are not required to be uniform. By way of clarification, the Committee, the Firm, the Director of Human Resources and their respective delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any time and for any reason; provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except to the extent that the Committee or its delegate considers advisable to (x) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "No Ownership Rights," in either case, to the extent permitted by Section 409A of the Code. This Award Agreement may not be amended except in writing signed by the Director of Human Resources of JPMorgan Chase.

Severability: If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator of competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law.

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity: Upon receipt of satisfactory evidence that applicable United States federal, state, local, foreign or supranational ethics or conflict of interest laws or regulations require you to divest your interest in JPMorgan Chase restricted stock units, the Firm may accelerate the distribution of all or part of your outstanding award effective on or before the required divestiture date; provided that no accelerated distribution shall occur if the Firm determines that such acceleration will violate Section 409A of the Code. If you have voluntarily terminated your employment and have satisfied the requirements of the "Government Office" section of this award, acceleration shall apply (to extent required) to the percentage of your outstanding award that would continue to vest under that section. In the case of a termination of employment where the award is outstanding as a result of "Job Elimination" or "Full Career Eligibility", then acceleration shall apply, to the extent required, to the full outstanding award. Notwithstanding accelerated distribution pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the original vesting period and shares had been distributed as scheduled as of each applicable vesting date, including, but not limited to, repayment obligations set forth in "Remedies" and employment restrictions in the case of "Full Career Eligibility" or "Government Office."

Use of Personal Data: By accepting this award, you have acknowledged that the Firm may process your personal data (including sensitive personal data) for purposes, including but not limited to(i) determining your compensation, (ii) payroll activities, including, but not limited to, tax withholding and regulatory reporting, which tax and regulatory reporting and withholding may include, but is not limited to, the United States, your work country (including countries to which you travel on Firm business) and country of residence, (iii) registration of shares and units, (iv) establishing brokerage account on your behalf, and (v) all other lawful purposes related to your employment and this award and that the Firm may provide such data to third party vendors with whom it has contracted to provide such services and/or other bodies, including regulators, supervisory bodies, law enforcement and other government agencies. You are acknowledging and agreeing that your personal data will be transferred to, and processed in, countries and locations that do not have the same data privacy laws and statutory protection for personal data as your work country, country of residence, or country of nationality. If your personal data is subject to data privacy laws or statutory protection for personal data and they so provide for termination of the foregoing authorization, you may terminate the authorization at any time except with respect to tax and regulatory reporting and subject always to the Firm's legal and regulatory obligations. In the event you terminate this authorization, your award will be cancelled.

Governing Law: This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflict of law principles.

Choice of Forum: By accepting this award, you agree that to the extent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in connection with this award or the Plan shall be submitted to arbitration in accordance with the rules of the American Arbitration Association if so elected by the Firm in its sole discretion. In the event such a dispute is not subject to arbitration for any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any objection to personal jurisdiction or to the laying of venue of such dispute and further agree not to commence any action arising out of or relating to this award or the Plan in any other forum.

Waiver of Jury Trial/Class Claims: By accepting this award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (i) to waive the right to a jury trial and (ii) that any judicial proceeding or arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member in a class action, collective action, or other representative or joint action.

Litigation: By accepting any award, you agree that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement where the Firm is the prevailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney fees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Nontransferability: Neither this award or any other outstanding awards of restricted stock units, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hypothecated or subject to any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

Outstanding Awards: The Administrative provisions set forth above shall apply to any award of restricted stock units outstanding as of the date hereof, and such awards are hereby amended.

Definitions

"**Cause**" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules of self-regulatory bodies) related to the Firm's business, (ii) indictment or conviction of a felony, (iii) commission of a fraudulent act, (iv) violation of the JPMorgan Code of Conduct or other Firm policies or misconduct related to your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job function or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee.

"**Financial Services Company**" means a business enterprise that employs you in any capacity (such as an employee, contractor, consultant, advisor, or self-employed individual, whether paid or unpaid) and engages in:

- commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,
- insurance, including but not limited to, guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of the forgoing,
- financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, and hedge funds,
- issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments,
- advising on, or investing in, private equity or real estate, or
- any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute financial services.

"**Firmwide Financial Threshold**" means a cumulative return on tangible common equity for 2016, 2017 and 2018 of not less than 15%. Cumulative return on tangible common equity means (i) the sum of the Firm's reported net income for all three years, divided by (ii) reported year-end tangible equity averaged over the three years.

"**Government Office**" means (i) a full-time position in an elected or appointed office in local, state, or federal government (including equivalent positions outside the U.S. or in a supranational organization), not reasonably anticipated to be a full-career position, or (ii) conducting a bona fide full-time campaign for such an elective public office after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office.

"**Line of Business**" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate Investment Bank). All Corporate Functions (including the functions of the Chief Investment Office) are considered a single Line of Business.

"**Line of Business Financial Threshold**" means the financial threshold set forth below for the following Lines of Business based on the Firm's management reporting system:

Asset Management	Annual negative pre-provision net income
Card Services	Annual negative pre-tax, pre loan loss reserve income
Commercial banking	Annual negative pre-provision net income including loan charge-offs

Corporate Investment Bank	Annual negative pre-provision net income for CIB overall and/or annual negative allocated product revenues (excluding DVA) for:
	• Macro Products:
	  • Currency and Emerging Markets
	  • Rates
	  • Commodities
	• Spread Products
	  • Credit
	  • SPG
	  • Public Finance
	• Equities
	• Investor Services
	• Global Banking

Consumer Banking Business	Annual negative pre-provision net income
Corporate Functions (including Chief Investment Office)	Annual negative pre-provision net income at the Firm level
Mortgage Banking	Annual negative pre-provision net income excluding losses from liquidating portfolios and MSR Trading

"Not-for-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code. Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals. Not-for-Profit Organization shall also mean entities outside the United States exempt from local and national tax laws because they are organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals

"**Recognized Service**" means the period of service as an employee set forth in the Firm's applicable service-related policies.

Government Office

You may be eligible to continue vesting in all or part of your award if you voluntarily resign to accept a Government Office (as defined above) or to become a candidate for an elective Government Office.

Full Career Eligibility:
The "Government Office" subsection of this award does not apply to you if you satisfy the requirement for "--Full Career Eligibility" as of the date that you voluntarily terminate your employment with the Firm.

Eligibility:
Eligibility for continued vesting is conditioned on your providing the Firm:

- At least 60 days' advance written notice of your intention to resign to accept or pursue a Government Office, during which period you must perform in a cooperative and professional manner services requested by the Firm and not provide services for any other employer. The Firm may elect to shorten this notice period at the Firm's discretion.
- Confirmation, in a form satisfactory to the Firm, that vesting in this award pursuant to this provision would not violate any applicable law, regulation or rule.
- Documentation in a form satisfactory to the Firm that your resignation is for the purpose of accepting a Government Office or becoming a candidate for a Government Office.

Portion of Your Awards Subject to Continued vesting:
Subject to the conditions below, the percentage of your outstanding awards that will continue to vest in accordance with this award's original schedule will be based on your years of continuous service completed with the Firm immediately preceding your termination date, as follows:

- 50% if you have at least 3 but less than 4 years of continuous service,
- 75% if you have at least 4 but less than 5 years of continuous service, or
- 100% if you have 5 or more years of continuous service.

The portion of each award subject to continued vesting above is referred to as the "CV Award" and the portion not subject to continued vesting will be cancelled on the date your employment terminates.

Conditions for Continued Vesting of Awards:

- You must remain in a non-elective Government Office for two or more years after your employment with the Firm terminates to receive in full your CV Award; provided that if your non-elective Government Office is for a period less than two years, you will receive the portion of the CV Award with a vesting date during your period of Government Service; or
- In the case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the election. (If you are not elected, see below for employment restrictions.)

Satisfaction of Conditions for Continued Vesting:
For any service in a Government Office, your awards will vest for the time you are engaged in such service, except as described in the section captioned "Administrative Provisions--Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity."

If your service in a Government Office ends two years or more after your employment with the Firm terminates, or in the case of resignation from the Firm to campaign for a Government Office, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards that would have then been outstanding but for an accelerated distribution of shares (as described in the section captioned "Administrative Provisions" **"**Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remainder of the applicable vesting period to the same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as if you had resigned from the Firm having met the requirements for Full Career Eligibility.

Failure to Satisfy Conditions for Continued Vesting:
If you do not satisfy the above "Conditions for Continued Vesting of Awards," any outstanding restricted stock units under each CV Award will be cancelled. You also will be required to repay the Fair Market Value of the number of shares (before tax and other withholdings) of Common Stock distributed to you that would have been outstanding as restricted stock units on the date you failed to satisfy the "Condition for Continued Vesting of Awards" but for their accelerated distribution (as described in the "Administrative Provisions" under the heading **"**Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"). Fair Market Value for this purpose will be determined as the date that the distribution was made.

Exhibit 10.22

JPMORGAN CHASE & CO. LONG-TERM INCENTIVE PLAN
TERMS AND CONDITIONS OF JANUARY 19, 2016
PERFORMANCE SHARE UNIT AWARD
OPERATING COMMITTEE
(Protection-Based Vesting Provisions)

Award Agreement

These terms and conditions are made part of the Award Agreement dated as of January 19, 2016 ("Grant Date") awarding performance share units ("PSUs") pursuant to the terms of the JPMorgan Chase & Co. Long-Term Incentive Plan ("Plan"). To the extent the terms of the Award Agreement (all references to which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other agreement, whether written or oral, that may have been entered into by the Firm and you relating to this award.

This award was granted on the Grant Date subject to the Award Agreement and Plan. **Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of the Grant Date.** If you decline the award, it will be cancelled as of the Grant Date.

Capitalized terms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan.

JPMorgan Chase & Co. will be referred to throughout the Award Agreement as "JPMorgan Chase," and together with its subsidiaries as the "Firm."

Form and Purpose of Award

Each PSU represents a non-transferable right to receive one share of Common Stock as of the vesting date as set forth in your Award Agreement.

The purpose of this award is to further emphasize sustained long-term performance and to align your interests with those of the Firm and its shareholders.

Protection-Based Vesting

This award is intended and expected to vest on the vesting date, provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "--Job Elimination," "--Full Career Eligibility," "--Government Office" or "--Disability." However, vesting and the number of PSUs that will vest are subject to these terms and conditions (including, but not limited to, sections captioned "Recapture Provisions," "Number to Vest on Vesting Date" and "Remedies" and the following protection-based vesting provision).

Up to a total of fifty percent of your award (including any associated Dividend Equivalent Shares) that would otherwise be distributable to you on the vesting date ("At Risk PSUs") may be cancelled if the Chief Executive Officer of JPMorgan Chase ("CEO") determines in his or her sole discretion that cancellation of all or portion of the At Risk PSUs is appropriate in light of any one or a combination of the following factors:

- Your performance in relation to the priorities for your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained period of time. Among the factors the CEO may consider in assessing performance are net income, total net revenue, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms.
- For any calendar year ending during the vesting period, JPMorgan Chase's annual pre-provision net income at the Firm level is negative.
- RSU awards granted to participants in a Line of Business for which you exercise, or during the vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.
- The Firm does not meet the Firmwide Financial Threshold.

For avoidance of doubt, cancellation of the At Risk PSUs, in whole or part, for one or more of the above factors may occur prior to the end of the Performance Period and the maximum number of At Risk PSUs subject to cancellation prior to the end of the Performance Period will be up to fifty percent of the Target Award Number.

In the event that your employment terminates due to "Job Elimination," "Full Career Eligibility," Government Office" or "Disability" entitling you to continued vesting in your award, the cancellation circumstances described above will continue to apply to your At Risk PSUs.

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee of the Board of Directors of JPMorgan Chase ("Committee"). In the case of an award to the CEO, all such determinations shall be made by the Committee.

Number to Vest on the Vesting Date

Subject to any cancellation in whole or part of your award pursuant to these terms and conditions:

Performance calculation: On the vesting date, you will vest in a number of PSUs derived by dividing the sum of the number of the Annual PSUs by the number of years in the Performance Period. See sections captioned, "Calculation of Relative Performance" and "Definitions."

You will also vest in additional shares of Common Stock as calculated under the section captioned, "Dividend Equivalent Shares." Delivery of vested shares to your account will be made not later than the date specified in the last sentence of the subsection captioned Section 409A Compliance.

Dividend Equivalent Shares

If dividends are paid on Common Stock during the Vesting Period while the award is outstanding, you will receive on the vesting date additional shares of Common Stock as calculated in this section. The number, if any, will be based on the dividends that would have been paid during the Vesting Period as of each dividend payment date on the actual number of shares of Common Stock distributable to you resulting from the vesting of the PSUs, if any, and treated as reinvested in additional shares of Common Stock on each dividend payment based on the Fair Market Value of one share of Common Stock on each dividend payment date ("Dividend Equivalent Shares").

Holding Requirement

As of the vesting date set forth in your Award Agreement, you shall be entitled to be issued a number of shares of the Common Stock of JPMorgan Chase equal to the number of PSUs, plus any additional Dividend Equivalent Shares, vesting on such date, less the number withheld to satisfy tax withholding obligations. The net number of shares issued to you will be held in an account in your name with restrictions preventing you from transferring, assigning, selling, pledging or otherwise encumbering such shares for a two year period commencing as of the vesting date and ending as of the second anniversary of the vesting date. Such restrictions shall only lapse, prior to the expiration of the two year holding period, in the event of your death or for an accelerated distribution for ethics or conflict reasons. See section captioned, "Death" and subsection captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity."

Calculation of Relative Performance Ranking

For purposes of the Relative Performance Ranking, the Ranking of the Firm and of each Performance Company for each year in the Performance Period shall be determined and calculated by the Calculation Agent, using the definitions of "Annual PSUs," "ROTCE," "Average Tangible Common Equity," (if otherwise applicable) "Firm Reported ROTCE" and "Performance Table" (including its footnote) as set forth in the Definitions section of these terms and conditions. See section captioned, "Definitions." Except for Firm Reported ROTCE, calculations will be expressed as a decimal to the second place (i.e. xx.yy%). See section captioned, "Definitions--Performance Table" in the event of a tie. All performance based calculations as set forth herein are binding and conclusive on you and your successors.

Vesting Period

The period from the Grant Date to the vesting date is the "Vesting Period." (See "Administrative Provision--Amendment" pursuant to which the Firm may extend the vesting period and "No Ownership Rights" pursuant to which the Firm may place restrictions on delivered shares of Common Stock following the vesting date and section captioned, "Holding Period" above).

Bonus Recoupment

In consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recoupment Policy or successor policy as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2015 and to this award. You can access this policy as currently in effect through the following link:

http://www.jpmorganchase.com/corporate/About-JPMC/corporate-governance-principles.htm#recoupment

For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy).

Recapture Provisions (Detrimental Conduct, Risk-Related and Other Recapture Provisions)

Notwithstanding any terms of this Award Agreement to the contrary, JPMorgan Chase reserves the right in its sole discretion to cancel up to 100% of your award (for the avoidance of doubt, including any associated Dividend Equivalent Shares) and, to the extent set forth in "Remedies" below, to recover from you up to an amount equal to the Fair Market Value (determined as of the vesting date) of the gross number of shares of Common Stock previously distributed (including vested shares subject to the Holding Requirements and shares withheld for tax purposes) under this award if the Firm in its sole discretion determines that:

- you engaged in conduct detrimental to the Firm insofar as it causes material financial or reputational harm to the Firm or its business activities, or
- this award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy, or
- this award was based on a material misrepresentation by you, or
- you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, risks and/or concerns with respect to risks material to the Firm or its business activities, or
- your employment was terminated for Cause (see "Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated for Cause.

See section captioned "Remedies" below for additional information.

JPMorgan Chase's right to cancel and/or recover the value of this award (or any cash bonus) under the JPMorgan Chase Bonus Recoupment Policy and the other provisions of this award relate to the "organizational goals" of the Firm as that term is defined by regulations issued under Section 409A of the Internal Revenue Code ("Code").

Termination of Employment

Except as explicitly set forth below under the subsections captioned "--Job Elimination," "--Full Career Eligibility," "--Government Office" or "--Disability" or under the section captioned "Death," this award (for avoidance of doubt, including any associated Dividend Equivalent Shares) will be cancelled in full effective on the date your employment with the Firm terminates for any reason.

Subject to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting," "Number to Vest on Vesting Date," "Bonus Recoupment," "Recapture Provisions," "Remedies," and "Your Obligations") you will be eligible to continue to vest (on the original vesting schedule) with respect to your award following the termination of your employment if one of the following circumstances applies to you:

➢ **Job Elimination**

Job Elimination:

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- the Firm terminated your employment because your job was eliminated, and
- after you are notified that your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and
- you satisfied the Release/Certification Requirements set forth below.

➢ **Full Career Eligibility**

Full Career Eligibility:

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- you voluntarily terminated your employment with the Firm, had completed at least five years of continuous service with the Firm immediately preceding your termination date, and the sum of your age and Recognized Service (as defined below) on your date of termination equaled or exceeded 60 *[for EU Operating Committee members:* and your Recognized Service on your date of termination equaled or exceeded 15 years*]*, and
- you provided at least 90 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which notice period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other employer, and
- continued vesting is appropriate, which determination is made prior to your termination and will be based on your performance and conduct (before and after providing notice), and
- from your date of termination of employment through the applicable vesting date, you do not (i) perform services in any capacity (including self-employment) for a Financial Services Company (as defined below) or (ii) work in your profession (whether or not for a Financial Services Company); provided that you may work for a government, education or Not-for-Profit Organization (as defined below), and
- you satisfy the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may choose to have you continue to provide services during such 90-day period as a condition to continued vesting or shorten the length of the 90-day period at the Firm's discretion, but to a date no earlier than the date you would otherwise meet the age and service requirements *[For EU Operating Committee members:* the date you would otherwise meet the service requirement*]*.

Additional advance notice requirements may apply for employees subject to notice period policies. (See "Notice Period" below.)

➢ **Government Office**

Government Office:

In the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidate for an elective Government Office, as described at the end of these terms and conditions under the section captioned "Government Office."

➢ **Disability**

Disability:

In the event that

- your employment with the Firm terminates because (i) you are unable to return to work while you are receiving benefits under the JPMorgan Chase Long Term Disability Plan, or for non-U.S. employees, under the equivalent JPMorgan Chase-sponsored local country plan (in either case, "LTD Plan"), or (ii) if you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm; provided that you (x) request in writing continued vesting due to such disability within 30 days of the date your employment terminates, and (y) provide any requested supporting documentation and (z) receive the Firm's written consent to such treatment, and
- you satisfy the Release/Certification Requirements set forth below.

Release/ Certification

To qualify for continued vesting after termination of your employment under any of the foregoing circumstances:

- you must timely execute and deliver a release of claims in favor of the Firm, having such form and terms as the Firm shall specify,
- with respect to Full Career Eligibility, prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at least 90 days advance written notification), advise that you are seeking to be treated as an individual eligible for Full Career Eligibility, and receive written consent to such continued vesting,
- with respect to Disability, you must satisfy the notice and documentation described above and receive written consent to such continued vesting, and
- except in the case of a Job Elimination, it is your responsibility to take the appropriate steps to certify to the Firm prior to each vesting date on the authorized form of the Firm that you have complied with the employment restrictions applicable to you (as described herein) from your date of termination of employment through the applicable vesting date and in all cases, otherwise complied with all other terms of the Award Agreement. (See section captioned "Your Obligations" below.)

Death

If you die while you are eligible to vest in this award, your designated beneficiary on file with the Firm's Stock Administration Department (or your estate or if no beneficiary has been designated or survives you) may be entitled to receive a distribution of a number of shares of Common Stock associated with your award. The Target Award Percentage in the case of death is based on the Number to Vest on the Vesting Date calculation described above for each completed calendar year in the Performance Period and using the Target Award Percentage equal to 100 percent for any remaining calendar years in the Performance Period.

In addition your beneficiary or your estate shall receive additional shares of Common Stock, i.e. Dividend Equivalent Shares, as set forth in the section captioned, "Dividend Equivalent Shares" but based on dividend equivalents up to the date of your death.

Any shares will be distributed by the later of the end of the calendar year in which you die or the 15th day of the third month following your date of death.

Your Obligations

In consideration of the grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non-Solicitation of Employees and Customers," "--Confidential Information," "--Non-Disparagement," "--Cooperation," "--Compliance with Award Agreement," and "--Notice Period."

- **Non-Solicitation of Employees and Customers**

During your employment by the Firm and for one year following the termination of your employment, or if longer, during the vesting period, if you continue to vest after your employment with the Firm terminates, you will not directly or indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Director of Human Resources: (i) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply for employment elsewhere, (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated, unless the individual's employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated for more than six months, (iii) to the fullest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert from doing business with the Firm, any then current customers, suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without the use of the Firm's confidential or proprietary information.

These restrictions do not apply to authorized actions you take in the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm's policies.

- **Confidential Information**

You will not, either during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any confidential information related to the Firm's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or the employment of others, by the Firm, in the case of either (i) or (ii), except as explicitly permitted by the JPMorgan Chase Code of Conduct and applicable policies or law or legal process. In addition, following your termination of employment, you will not, without prior written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has in the JPMorgan Chase Code of Conduct. Nothing in this award precludes you from reporting to the Firm's management or directors or to the government, a regulator or self-regulatory agency conduct you believe to be in violation of the law or responding truthfully to questions or requests from the government, a regulator or in a court of law.

- **Non-Disparagement**

You will not, either during your employment with the Firm or thereafter, make or encourage others to make any public statement or release any information in verbal, written, electronic or any other form, that is intended to, or reasonably could be foreseen to, disparage, embarrass or criticize the Firm or its employees, officers, directors or shareholders as a group. This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests for information to the government, a regulator or in a court of law in connection with a legal or regulatory investigation or proceeding.

- **Cooperation**

You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-of-pocket expenses incurred by you.

- **Compliance with Award Agreement**

You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and you authorize the Firm to disclose the terms of the Award Agreement to any third party who might be affected thereby, including your prospective employer.

- **Notice Period**

If you are subject to a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy, that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice that applies to you, as specified by such contract or policy.

After receipt of your notice, the Firm may choose to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period. During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services for any other employer and shall receive your base salary and certain benefits until your employment terminates. You and the Firm may mutually agree to waive or modify the length of the Notice Period.

Regardless of whether a Notice Period applies to you, you must comply with the 90-day advance notice period described under the section captioned "Termination of Employment-- Full Career Eligibility" in the event you wish to terminate employment under the Full Career Eligibility provision.

Remedies

➢ **Cancellation** In addition to the cancellation provisions described under the sections captioned "Bonus Recoupment," "Protection-Based Vesting," "Termination of Employment" and "Recapture Provisions," your outstanding PSUs under this award may be cancelled if the Firm in its sole discretion determines that:

- you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or
- you have failed to return the required forms specified under the section captioned "Release/Certification" within the specified deadline, including the certification required immediately prior to a vesting date under Full Career Eligibility and Disability, or
- you have violated any of the provisions as set forth above in the section captioned "Your Obligations."

To the extent provided under "Administrative Provisions-Amendment" below, JPMorgan Chase reserves the right to suspend vesting of this award and/or distribution of shares under this award, including, without limitation, during any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distributions of shares under this award are satisfied. The Firm will not be responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be reinstated consistent with Plan administration procedures. See also "Administrative Provisions-No Ownership Rights."

➢ **Recovery** In addition, you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date or acceleration date) of the gross number of shares of Common Stock previously distributed, including vested shares subject to the Holding Requirements, under this award as follows:

- Payment may be required with respect to any shares of Common Stock distributed within the three year period prior to a notice-of-recovery under this section, if the Firm in its sole discretion determines that:
  - you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment;
  - you violated any of the provisions as set forth above in the section captioned "Your Obligations;" or
  - you violated the employment restrictions set forth in the subsection Full Career Eligibility following the termination of your employment.
- In addition, payment may be required with respect to any shares distributed within the one year period prior to notice-of-recovery under this section, if the Firm in its sole discretion determines appropriate pursuant to the provisions in the section above captioned "Recapture Provisions."

Notice-of-recovery under this section is a written (including electronic) notice from the Firm to you either requiring payment under this section or stating that JPMorgan Chase is evaluating requiring payment under this section. Without limiting the foregoing, notice-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic) notice at your last known address maintained in the Firm's employment records. For the avoidance of doubt, a notice-of-recovery that the Firm is evaluating requiring payment under this section shall preserve JPMorgan Chase's rights to require payment as set forth above in all respects and the Firm shall be under no obligation to complete its evaluation other than as the Firm may determine in its sole discretion.

For purposes of this section, shares distributed under this award include shares withheld for tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this section with respect to shares that are or may be retained by you following a determination of tax liability and that you will not be required to pay amounts with respect to shares representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPMorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

Payment may be made in shares of Common Stock or in cash. You agree that this repayment will be a recovery of shares to which you were not entitled under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty. You also acknowledge that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations; such right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity.

Nothing in the section in any way limits your obligations under "Bonus Recoupment."

Administrative Provisions **Withholding Taxes:** The Firm, in its sole discretion, may (i) retain from each distribution the number of shares of Common Stock required to satisfy applicable tax obligations (including, to the extent legally permissible, recovery by the Firm of fringe benefit taxes) or (ii) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the vested shares and the award. This may include but is not limited to (i) a market sale of a number of such shares on your behalf substantially equal to the withholding or other taxes, (ii) to the extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to the award and shares that vest under this award , and (iii) retaining vested shares under this award until you pay any taxes associated with the award and vested shares directly to the competent authorities.

Right to Set Off: The Firm may, to the maximum extent permitted by applicable law (including Section 409A of the Code), retain for itself funds or the shares of Common Stock resulting from any vesting of this award to satisfy any obligation or debt that you owe to the Firm. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt or obligation owed by you under this award without your consent. This restriction on the Firm does not apply to accounts described and authorized in "No Ownership Rights" described below.

No Ownership Rights: PSUs do not convey the rights of ownership of Common Stock and do not carry voting rights. No shares of Common Stock will be issued to you until after the number of PSUs have been determined, if any, and have vested and any applicable restrictions (other than Holding Requirement) have lapsed. Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its discretion, to establish on your behalf a brokerage account in your name with the Firm and deliver to that brokerage account any vested shares derived from the award and, for avoidance of doubt, you further agree that it shall apply to prior unvested awards.

With respect to any applicable vesting date, JPMorgan Chase may impose for any reason, as of such vesting date for such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to, restricting the sale, transfer, pledge, assignment or encumbrance of such shares of Common Stock. By accepting this award, you acknowledge that during such specified period should there be a determination that the cancellation or recovery provisions of this Award (see "Bonus Recoupment," "Protection-Based Vesting," "Termination of Employment," "Recapture Provisions" and "Remedies") apply, then you agree that any shares subject to such restrictions (notwithstanding the limitation set forth in the Right to Set Off section above) may be cancelled in whole or part. See also Amendment section permitting suspension of vesting.

Binding Agreement: The Award Agreement will be binding upon any successor in interest to JPMorgan Chase, by merger or otherwise.

Not a Contract of Employment: Nothing contained in the Award Agreement constitutes a contract of employment or continued employment. Employment is "at-will" and may be terminated by either you or JPMorgan Chase for any reason at any time. This award does not confer any right or entitlement to, nor does the award impose any obligation on the Firm to provide, the same or any similar award in the future and its value is not compensation for purposes of determining severance.

Section 409A Compliance: To the extent that Section 409A of the Code is applicable to this award, distributions of shares and cash hereunder are intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.

Notwithstanding anything herein to the contrary, if you (i) are subject to taxation under the Code, (ii) are a specified employee as defined in the JPMorgan Chase 2005 Deferred Compensation Plan and (iii) have incurred a separation from service (as defined in that Plan) and if any units/shares under this award represent deferred compensation as defined in Section 409A and such shares are distributable to you as a result of your separation from service, then those shares will be delivered to you on first business day of the first calendar month after the expiration of six full months from date of your separation from service. Further, if your award is not subject to a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following vesting date set forth in your Award Agreement shall be a payment date for purposes of distributing the vested portion of the award.

Change in Outstanding Shares: In the event of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, recapitalization, issuance of a new class of common stock, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to stockholders of Common Stock other than regular cash dividends, the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other securities issued or reserved for issuance pursuant to the Plan and to any PSUs outstanding under this award for such corporate events.

Other Equitable Adjustments: The Committee may make adjustments (up or down) to the award as it deems to be equitable, to maintain the intended economics of the award in light of changed circumstances, which may include unusual or non-recurring events affecting the Firm (or the Performance Companies) or its financial statements in each case resulting from changes in accounting methods, practices or policies, changes in capital structure by reason of legal or regulatory requirements and such other changed circumstances, as the Committee may deem appropriate.

Interpretation/Administration: The Committee has sole and complete authority to interpret and administer this Award Agreement, including, without limitation, the power to (i) interpret the Plan and the terms of this Award Agreement; (ii) determine the reason for termination of employment; (iii) determine application of the post-employment obligations and cancellation and recovery provisions; (iv) decide all claims arising with respect to this award; and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Director of Human Resources or their respective delegates or nominees shall be binding on all parties.

Notwithstanding anything herein to the contrary, the determinations of the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements are not required to be uniform. By way of clarification, the Committee, the Firm, the Director of Human Resources and their respective delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any time and for any reason; provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except to the extent that the Committee or its delegate considers advisable to (x) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "No Ownership Rights," in either case, to the extent permitted by Section 409A of the Code. This Award Agreement may not be amended except in writing signed by the Director of Human Resources of JPMorgan Chase.

Severability: If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator of competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law.

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity: Upon receipt of satisfactory evidence that applicable United States federal, state, local, foreign or supranational ethics or conflict of interest laws or regulations require you to divest your interest in JPMorgan Chase PSUs, the Firm may accelerate the distribution of all or part of your outstanding award, including Dividend Equivalent Shares, effective on or before the required divestiture date and waive the Holding Requirement; provided that no accelerated distribution shall occur if the Firm determines that such acceleration will violate Section 409A of the Code.

If you have voluntarily terminated your employment and have satisfied the requirements of the "Government Office" section of this award, acceleration shall apply (to extent required) to the percentage of your outstanding award that would continue to vest under that section. In the case of a termination of employment where the award is outstanding as a result of "Job Elimination" or "Full Career Eligibility," then acceleration shall apply, to the extent required, to the full outstanding award. Subject to the two foregoing sections, the number of shares of Common Stock to be received on acceleration shall be determined using the methodology set forth under the section captioned "Death."

To the extent you have vested shares under this award subject to the Holding Requirement and become subject to divestiture requirement as forth herein, the Firm may waive the holding period to the extent required.

Notwithstanding an accelerated distribution or waiver of the Holding Requirement pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the original vesting period and shares had been distributed as scheduled as of the vesting date, including, but not limited to, repayment obligations set forth in "Remedies" and employment restrictions in the case of "Full Career Eligibility" or required government service period in the case of "Government Office."

Use of Personal Data: By accepting this award, you have acknowledged that the Firm may process your personal data (including sensitive personal data) for purposes, including but not limited to (i) determining your compensation, (ii) payroll activities, including, but not limited to, tax withholding and regulatory reporting, which tax and regulatory reporting and withholding may include, but is not limited to, the United States and its political subdivisions, (if not the United States) your work country and its political subdivisions (including countries to which you travel on Firm business) and your country of residence or nationality,(iii) registration of shares, (iv) establishing brokerage account on your behalf, and (v) all other lawful purposes related to your employment and this award, and that the Firm may provide such data to third party vendors with whom it has contracted to provide such services and/or other bodies, including regulators, supervisory bodies, law enforcement and other government agencies. You are acknowledging and agreeing that your personal data will be transferred to and processed in countries and locations that do not have the same data privacy laws and statutory protection for personal data as your work country, country of residence, or country of nationality. If your personal data is subject to data privacy laws or statutory protection for personal data and they so provide for termination of the foregoing authorization, you may terminate the authorization at any time except with respect to tax and regulatory reporting and subject always to the Firm's legal and regulatory obligations. In the event you terminate this authorization, your award will be cancelled.

Governing Law: This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflict of law principles.

Choice of Forum: By accepting this award, you agree that to the extent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in connection with this award or the Plan shall be submitted to arbitration in accordance with the rules of the American Arbitration Association if so elected by the Firm in its sole discretion. In the event such a dispute is not subject to arbitration for any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any objection to personal jurisdiction or to the laying of venue of such dispute and further agree not to commence any action arising out of or relating to this award or the Plan in any other forum.

Waiver of Jury Trial/Class Claims: By accepting this award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (i) to waive the right to a jury trial and (ii) that any judicial proceeding or arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member in a class action, collective action, or other representative or joint action.

Litigation: By accepting any award, you agree that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement where the Firm is the prevailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney fees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Nontransferability: Neither this award or any other outstanding awards of restricted stock units or of performance based share units, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hypothecated or subject to any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

Definitions

"Annual PSUs" means the number of PSUs determined by multiplying the Target Award Number (after giving effect to any cancellation thereof, in whole or in part) by the Target Award Percentage corresponding to the Firm's Relative Performance Ranking for each applicable performance year (both percentage and ranking, as set forth in the footnote to the Performance Table); provided that if the Firm Reported ROTCE for any completed calendar year in the Performance Period either equals or exceeds 14% or is less than 6%, one hundred fifty percent or zero, respectively as the case may be, shall be substituted for that year's Target Award Percentage in calculating the number of Annual PSUs for that year. For avoidance of doubt, any cancellation of this award (in whole or in part) during the Performance Period will reduce the Target Award Number.

"Average Tangible Common Equity" means annual average common stockholders' equity less annual average goodwill and annual average identifiable intangible assets. Annual averages of the components of Average Tangible Common Equity will be calculated using quarterly balances, as reported in publicly available financial disclosures. In the event that quarterly balances are not available, annual year end balances will be used. This calculation is used solely for purposes of the Relative Performance Ranking.

"Calculation Agent" means a third party entity not owned or controlled by the Firm, such as an accounting or consulting firm, retained from time to time by the Director of Human Resources or his/her delegate.

"Cause" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules of self-regulatory bodies) related to the Firm's business, (ii) indictment or conviction of a felony, (iii) commission of a fraudulent act, (iv) violation of the JPMorgan Code of Conduct or other Firm policies or misconduct related to your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job function or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee.

"Financial Services Company" means a business enterprise that employs you in any capacity (such as an employee, contractor, consultant, advisor, or self-employed individual, whether paid or unpaid) and engages in:

- commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,
- insurance, including but not limited to, guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of the forgoing,
- financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, and hedge funds,
- issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments,
- advising on, or investing in, private equity or real estate, or
- any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute financial services.

"Firmwide Financial Threshold" means a cumulative return on tangible common equity for 2016, 2017 and 2018 of not less than 15%. Cumulative return on tangible common equity means (i) the sum of the Firm's reported net income for all three years, divided by (ii) reported year-end tangible equity averaged over the three years. "Firm Reported ROTCE" means the Firm's percentage return on tangible common equity for each year in the Performance Period (as calculated for use in its publicly available year-end financial disclosures without taking into account any rounding conventions used for financial reporting purposes).

"Government Office" means (i) a full-time position in an elected or appointed office in local, state, or federal government (including equivalent positions outside the U.S. or in a supranational organization), not reasonably anticipated to be a full-career position, or (ii) conducting a bona fide full-time campaign for such an elective public office after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office.

"Line of Business" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate Investment Bank). All Corporate Functions (including the functions of the Chief Investment Office) are considered a single Line of Business.

"Line of Business Financial Threshold" means the financial threshold set forth below: for the following Lines of Business based on the Firm's management reporting system:

Asset Management	Annual negative pre-provision net income
Card Services	Annual negative pre-tax, pre loan loss reserve income
Commercial Banking	Annual negative pre-provision net income including loan charge-offs

Corporate Investment Bank	Annual negative pre-provision net income for CIB overall and/or annual negative allocated product revenues (excluding DVA) for:
	• Macro Products:
	  • Currency and Emerging Markets
	  • Rates
	  • Commodities
	• Spread Products
	  • Credit
	  • SPG
	  • Public Finance
	• Equities
	• Investor Services
	• Global Banking

Consumer Banking Business	Annual negative pre-provision net income
Corporate Functions (including Chief Investment Office)	Annual negative pre-provision net income at the Firm level
Mortgage Banking	Annual negative pre-provision net income excluding losses from liquidating portfolios and MSR Trading

"Not-for-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code. Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals. Not-for-Profit Organization shall also mean entities outside the United States exempt from local and national tax laws because they are organized and operated exclusively for purposes identical to those applicable to Section 501(c)(3) organization.

"Performance Companies" mean the following institutions which have business activities that overlap with a significant portion of the Firm's revenue mix: Bank of America Corporation, Barclays PLC, Capital One Financial Corporation, Citigroup Inc., Credit Suisse Group AG, Deutsche Bank AG, Goldman Sachs Group, Inc., HSBC Holdings PLC, Morgan Stanley, Wells Fargo & Company, and UBS Group AG.

If, during the Performance Period, one or more Performance Companies shall merge, engage in a spin-off or otherwise experience a material change in its revenue mix or business activities or its existence or its primary businesses shall terminate or cease due to receivership, bankruptcy, sale, or otherwise, the Committee may eliminate such institution from the list of Performance Companies or make such other equitable adjustments, such as adding an acquirer or a new company to the list of Performance Companies, as it deems appropriate, with any such changes having effect for purposes of all calculations hereunder on a prospective basis from the date the applicable change is made.

"Performance Period" means calendar years 2016, 2017 and 2018.

"Performance Table" means the table used int he calculation of Annual PSUs for each year in the Performance Period as set forth below:

Firm Reported ROTCE (annual performance)	Target Award Percentage
≥14%	150%
6% to <14%	Pay by relative ROTCE scale
<6%	0%

Relative Performance Ranking [1] (annual performance)	Target Award Percentage [1]
1st Quartile	150%
2nd Quartile	100% to 125%
3rd Quartile	70% to 100%
4th Quartile	25% to 55%

1. The following sets forth the precise Target Award Percentage corresponding to the Firm's Relative performance ranking (when compared to Performance Companies): Top 3 = 150%; #4 = 125%; #5 = 112.5%; #6 = 100%; #7 = 100%; #8 = 85%; #9 =70%; #10 = 55%; #11 = 40%; and #12 = 25%.

If, after the calculation of the Relative Performance Ranking, there is a tie, the tie shall be disregarded for purposes of determining the Target Award Percentage. For example, in the case of a tie for the fourth ranking between the Firm and a Performance Company, the Firm shall be treated as having satisfied that ranking. In the case of that same tie among Performance Companies, the fourth and fifth rankings will be deemed to have been satisfied.

"Recognized Service" means the period of service as an employee set forth in the Firm's applicable service-related policies.

"Relative Performance Ranking" means the ranking of the ROTCE of the Firm as compared to the ranking of the ROTCE of the Performance Companies as specified in the footnote to the Performance Table for each year in the Performance Period.

"ROTCE" means for the Firm and each of the Performance Companies a percentage derived by, for each year in the Performance Period, dividing (i) annual earnings from continuing operations less dividends on preferred stock as set forth in published financial disclosures by (ii) the Average Tangible Common Equity for the year. If, prior to the end of the vesting period, the Firm or any Performance Company restates its published financial statements for any year in the Performance Period, ROTCE for that year shall be recalculated for the Firm or Performance Company with the Relative Performance Ranking adjusted, if necessary. This calculation is used solely for purposes of the Relative Performance Ranking.

"Target Award Number" means the number of PSUs designated as such in the Award Agreement.

"Target Award Percentage" means the applicable percentage specified in the footnote to the Performance Table for each year in the Performance Period.

Government Office

You may be eligible to continue vesting in all or part of your award if you voluntarily resign to accept a Government Office (as defined above) or to become a candidate for an elective Government Office.

Full Career Eligibility:
The "Government Office" subsection of this award does not apply to you if you satisfy the requirement for "--Full Career Eligibility" as of the date that you voluntarily terminate your employment with the Firm.

Eligibility:
Eligibility for continued vesting is conditioned on your providing the Firm:

- At least 60 days' advance written notice of your intention to resign to accept or pursue a Government Office, during which period you must perform in a cooperative and professional manner services requested by the Firm and not provide services for any other employer. The Firm may elect to shorten this notice period at the Firm's discretion.
- Confirmation, in a form satisfactory to the Firm, that vesting in this award pursuant to this provision would not violate any applicable law, regulation or rule.
- Documentation in a form satisfactory to the Firm that your resignation is for the purpose of accepting a Government Office or becoming a candidate for a Government Office.

Portion of Your Award Subject to Continued vesting:
Subject to the conditions below, the percentage of this award that will continue to vest in accordance with this award's original schedule will be based on your years of continuous service completed with the Firm immediately preceding your termination date, as follows:

- 50% if you have at least 3 but less than 4 years of continuous service,
- 75% if you have at least 4 but less than 5 years of continuous service, or
- 100% if you have 5 or more years of continuous service.

The portion of this award subject to continued vesting above is referred to as the "CV Award" and the portion not subject to continued vesting will be cancelled as of the date your employment terminates.

Conditions for Continued Vesting of Award:

- You must remain in a non-elective Government Office for two or more years after your employment with the Firm terminates to be eligible to receive the CV Award; provided that if your non-elective Government Office is for a period less than two years, you will be eligible to receive the CV Award if it has a vesting date during your period of Government Service; or

  In the case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the election. (If you are not elected, see below for employment restrictions.)

  For avoidance of doubt, the performance criteria and protection based vesting set forth in these terms and conditions continue to apply to a CV Award.

Satisfaction of Conditions for Continued Vesting:
For any service in a Government Office, your awards will vest for the time you are engaged in such service, except as described in the section captioned "Administrative Provisions--Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity".

If your service in a Government Office ends two years or more after your employment with the Firm terminates, or in the case of resignation from the Firm to campaign for a Government Office, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards that would have then been outstanding but for an accelerated distribution of shares (as described in the section captioned "Administrative Provisions--Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remainder of the applicable vesting period to the same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as if you had resigned from the Firm having met the requirements for Full Career Eligibility.

Failure to Satisfy Conditions for Continued Vesting:
If you do not satisfy the above "Conditions for Continued Vesting of Awards," any outstanding PSUs under the CV Award will be cancelled. You also will be required to repay the Fair Market Value of the number of shares (before tax and other withholdings) of Common Stock distributed to you that would have been outstanding as PSUs on the date you failed to satisfy the "Conditions for Continued Vesting of Award" but for their accelerated distribution (as described in the "Administrative Provisions" under the heading captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"). Fair Market Value for this purpose will be determined as the date that the shares were distributed.

JPMORGAN CHASE & CO. LONG-TERM INCENTIVE PLAN
TERMS AND CONDITIONS OF JANUARY 19, 2016
PERFORMANCE SHARE UNIT AWARD
OPERATING COMMITTEE
(Protection-Based Vesting Provisions)

Award Agreement

These terms and conditions are made part of the Award Agreement dated as of January 19, 2016 ("Grant Date") awarding performance share units ("PSUs") pursuant to the terms of the JPMorgan Chase & Co. Long-Term Incentive Plan ("Plan"). To the extent the terms of the Award Agreement (all references to which will include these terms and conditions) conflict with the Plan, the Plan will govern. The Award Agreement, the Plan and Prospectus supersede any other agreement, whether written or oral, that may have been entered into by the Firm and you relating to this award.

This award was granted on the Grant Date subject to the Award Agreement and Plan. **Unless you decline by the deadline and in the manner specified in the Award Agreement, you will have agreed to be bound by these terms and conditions, effective as of the Grant Date.** If you decline the award, it will be cancelled as of the Grant Date.

Capitalized terms that are not defined in "Definitions" below or elsewhere in the Award Agreement will have the same meaning as set forth in the Plan.

JPMorgan Chase & Co. will be referred to throughout the Award Agreement as "JPMorgan Chase," and together with its subsidiaries as the "Firm."

Form and Purpose of Award

Each PSU represents a non-transferable right to require JPMorgan Chase to transfer one share of Common Stock or (at JPMorgan Chase's option) to pay the amount of the Fair Market Value thereof following the vesting date as set forth in your Award Agreement. Such transfer or payment is hereinafter referred to as a "distribution" and words to a similar effect, such as distributed, should be construed accordingly. Whether the distribution is made in Common Stock or in cash shall be determined by the Firm and if not so determined before the time of the actual distribution shall be made in Common Stock. To the extent which a payment is made not in Common Stock but in cash, the amount of such cash shall be the Fair Market Value of the Common Stock not transferred, calculated at the applicable vesting date.

The purpose of this award is to further emphasize sustained long-term performance and to align your interests with those of the Firm and its shareholders.

Protection-Based Vesting

This award is intended and expected to vest on the vesting date, provided that you are continuously employed by the Firm through such vesting date, or you meet the requirements for continued vesting described under the subsections "--Job Elimination," "--Full Career Eligibility," "--Government Office" or "--Disability." However, vesting and the number of PSUs that will vest are subject to these terms and conditions (including, but not limited to, sections captioned "Recapture Provisions," "Number to Vest on Vesting Date" and "Remedies" and the following protection-based vesting provision).

Up to a total of fifty percent of your award (including any associated Dividend Equivalent Shares) that would otherwise be distributable to you on the vesting date ("At Risk PSUs") may be cancelled if the Chief Executive Officer of JPMorgan Chase ("CEO") determines in his or her sole discretion that cancellation of all or portion of the At Risk PSUs is appropriate in light of any one or a combination of the following factors:

- Your performance in relation to the priorities for your position, or the Firm's performance in relation to the priorities for which you share responsibility as a member of the Operating Committee, have been unsatisfactory for a sustained period of time. Among the factors the CEO may consider in assessing performance are net income, total net revenue, earnings per share and capital ratios of the Firm, both on an absolute basis and, as appropriate, relative to peer firms.
- For any calendar year ending during the vesting period, JPMorgan Chase's annual pre-provision net income at the Firm level is negative.
- RSU awards granted to participants in a Line of Business for which you exercise, or during the vesting period exercised, direct or indirect responsibility, were in whole or in part cancelled because the Line of Business did not meet its annual Line of Business Financial Threshold.
- The Firm does not meet the Firmwide Financial Threshold.

For avoidance of doubt, cancellation of the At Risk PSUs, in whole or part, for one or more of the above factors may occur prior to the end of the Performance Period and the maximum number of At Risk PSUs subject to cancellation prior to the end of the Performance Period will be up to fifty percent of the Target Award Number.

In the event that your employment terminates due to "Job Elimination," "Full Career Eligibility," Government Office" or "Disability" entitling you to continued vesting in your award, the cancellation circumstances described above will continue to apply to your At Risk PSUs.

Any determination above with respect to protection-based vesting provisions is subject to ratification by the Compensation and Management Development Committee of the Board of Directors of JPMorgan Chase ("Committee"). In the case of an award to the CEO, all such determinations shall be made by the Committee.

Number to Vest on the Vesting Date

Subject to any cancellation in whole or part of your award pursuant to these terms and conditions:

Performance calculation: On the vesting date, you will vest in a number of PSUs derived by dividing the sum of the number of the Annual PSUs by the number of years in the Performance Period. See sections captioned, "Calculation of Relative Performance" and "Definitions."

You will also vest in additional shares of Common Stock as calculated under the section captioned, "Dividend Equivalent Shares." Delivery of vested shares to your account will be made not later than the date specified in the last sentence of the subsection captioned Section 409A Compliance.

Dividend Equivalent Shares

If dividends are paid on Common Stock during the Vesting Period while the award is outstanding, you will receive on the vesting date additional shares of Common Stock as calculated in this section. The number, if any, will be based on the dividends that would have been paid during the Vesting Period as of each dividend payment date on the actual number of shares of Common Stock distributable to you resulting from the vesting of the PSUs, if any, and treated as reinvested in additional shares of Common Stock on each dividend payment based on the Fair Market Value of one share of Common Stock on each dividend payment date ("Dividend Equivalent Shares").

Holding Requirement

As of the vesting date set forth in your Award Agreement, you shall be entitled to a distribution equal to the number of PSUs, plus any additional Dividend Equivalent Shares, vesting on such date, less the number withheld to satisfy tax withholding obligations. The distribution made to you will be held in an account in your name with restrictions preventing you from transferring, assigning, selling, pledging or otherwise encumbering such distribution for a two year period commencing as of the vesting date and ending as of the second anniversary of the vesting date. Such restrictions shall only lapse, prior to the expiration of the two year holding period, in the event of your death or for an accelerated distribution for ethics or conflict reasons. See section captioned, "Death" and subsection captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity."

Calculation of Relative Performance Ranking

For purposes of the Relative Performance Ranking, the Ranking of the Firm and of each Performance Company for each year in the Performance Period shall be determined and calculated by the Calculation Agent, using the definitions of "Annual PSUs," "ROTCE," "Average Tangible Common Equity," (if otherwise applicable) "Firm Reported ROTCE" and "Performance Table" (including its footnote) as set forth in the Definitions section of these terms and conditions. See section captioned, "Definitions." Except for Firm Reported ROTCE, calculations will be expressed as a decimal to the second place (i.e. xx.yy%). See section captioned, "Definitions--Performance Table" in the event of a tie. All performance based calculations as set forth herein are binding and conclusive on you and your successors.

Vesting Period

The period from the Grant Date to the vesting date is the "Vesting Period." (See "Administrative Provision--Amendment" pursuant to which the Firm may extend the vesting period and "No Ownership Rights" pursuant to which the Firm may place restrictions on delivered shares of Common Stock following the vesting date and section captioned, "Holding Period" above).

Bonus Recoupment

In consideration of the grant of this award, you agree that you are subject to the JPMorgan Chase Bonus Recoupment Policy or successor policy as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2015 and to this award. You can access this policy as currently in effect through the following link:

http://www.jpmorganchase.com/corporate/About-JPMC/corporate-governance-principles.htm#recoupment

For the avoidance of doubt, nothing in these terms and conditions in any way limits the rights of the Firm under the JPMorgan Chase Bonus Recoupment Policy (or successor policy).

UK Clawback Policy for Identified Staff

In consideration of grant of this award, and without prejudice to any other provision of this Award Agreement, you agree that you are subject to the JPMorgan Chase Clawback Policy for Identified Staff or successor policy as in effect from time to time as it applies both to the cash incentive compensation awarded to you for performance year 2015 and to this award. You can access this policy as currently in effect in My Rewards through the following link:

https://myrewards.jpmchase.net/myrewards

Recapture Provisions (Detrimental Conduct, Risk-Related and Other Recapture Provisions)

Notwithstanding any terms of this Award Agreement to the contrary, JPMorgan Chase reserves the right in its sole discretion to cancel up to 100% of your award (for the avoidance of doubt, including any associated Dividend Equivalent Shares) and, to the extent set forth in "Remedies" below, to recover from you up to an amount equal to the Fair Market Value (determined as of the vesting date) of the gross number of shares of Common Stock (or the gross amount of cash in lieu of shares) previously distributed (including vested shares subject to the Holding Requirements and shares withheld for tax purposes) under this award if the Firm in its sole discretion determines that:

- you engaged in conduct detrimental to the Firm insofar as it causes material financial or reputational harm to the Firm or its business activities, or
- this award was based on materially inaccurate performance metrics, whether or not you were responsible for the inaccuracy, or
- this award was based on a material misrepresentation by you, or
- you improperly or with gross negligence failed to identify, raise or assess, in a timely manner and as reasonably expected, risks and/or concerns with respect to risks material to the Firm or its business activities, or
- your employment was terminated for Cause (see "Definitions" below) or, in the case of a determination after the termination of your employment, that your employment could have been terminated for Cause.

See section captioned "Remedies" below for additional information.

JPMorgan Chase's right to cancel and/or recover the value of this award (or any cash bonus) under the JPMorgan Chase Bonus Recoupment Policy and the other provisions of this award relate to the "organizational goals" of the Firm as that term is defined by regulations issued under Section 409A of the Internal Revenue Code ("Code").

Termination of Employment

Except as explicitly set forth below under the subsections captioned "--Job Elimination," "--Full Career Eligibility," "--Government Office" or "--Disability" or under the section captioned "Death," this award (for avoidance of doubt, including any associated Dividend Equivalent Shares) will be cancelled in full effective on the date your employment with the Firm terminates for any reason.

Subject to these terms and conditions (including, but not limited to, sections captioned "Protection-Based Vesting," "Number to Vest on Vesting Date," "Bonus Recoupment," "UK Clawback Policy for Identified Staff," "Recapture Provisions," "Remedies," and "Your Obligations",) you will be eligible to continue to vest (on the original vesting schedule) with respect to your award following the termination of your employment if one of the following circumstances applies to you:

➢ **Job Elimination**

Job Elimination:

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- the Firm terminated your employment because your job was eliminated, and
- after you are notified that your job will be eliminated, you provided such services as requested by the Firm in a cooperative and professional manner, and
- you satisfied the Release/Certification Requirements set forth below.

➢ **Full Career Eligibility**

Full Career Eligibility:

In the event that the Director of Human Resources or nominee in his or her sole discretion determines that

- you voluntarily terminated your employment with the Firm, had completed at least five years of continuous service with the Firm immediately preceding your termination date, and your Recognized Service (as defined below) on your date of termination equaled or exceeded 15 years, and
- you provided at least 90 days advance written notice to the Firm of your intention to voluntarily terminate your employment under this provision, during which notice period you provided such services as requested by the Firm in a cooperative and professional manner and you did not perform any services for any other employer, and
- continued vesting is appropriate, which determination is made prior to your termination and will be based on your performance and conduct (before and after providing notice), and
- from your date of termination of employment through the applicable vesting date, you do not (i) perform services in any capacity (including self-employment) for a Financial Services Company (as defined below) or (ii) work in your profession (whether or not for a Financial Services Company); provided that you may work for a government, education or Not-for-Profit Organization (as defined below), and
- you satisfy the Release/Certification Requirements set forth below.

After receipt of such advance written notice, the Firm may choose to have you continue to provide services during such 90-day period as a condition to continued vesting or shorten the length of the 90-day period at the Firm's discretion, but to a date no earlier than the date you would otherwise meet the service requirement.

Additional advance notice requirements may apply for employees subject to notice period policies. (See "Notice Period" below.)

➢ **Government Office**

Government Office:

In the event that you voluntarily terminate your employment with the Firm to accept a Government Office or become a candidate for an elective Government Office, as described at the end of these terms and conditions under the section captioned "Government Office."

➢ **Disability**

Disability:

In the event that

- your employment with the Firm terminates because (i) you are unable to return to work while you are receiving benefits under the JPMorgan Chase Long Term Disability Plan, or for non-U.S. employees, under the equivalent JPMorgan Chase-sponsored local country plan (in either case, "LTD Plan"), or (ii) if you are not covered by a LTD Plan, you are unable to return to work due to a long-term disability that would qualify for benefits under the applicable LTD Plan, as determined by the Firm or a third-party designated by the Firm; provided that you (x) request in writing continued vesting due to such disability within 30 days of the date your employment terminates, and (y) provide any requested supporting documentation and (z) receive the Firm's written consent to such treatment, and
- you satisfy the Release/Certification Requirements set forth below.

Release/ Certification

To qualify for continued vesting after termination of your employment under any of the foregoing circumstances:

- you must timely execute and deliver a release of claims in favor of the Firm, having such form and terms as the Firm shall specify,
- with respect to Full Career Eligibility, prior to the termination of your employment, you must confirm with management that you meet the eligibility criteria (including providing at least 90 days advance written notification), advise that you are seeking to be treated as an individual eligible for Full Career Eligibility, and receive written consent to such continued vesting,
- with respect to Disability, you must satisfy the notice and documentation described above and receive written consent to such continued vesting, and
- except in the case of a Job Elimination, it is your responsibility to take the appropriate steps to certify to the Firm prior to each vesting date on the authorized form of the Firm that you have complied with the employment restrictions applicable to you (as described herein) from your date of termination of employment through the applicable vesting date and in all cases, otherwise complied with all other terms of the Award Agreement. (See section captioned "Your Obligations" below.)

Death

If you die while you are eligible to vest in this award, your designated beneficiary on file with the Firm's Stock Administration Department (or your estate or if no beneficiary has been designated or survives you) may be entitled to receive a distribution of a number of shares of Common Stock associated with your award. The Target Award Percentage in the case of death is based on the Number to Vest on the Vesting Date calculation described above for each completed calendar year in the Performance Period and using the Target Award Percentage equal to 100 percent for any remaining calendar years in the Performance Period.

In addition your beneficiary or your estate shall receive additional shares of Common Stock, i.e. Dividend Equivalent Shares, as set forth in the section captioned, "Dividend Equivalent Shares" but based on dividend equivalents up to the date of your death.

Any shares will be distributed by the later of the end of the calendar year in which you die or the 15th day of the third month following your date of death.

Your Obligations

In consideration of the grant of this award, you agree to comply with and be bound by the obligations set forth below next to the subsections captioned "--Non-Solicitation of Employees and Customers," "--Confidential Information," "--Non-Disparagement," "--Cooperation," "--Compliance with Award Agreement," and "--Notice Period."

➢ **Non-Solicitation of Employees and Customers**

During your employment by the Firm and for one year following the termination of your employment, or if longer, during the vesting period, if you continue to vest after your employment with the Firm terminates, you will not directly or indirectly, whether on your own behalf or on behalf of any other party, without the prior written consent of the Director of Human Resources: (i) solicit, induce or encourage any of the Firm's then current employees to leave the Firm or to apply for employment elsewhere, (ii) hire any employee or former employee who was employed by the Firm at the date your employment terminated, unless the individual's employment terminated because his or her job was eliminated, or the individual's employment with the Firm has been terminated for more than six months, (iii) to the fullest extent enforceable under applicable law, solicit or induce or attempt to induce to leave the Firm, or divert or attempt to divert from doing business with the Firm, any then current customers, suppliers or other persons or entities that were serviced by you or whose names became known to you by virtue of your employment with the Firm, or otherwise interfere with the relationship between the Firm and such customers, suppliers or other persons or entities. This does not apply to publicly known institutional customers that you service after your employment with the Firm without the use of the Firm's confidential or proprietary information.

These restrictions do not apply to authorized actions you take in the normal course of your employment with the Firm, such as employment decisions with respect to employees you supervise or business referrals in accordance with the Firm's policies.

- **Confidential Information** You will not, either during your employment with the Firm or thereafter, directly or indirectly (i) use or disclose to anyone any confidential information related to the Firm's business, or (ii) communicate with the press or other media about matters related to the Firm, its customers or employees, including matters and activities relating to your employment, or the employment of others, by the Firm, in the case of either (i) or (ii), except as explicitly permitted by the JPMorgan Chase Code of Conduct and applicable policies or law or legal process. In addition, following your termination of employment, you will not, without prior written authorization, access the Firm's private and internal information through telephonic, intranet or internet means. "Confidential information" shall have the same meaning for the Award Agreement as it has in the JPMorgan Chase Code of Conduct. Nothing in this award precludes you from reporting to the Firm's management or directors or to the government, a regulator or self-regulatory agency conduct you believe to be in violation of the law or responding truthfully to questions or requests from the government, a regulator or in a court of law.

- **Non-Disparagement** You will not, either during your employment with the Firm or thereafter, make or encourage others to make any public statement or release any information in verbal, written, electronic or any other form, that is intended to, or reasonably could be foreseen to, disparage, embarrass or criticize the Firm or its employees, officers, directors or shareholders as a group. This shall not preclude you from reporting to the Firm's management or directors or to the government or a regulator conduct you believe to be in violation of the law or the Firm's Code of Conduct or responding truthfully to questions or requests for information to the government, a regulator or in a court of law in connection with a legal or regulatory investigation or proceeding.

- **Cooperation** You will cooperate fully with and provide full and accurate information to the Firm and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which you may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable out-of-pocket expenses incurred by you.

- **Compliance with Award Agreement** You will provide the Firm with any information reasonably requested to determine compliance with the Award Agreement, and you authorize the Firm to disclose the terms of the Award Agreement to any third party who might be affected thereby, including your prospective employer.

- **Notice Period** If you are subject to a notice period or become subject to a notice period after the Grant Date, whether by contract or by policy, that requires you to provide advance written notice of your intention to terminate your employment ("Notice Period"), then as consideration for this award and continued employment, you will provide the Firm with the necessary advance written notice that applies to you, as specified by such contract or policy.

  After receipt of your notice, the Firm may choose to have you continue to provide services during the applicable Notice Period or may place you on a paid leave for all or part of the applicable Notice Period. During the Notice Period, you shall continue to devote your full time and loyalty to the Firm by providing services in a cooperative and professional manner and not perform any services for any other employer and shall receive your base salary and certain benefits until your employment terminates. You and the Firm may mutually agree to waive or modify the length of the Notice Period.

  Regardless of whether a Notice Period applies to you, you must comply with the 90-day advance notice period described under the section captioned "Termination of Employment-- Full Career Eligibility" in the event you wish to terminate employment under the Full Career Eligibility provision.

Remedies

- **Cancellation** In addition to the cancellation provisions described under the sections captioned "Bonus Recoupment," "UK Clawback Policy for Identified Staff," "Protection-Based Vesting," "Termination of Employment" and "Recapture Provisions," your outstanding PSUs under this award may be cancelled if the Firm in its sole discretion determines that:

  - you have failed to comply with any of the advance notice/cooperation requirements or employment restrictions applicable to your termination of employment, or
  - you have failed to return the required forms specified under the section captioned "Release/Certification" within the specified deadline, including the certification required immediately prior to a vesting date under Full Career Eligibility and Disability, or
  - you have violated any of the provisions as set forth above in the section captioned "Your Obligations."

  To the extent provided under "Administrative Provisions-Amendment" below, JPMorgan Chase reserves the right to suspend vesting of this award and/or distribution of shares under this award, including, without limitation, during any period that JPMorgan Chase is evaluating whether this award is subject to cancellation and/or recovery and/or whether the conditions for distributions of shares under this award are satisfied. The Firm will not be responsible for any price fluctuations during any period of suspension and, if applicable, suspended units will be reinstated consistent with Plan administration procedures. See also "Administrative Provisions-No Ownership Rights."

➢ **Recovery** In addition, you may be required to pay the Firm up to an amount equal to the Fair Market Value (determined as of the applicable vesting date or acceleration date) of the gross number of shares of Common Stock (or cash in lieu of shares) previously distributed, including vested shares subject to the Holding Requirements, under this award as follows:

- Payment may be required with respect to any shares of Common Stock or cash distributed within the three year period prior to a notice-of-recovery under this section, if the Firm in its sole discretion determines that:
  - you committed a fraudulent act, or engaged in knowing and willful misconduct related to your employment;
  - you violated any of the provisions as set forth above in the section captioned "Your Obligations;" or
  - you violated the employment restrictions set forth in the subsection Full Career Eligibility following the termination of your employment.
- In addition, payment may be required with respect to any shares or cash distributed within the one year period prior to notice-of-recovery under this section, if the Firm in its sole discretion determines appropriate pursuant to the provisions in the section above captioned "Recapture Provisions."

Notice-of-recovery under this section is a written (including electronic) notice from the Firm to you either requiring payment under this section or stating that JPMorgan Chase is evaluating requiring payment under this section. Without limiting the foregoing, notice-of-recovery will be deemed provided if the Firm makes a good faith attempt to provide written (including electronic) notice at your last known address maintained in the Firm's employment records. For the avoidance of doubt, a notice-of-recovery that the Firm is evaluating requiring payment under this section shall preserve JPMorgan Chase's rights to require payment as set forth above in all respects and the Firm shall be under no obligation to complete its evaluation other than as the Firm may determine in its sole discretion.

For purposes of this section, shares or cash distributed under this award include shares or other amounts withheld for tax purposes. However, it is the Firm's intention that you only be required to pay the amounts under this section with respect to shares or cash that are or may be retained by you following a determination of tax liability and that you will not be required to pay amounts with respect to shares or other amounts representing irrevocable tax withholdings or tax payments previously made (whether by you or the Firm) that you will not be able to recover, recapture or reclaim (including as a tax credit, refund or other benefit). Accordingly, JPMorgan Chase will not require you to pay any amount that the Firm or its nominee in his or her sole discretion determines is represented by such withholdings or tax payments.

Payment may be made in shares of Common Stock (if shares are distributed) or in cash. You agree that this repayment will be a recovery of a distribution to which you were not entitled under the terms and conditions of your Award Agreement and is not to be construed in any manner as a penalty. You also acknowledge that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Firm, and therefore agree that the Firm shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations; such right to an injunction, however, shall be cumulative and in addition to whatever other remedies the Firm may have under law or equity.

Nothing in the section in any way limits your obligations under "Bonus Recoupment" and "UK Clawback Policy for Identified Staff."

Administrative Provisions

Withholding Taxes: The Firm, in its sole discretion, may (i) retain from each distribution the amount required to satisfy applicable tax obligations (including, to the extent legally permissible, recovery by the Firm of fringe benefit taxes) or (ii) implement any other desirable or necessary procedures, so that appropriate withholding and other taxes are paid to the competent authorities with respect to the distribution and the award. This may include but is not limited to (i) a market sale of a number of such shares on your behalf substantially equal to the withholding or other taxes, (ii) to the extent required by law, withhold from cash compensation, an amount equal to any withholding obligation with respect to the award and distribution that vest under this award , and (iii) retaining vested shares or cash under this award until you pay any taxes associated with the award and distribution directly to the competent authorities.

Right to Set Off: The Firm may, to the maximum extent permitted by applicable law (including Section 409A of the Code), retain for itself funds or the shares of Common Stock resulting from any vesting of this award to satisfy any obligation or debt that you owe to the Firm. Notwithstanding any account agreement with the Firm to the contrary, the Firm will not recoup or recover any amount owed from any funds or unrestricted securities held in your name and maintained at the Firm pursuant to such account agreement to satisfy any obligation or debt or obligation owed by you under this award without your consent. This restriction on the Firm does not apply to accounts described and authorized in "No Ownership Rights" described below.

No Ownership Rights: PSUs do not convey the rights of ownership of Common Stock and do not carry voting rights. No distribution will be made to you until after the number of PSUs have been determined, if any, and have vested and any applicable restrictions (other than Holding Requirement) have lapsed. Shares will be issued in accordance with JPMorgan Chase's procedures for issuing stock. By accepting this award, you authorize the Firm, in its discretion, to establish on your behalf a brokerage account in your name with the Firm and deliver to that brokerage account any vested shares derived from the award and, for avoidance of doubt, you further agree that it shall apply to prior unvested awards.

With respect to any applicable vesting date, JPMorgan Chase may impose for any reason, as of such vesting date for such period as it may specify in its sole discretion, such restrictions on the Common Stock to be issued to you as it may deem appropriate, including, but not limited to, restricting the sale, transfer, pledge, assignment or encumbrance of such shares of Common Stock. By accepting this award, you acknowledge that during such specified period should there be a determination that the cancellation or recovery provisions of this Award (see "Protection-Based Vesting," "Bonus Recoupment," "UK Clawback Policy for Identified Staff," "Termination of Employment," "Recapture Provisions" and "Remedies") apply, then you agree that any shares subject to such restrictions (notwithstanding the limitation set forth in the Right to Set Off section above) may be cancelled in whole or part. See also Amendment section permitting suspension of vesting.

Binding Agreement: The Award Agreement will be binding upon any successor in interest to JPMorgan Chase, by merger or otherwise.

Not a Contract of Employment: Nothing contained in the Award Agreement constitutes a contract of employment or continued employment. Employment is "at-will" and may be terminated by either you or JPMorgan Chase for any reason at any time. This award does not confer any right or entitlement to, nor does the award impose any obligation on the Firm to provide, the same or any similar award in the future and its value is not compensation for purposes of determining severance.

Section 409A Compliance: To the extent that Section 409A of the Code is applicable to this award, distributions of shares and cash hereunder are intended to comply with Section 409A of the Code, and the Award Agreement, including these terms and conditions, shall be interpreted in a manner consistent with such intent.

Notwithstanding anything herein to the contrary, if you (i) are subject to taxation under the Code, (ii) are a specified employee as defined in the JPMorgan Chase 2005 Deferred Compensation Plan and (iii) have incurred a separation from service (as defined in that Plan) and if any distribution under this award represents deferred compensation as defined in Section 409A and such amounts are distributable to you as a result of your separation from service, then those amounts will be delivered to you on first business day of the first calendar month after the expiration of six full months from date of your separation from service. Further, if your award is not subject to a substantial risk of forfeiture as defined by regulations issued under Section 409A of the Code, then the remainder of each calendar year immediately following vesting date set forth in your Award Agreement shall be a payment date for purposes of distributing the vested portion of the award.

Change in Outstanding Shares: In the event of any change in the outstanding shares of Common Stock by reason of any stock dividend or split, recapitalization, issuance of a new class of common stock, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to stockholders of Common Stock other than regular cash dividends, the Committee will make an equitable substitution or proportionate adjustment, in the number or kind of shares of Common Stock or other securities issued or reserved for issuance pursuant to the Plan and to any PSUs outstanding under this award for such corporate events.

Other Equitable Adjustments: The Committee may make adjustments (up or down) to the award as it deems to be equitable, to maintain the intended economics of the award in light of changed circumstances, which may include unusual or non-recurring events affecting the Firm (or the Performance Companies) or its financial statements in each case resulting from changes in accounting methods, practices or policies, changes in capital structure by reason of legal or regulatory requirements and such other changed circumstances, as the Committee may deem appropriate.

Interpretation/Administration: The Committee has sole and complete authority to interpret and administer this Award Agreement, including, without limitation, the power to (i) interpret the Plan and the terms of this Award Agreement; (ii) determine the reason for termination of employment; (iii) determine application of the post-employment obligations and cancellation and recovery provisions; (iv) decide all claims arising with respect to this award; and (v) delegate such authority as it deems appropriate. Any determination contemplated hereunder by the Committee, the Firm, the Director of Human Resources or their respective delegates or nominees shall be binding on all parties.

Notwithstanding anything herein to the contrary, the determinations of the Director of Human Resources, the Firm, the Committee and their respective delegates and nominees under the Plan and the Award Agreements are not required to be uniform. By way of clarification, the Committee, the Firm, the Director of Human Resources and their respective delegates and nominees shall be entitled to make non-uniform and selective determinations and modifications under Award Agreements and the Plan.

Amendment: The Committee or its nominee reserves the right to amend this Award Agreement in any manner, at any time and for any reason; provided, however, that no such amendment shall materially adversely affect your rights under this Award Agreement without your consent except to the extent that the Committee or its delegate considers advisable to (x) comply with applicable laws or changes in or interpretation of applicable laws, regulatory requirements and accounting rules or standards and/or (y) make a change in a scheduled vesting date or impose the restrictions described above under "No Ownership Rights," in either case, to the extent permitted by Section 409A of the Code. This Award Agreement may not be amended except in writing signed by the Director of Human Resources of JPMorgan Chase.

Severability: If any portion of the Award Agreement is determined by the Firm to be unenforceable in any jurisdiction, any court or arbitrator of competent jurisdiction or the Director of Human Resources may reform the relevant provisions (e.g., as to length of service, time, geographical area or scope) to the extent the Firm (or court/arbitrator) considers necessary to make the provision enforceable under applicable law.

Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity: Upon receipt of satisfactory evidence that applicable United States federal, state, local, foreign or supranational ethics or conflict of interest laws or regulations require you to divest your interest in JPMorgan Chase PSUs, the Firm may accelerate the distribution of all or part of your outstanding award, including Dividend Equivalent Shares, effective on or before the required divestiture date and waive the Holding Requirement; provided that no accelerated distribution shall occur if the Firm determines that such acceleration will violate Section 409A of the Code.

If you have voluntarily terminated your employment and have satisfied the requirements of the "Government Office" section of this award, acceleration shall apply (to extent required) to the percentage of your outstanding award that would continue to vest under that section. In the case of a termination of employment where the award is outstanding as a result of "Job Elimination" or "Full Career Eligibility", then acceleration shall apply, to the extent required, to the full outstanding award. Subject to the two foregoing sections, the number of shares of Common Stock to be received on acceleration shall be determined using the methodology set forth under the section captioned "Death."

To the extent you have vested shares under this award subject to the Holding Requirement and become subject to divestiture requirement as forth herein, the Firm may waive the holding period to the extent required.

Notwithstanding an accelerated distribution or waiver of the Holding Requirement pursuant to the foregoing, you will remain subject to the applicable terms of your Award Agreement as if your award had remained outstanding for the duration of the original vesting period and shares had been distributed as scheduled as of the vesting date, including, but not limited to, repayment obligations set forth in "Remedies" and employment restrictions in the case of "Full Career Eligibility" or required government service period in the case of "Government Office."

Use of Personal Data: By accepting this award, you have acknowledged that the Firm may process your personal data (including sensitive personal data) for purposes, including but not limited to (i) determining your compensation, (ii) payroll activities, including, but not limited to, tax withholding and regulatory reporting, which tax and regulatory reporting and withholding may include, but is not limited to, the United States and its political subdivisions, (if not the United States) your work country and its political subdivisions (including countries to which you travel on Firm business) and your country of residence or nationality,(iii) registration of shares, (iv) establishing brokerage account on your behalf, and (v) all other lawful purposes related to your employment and this award, and that the Firm may provide such data to third party vendors with whom it has contracted to provide such services and/or other bodies, including regulators, supervisory bodies, law enforcement and other government agencies. You are acknowledging and agreeing that your personal data will be transferred to and processed in countries and locations that do not have the same data privacy laws and statutory protection for personal data as your work country, country of residence, or country of nationality. If your personal data is subject to data privacy laws or statutory protection for personal data and they so provide for termination of the foregoing authorization, you may terminate the authorization at any time except with respect to tax and regulatory reporting and subject always to the Firm's legal and regulatory obligations. In the event you terminate this authorization, your award will be cancelled.

Governing Law: This award shall be governed by and construed in accordance with the laws of the State of New York, without regard to conflict of law principles.

Choice of Forum: By accepting this award, you agree that to the extent not otherwise subject to arbitration under an arbitration agreement between you and the Firm, any dispute arising directly or indirectly in connection with this award or the Plan shall be submitted to arbitration in accordance with the rules of the American Arbitration Association if so elected by the Firm in its sole discretion. In the event such a dispute is not subject to arbitration for any reason, you agree to accept the exclusive jurisdiction and venue of the United States District Court for the Southern District of New York with respect to any judicial proceeding in connection with this award or the Plan. You waive, to the fullest extent permitted by law, any objection to personal jurisdiction or to the laying of venue of such dispute and further agree not to commence any action arising out of or relating to this award or the Plan in any other forum.

Waiver of Jury Trial/Class Claims: By accepting this award, you agree, with respect to any claim brought in connection with your employment with the Firm in any forum (i) to waive the right to a jury trial and (ii) that any judicial proceeding or arbitration claim will be brought on an individual basis, and you hereby waive any right to submit, initiate, or participate in a representative capacity or as a plaintiff, claimant or member in a class action, collective action, or other representative or joint action.

Litigation: By accepting any award, you agree that in any action or proceeding by the Firm (other than a derivative suit in the right of the Firm) to enforce the terms and conditions of this Award Agreement where the Firm is the prevailing party, the Firm shall be entitled to recover from you its reasonable attorney fees and expenses incurred in such action or proceeding. In addition, you agree that you are not entitled to, and agree not to seek, advancement of attorney fees and indemnification under the Firm's By-Laws in the event of such a suit by the Firm.

Nontransferability: Neither this award or any other outstanding awards of restricted stock units or of performance based share units, nor your interests or rights in any such awards, shall be assigned, pledged, transferred, hypothecated or subject to any lien. An award may be transferred following your death by will, the laws of descent or by a beneficiary designation on file with the Firm.

Definitions

"Annual PSUs" means the number of PSUs determined by multiplying the Target Award Number (after giving effect to any cancellation thereof, in whole or in part) by the Target Award Percentage corresponding to the Firm's Relative Performance Ranking for each applicable performance year (both percentage and ranking, as set forth in the footnote to the Performance Table); provided that if the Firm Reported ROTCE for any completed calendar year in the Performance Period either equals or exceeds 14% or is less than 6%, one hundred fifty percent or zero, respectively as the case may be, shall be substituted for that year's Target Award Percentage in calculating the number of Annual PSUs for that year. For avoidance of doubt, any cancellation of this award (in whole or in part) during the Performance Period will reduce the Target Award Number.

"Average Tangible Common Equity" means annual average common stockholders' equity less annual average goodwill and annual average identifiable intangible assets. Annual averages of the components of Average Tangible Common Equity will be calculated using quarterly balances, as reported in publicly available financial disclosures. In the event that quarterly balances are not available, annual year end balances will be used. This calculation is used solely for purposes of the Relative Performance Ranking.

"Calculation Agent" means a third party entity not owned or controlled by the Firm, such as an accounting or consulting firm, retained from time to time by the Director of Human Resources or his/her delegate.

"Cause" means a determination by the Firm that your employment terminated as a result of your (i) violation of any law, rule or regulation (including rules of self-regulatory bodies) related to the Firm's business, (ii) indictment or conviction of a felony, (iii) commission of a fraudulent act, (iv) violation of the JPMorgan Code of Conduct or other Firm policies or misconduct related to your duties to the Firm (other than immaterial and inadvertent violations or misconduct), (v) grossly inadequate performance of the duties associated with your position or job function or failure to follow reasonable directives of your manager, or (vi) any act or failure to act that is injurious to the interests of the Firm or its relationship with a customer, client or an employee.

"Financial Services Company" means a business enterprise that employs you in any capacity (such as an employee, contractor, consultant, advisor, or self-employed individual, whether paid or unpaid) and engages in:

- commercial or retail banking, including, but not limited to, commercial, institutional and personal trust, custody and/or lending and processing services, originating and servicing mortgages, issuing and servicing credit cards, payment servicing or processing or merchant services,
- insurance, including but not limited to, guaranteeing against loss, harm, damage, illness, disability or death, providing and issuing annuities, acting as principal, agent or broker for purpose of the forgoing,
- financial, investment or economic advisory services, including but not limited to, investment banking services (such as advising on mergers or dispositions, underwriting, dealing in, or making a market in securities or other similar activities), brokerage services, investment management services, asset management services, and hedge funds,
- issuing, trading or selling instruments representing interests in pools of assets or in derivatives instruments,
- advising on, or investing in, private equity or real estate, or
- any similar activities that the Director of Human Resources or nominee determines in his or her sole discretion constitute financial services.

"Firmwide Financial Threshold" means a cumulative return on tangible common equity for 2016, 2017 and 2018 of not less than 15%. Cumulative return on tangible common equity means (i) the sum of the Firm's reported net income for all three years, divided by (ii) reported year-end tangible equity averaged over the three years. "Firm Reported ROTCE" means the Firm's percentage return on tangible common equity for each year in the Performance Period (as calculated for use in its publicly available year-end financial disclosures without taking into account any rounding conventions used for financial reporting purposes).

"Government Office" means (i) a full-time position in an elected or appointed office in local, state, or federal government (including equivalent positions outside the U.S. or in a supranational organization), not reasonably anticipated to be a full-career position, or (ii) conducting a bona fide full-time campaign for such an elective public office after formally filing for candidacy, where it is customary and reasonably necessary to campaign full-time for the office.

"Line of Business" means a business unit of the Firm (or one or more business units designated below under the definition "Line of Business Financial Threshold" of the Corporate Investment Bank). All Corporate Functions (including the functions of the Chief Investment Office) are considered a single Line of Business.

"Line of Business Financial Threshold" means the financial threshold set forth below: for the following Lines of Business based on the Firm's management reporting system:

Asset Management	Annual negative pre-provision net income
Card Services	Annual negative pre-tax, pre loan loss reserve income
Commercial Banking	Annual negative pre-provision net income including loan charge-offs

Corporate Investment Bank	Annual negative pre-provision net income for CIB overall and/or annual negative allocated product revenues (excluding DVA) for:
	• Macro Products:
	  • Currency and Emerging Markets
	  • Rates
	  • Commodities
	• Spread Products
	  • Credit
	  • SPG
	  • Public Finance
	• Equities
	• Investor Services
	• Global Banking

Consumer Banking Business	Annual negative pre-provision net income
Corporate Functions (including Chief Investment Office)	Annual negative pre-provision net income at the Firm level
Mortgage Banking	Annual negative pre-provision net income excluding losses from liquidating portfolios and MSR Trading

"Not-for-Profit Organization" means an entity exempt from tax under state law and under Section 501(c)(3) of the Code. Section 501(c)(3) only includes entities organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary or educational purposes, or to foster national or international amateur sports competition or for the prevention of cruelty to children or animals. Not-for-Profit Organization shall also mean entities outside the United States exempt from local and national tax laws because they are organized and operated exclusively for purposes identical to those applicable to Section 501(c)(3) organization.

"Performance Companies" mean the following institutions which have business activities that overlap with a significant portion of the Firm's revenue mix: Bank of America Corporation, Barclays PLC, Capital One Financial Corporation, Citigroup Inc., Credit Suisse Group AG, Deutsche Bank AG, Goldman Sachs Group, Inc., HSBC Holdings PLC, Morgan Stanley, Wells Fargo & Company, and UBS Group AG.

If, during the Performance Period, one or more Performance Companies shall merge, engage in a spin-off or otherwise experience a material change in its revenue mix or business activities or its existence or its primary businesses shall terminate or cease due to receivership, bankruptcy, sale, or otherwise, the Committee may eliminate such institution from the list of Performance Companies or make such other equitable adjustments, such as adding an acquirer or a new company to the list of Performance Companies, as it deems appropriate, with any such changes having effect for purposes of all calculations hereunder on a prospective basis from the date the applicable change is made.

"Performance Period" means calendar years 2016, 2017 and 2018.

"Performance Table" means the table used int he calculation of Annual PSUs for each year in the Performance Period as set forth below:

Firm Reported ROTCE (annual performance)	Target Award Percentage
≥14%	150%
6% to <14%	Pay by relative ROTCE scale
<6%	0%

Relative Performance Ranking [1] (annual performance)	Target Award Percentage [1]
1st Quartile	150%
2nd Quartile	100% to 125%
3rd Quartile	70% to 100%
4th Quartile	25% to 55%

1. The following sets forth the precise Target Award Percentage corresponding to the Firm's Relative performance ranking (when compared to Performance Companies): Top 3 = 150%; #4 = 125%; #5 = 112.5%; #6 = 100%; #7 = 100%; #8 = 85%; #9 =70%; #10 = 55%; #11 = 40%; and #12 = 25%.

If, after the calculation of the Relative Performance Ranking, there is a tie, the tie shall be disregarded for purposes of determining the Target Award Percentage. For example, in the case of a tie for the fourth ranking between the Firm and a Performance Company, the Firm shall be treated as having satisfied that ranking. In the case of that same tie among Performance Companies, the fourth and fifth rankings will be deemed to have been satisfied.

"Recognized Service" means the period of service as an employee set forth in the Firm's applicable service-related policies.

"Relative Performance Ranking" means the ranking of the ROTCE of the Firm as compared to the ranking of the ROTCE of the Performance Companies as specified in the footnote to the Performance Table for each year in the Performance Period.

"ROTCE" means for the Firm and each of the Performance Companies a percentage derived by, for each year in the Performance Period, dividing (i) annual earnings from continuing operations less dividends on preferred stock as set forth in published financial disclosures by (ii) the Average Tangible Common Equity for the year. If, prior to the end of the vesting period, the Firm or any Performance Company restates its published financial statements for any year in the Performance Period, ROTCE for that year shall be recalculated for the Firm or Performance Company with the Relative Performance Ranking adjusted, if necessary. This calculation is used solely for purposes of the Relative Performance Ranking.

"Target Award Number" means the number of PSUs designated as such in the Award Agreement.

"Target Award Percentage" means the applicable percentage specified in the footnote to the Performance Table for each year in the Performance Period.

Government Office

You may be eligible to continue vesting in all or part of your award if you voluntarily resign to accept a Government Office (as defined above) or to become a candidate for an elective Government Office.

Full Career Eligibility:
The "Government Office" subsection of this award does not apply to you if you satisfy the requirement for "--Full Career Eligibility" as of the date that you voluntarily terminate your employment with the Firm.

Eligibility:
Eligibility for continued vesting is conditioned on your providing the Firm:

- At least 60 days' advance written notice of your intention to resign to accept or pursue a Government Office, during which period you must perform in a cooperative and professional manner services requested by the Firm and not provide services for any other employer. The Firm may elect to shorten this notice period at the Firm's discretion.
- Confirmation, in a form satisfactory to the Firm, that vesting in this award pursuant to this provision would not violate any applicable law, regulation or rule.
- Documentation in a form satisfactory to the Firm that your resignation is for the purpose of accepting a Government Office or becoming a candidate for a Government Office.

Portion of Your Award Subject to Continued vesting:
Subject to the conditions below, the percentage of this award that will continue to vest in accordance with this award's original schedule will be based on your years of continuous service completed with the Firm immediately preceding your termination date, as follows:

- 50% if you have at least 3 but less than 4 years of continuous service,
- 75% if you have at least 4 but less than 5 years of continuous service, or
- 100% if you have 5 or more years of continuous service.

The portion of this award subject to continued vesting above is referred to as the "CV Award" and the portion not subject to continued vesting will be cancelled as of the date your employment terminates.

Conditions for Continued Vesting of Award:

- You must remain in a non-elective Government Office for two or more years after your employment with the Firm terminates to be eligible to receive the CV Award; provided that if your non-elective Government Office is for a period less than two years, you will be eligible to receive the CV Award if it has a vesting date during your period of Government Service; or

  In the case of resignation from the Firm to campaign for an elective Government Office, your name must be on the primary or final public ballot for the election. (If you are not elected, see below for employment restrictions.)

  For avoidance of doubt, the performance criteria and protection based vesting set forth in these terms and conditions continue to apply to a CV Award.

Satisfaction of Conditions for Continued Vesting:
For any service in a Government Office, your awards will vest for the time you are engaged in such service, except as described in the section captioned "Administrative Provisions--Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity".

If your service in a Government Office ends two years or more after your employment with the Firm terminates, or in the case of resignation from the Firm to campaign for a Government Office, your name is on the primary or final public ballot for the election and you are not elected, any CV Awards then outstanding and any such awards that would have then been outstanding but for an accelerated distribution of shares (as described in the section captioned "Administrative Provisions--Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity") will be subject for the remainder of the applicable vesting period to the same terms and conditions of this Award Agreement, including employment restrictions during the vesting period, as if you had resigned from the Firm having met the requirements for Full Career Eligibility.

Failure to Satisfy Conditions for Continued Vesting:
If you do not satisfy the above "Conditions for Continued Vesting of Awards," any outstanding PSUs under the CV Award will be cancelled. You also will be required to repay the Fair Market Value of the number of shares (before tax and other withholdings) of Common Stock distributed to you that would have been outstanding as PSUs on the date you failed to satisfy the "Conditions for Continued Vesting of Award" but for their accelerated distribution (as described in the "Administrative Provisions" under the heading captioned, "Accelerated Distribution for Ethics or Conflict Reasons Resulting From Employment by a Government Entity"). Fair Market Value for this purpose will be determined as the date that the shares were distributed.

Exhibit 12.1

JPMorgan Chase & Co.

Computation of Ratio of Earnings to Fixed Charges

Year ended December 31, (in millions, except ratios)	**2015**	2014	2013	2012	2011
Excluding interest on deposits					
Income from continuing operations before income taxes	**$ 30,702**	$ 30,699	$ 26,675	$ 29,566	$ 27,358
Fixed charges:					
Interest expense	**6,211**	6,264	7,610	8,498	9,749
One-third of rents, net of income from subleases[(a)]	**535**	624	616	554	562
Total fixed charges	**6,746**	6,888	8,226	9,052	10,311
Add: Equity in undistributed loss of affiliates/Less: Equity in undistributed income of affiliates	**406**	1,026	770	172	59
Income from continuing operations before income taxes and fixed charges, excluding capitalized interest	**$ 37,854**	$ 38,613	$ 35,671	$ 38,790	$ 37,728
Fixed charges, as above	**$ 6,746**	$ 6,888	$ 8,226	$ 9,052	$ 10,311
Ratio of earnings to fixed charges	**5.61**	5.61	4.34	4.29	3.66
Including interest on deposits					
Fixed charges as above	**$ 6,746**	$ 6,888	$ 8,226	$ 9,052	$ 10,311
Add: Interest on deposits	**1,252**	1,633	2,067	2,655	3,855
Total fixed charges and interest on deposits	**$ 7,998**	$ 8,521	$ 10,293	$ 11,707	$ 14,166
Income from continuing operations before income taxes and fixed charges, excluding capitalized interest, as above	**$ 37,854**	$ 38,613	$ 35,671	$ 38,790	$ 37,728
Add: Interest on deposits	**1,252**	1,633	2,067	2,655	3,855
Total income from continuing operations before income taxes, fixed charges and interest on deposits	**$ 39,106**	$ 40,246	$ 37,738	$ 41,445	$ 41,583
Ratio of earnings to fixed charges	**4.89**	4.72	3.67	3.54	2.94

(a) The proportion deemed representative of the interest factor.

Exhibit 12.2

JPMorgan Chase & Co.

Computation of Ratio of Earnings to Fixed Charges And Preferred Stock Dividend Requirements

Year ended December 31, (in millions, except ratios)	**2015**	2014	2013	2012	2011
Excluding interest on deposits					
Income from continuing operations before income taxes	**$ 30,702**	$ 30,699	$ 26,675	$ 29,566	$ 27,358
Fixed charges:					
Interest expense	**6,211**	6,264	7,610	8,498	9,749
One-third of rents, net of income from subleases[(a)]	**535**	624	616	554	562
Total fixed charges	**6,746**	6,888	8,226	9,052	10,311
Add: Equity in undistributed loss of affiliates/Less: Equity in undistributed income of affiliates	**406**	1,026	770	172	59
Income from continuing operations before income taxes and fixed charges, excluding capitalized interest	**$ 37,854**	$ 38,613	$ 35,671	$ 38,790	$ 37,728
Fixed charges, as above	**$ 6,746**	$ 6,888	$ 8,226	$ 9,052	$ 10,311
Preferred stock dividends (pretax)	**2,134**	1,589	1,200	908	908
Fixed charges including preferred stock dividends	**$ 8,880**	$ 8,477	$ 9,426	$ 9,960	$ 11,219
Ratio of earnings to fixed charges and preferred stock dividend requirements	**4.26**	4.56	3.78	3.89	3.36
Including interest on deposits					
Fixed charges including preferred stock dividends, as above	**$ 8,880**	$ 8,477	$ 9,426	$ 9,960	$ 11,219
Add: Interest on deposits	**1,252**	1,633	2,067	2,655	3,855
Total fixed charges including preferred stock dividends and interest on deposits	**$ 10,132**	$ 10,110	$ 11,493	$ 12,615	$ 15,074
Income from continuing operations before income taxes and fixed charges, excluding capitalized interest, as above	**$ 37,854**	$ 38,613	$ 35,671	$ 38,790	$ 37,728
Add: Interest on deposits	**1,252**	1,633	2,067	2,655	3,855
Total income from continuing operations before income taxes, fixed charges and interest on deposits	**$ 39,106**	$ 40,246	$ 37,738	$ 41,445	$ 41,583
Ratio of earnings to fixed charges and preferred stock dividend requirements	**3.86**	3.98	3.28	3.29	2.76

(a) The proportion deemed representative of the interest factor.

Exhibit 21

JPMorgan Chase & Co.

List of subsidiaries

While there are a number of subsidiaries that are required to be reported for various purposes to bank regulators, the following is a list of JPMorgan Chase & Co.'s significant legal entity subsidiaries as of December 31, 2015, as defined by SEC rules. The list includes the parent company of significant subsidiaries even if the parent company did not meet the definition of a significant subsidiary. Excluded from the list are subsidiaries that, if considered in the aggregate, would not constitute a significant subsidiary under SEC rules as of December 31, 2015.

Also included in the list are certain subsidiaries that have been designated as material legal entities for resolution planning purposes under the Dodd-Frank Act that did not meet the definition of a significant subsidiary under SEC rules.

December 31, 2015 Name	Organized Under The Laws Of
JPMorgan Chase Bank, National Association	United States
Paymentech, LLC	United States
Chase Mortgage Holdings, Inc	United States
J.P. Morgan Treasury Technologies Corporation	United States
J.P. Morgan International Inc	United States
Bank One International Holding Corporation	United States
J.P.Morgan International Finance Limited	United States
J.P. Morgan Overseas Capital Corporation	United States
J.P. Morgan Whitefriars Inc.	United States
JPMorgan Holdings (Japan) LLC	United States
JPMorgan Securities Japan Co., Ltd.	Japan
J.P. Morgan AG	Germany
Dearborn Merchant Services, Inc.	Canada
Chase Paymentech Solutions	Canada
Paymentech Salem Services, LLC	United States
Chase Paymentech Europe Limited	Ireland
J.P. Morgan Capital Holdings Limited	United Kingdom
J.P.Morgan Chase (UK) Holdings Limited	United Kingdom
J.P.Morgan Chase International Holdings	United Kingdom
J.P. Morgan Securities PLC	United Kingdom
J.P.Morgan Europe Limited	United Kingdom
J.P. Morgan International Bank Limited	United Kingdom
J.P. Morgan Broker-Dealer Holdings Inc.	United States
J.P.Morgan Securities LLC	United States
J.P. Morgan Clearing Corp.	United States
J.P.Morgan Equity Holdings, Inc	United States
Chase Bank USA, National Association	United States
Chase BankCard Services, Inc.	United States
Chase Issuance Trust	United States
J.P.Morgan Services Asia Holdings Inc	United States
J.P.Morgan Services Asia Holdings Limited	Mauritius
J.P.Morgan Services India Private Limited	India
JPMorgan Asset Management Holdings, Inc	United States
J.P.Morgan Investment Management, Inc	United States
JPMorgan Asset Management International Limited	United Kingdom
JPMorgan Asset Management Holdings (UK) Limited	United Kingdom
JPMorgan Asset Management (UK) Limited	United Kingdom
JPMorgan Asset Management Holdings (Luxembourg) S.à.r.l.	Luxembourg
JPMorgan Asset Management (Europe) S.à.r.l.	Luxembourg
JPMorgan Distribution Services, Inc.	United States
JPMorgan Funds Management, Inc.	United States
J.P. Morgan Ventures Energy Corporation	United States

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on:

Form S-3
(No. 333-191692)
(No. 333-199966)

Form S-8
(No. 333-185584)
(No. 333-185582)
(No. 333-185581)
(No. 333-175681)
(No. 333-158325)
(No. 333-150208)
(No. 333-145108)
(No. 333-142109)
(No. 333-125827)
(No. 333-112967)
(No. 333-64476)

of JPMorgan Chase & Co. or its affiliates of our report dated February 23, 2016 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
New York, New York
February 23, 2016

Exhibit 31.1
JPMorgan Chase & Co.

CERTIFICATION

I, James Dimon, certify that:

1. I have reviewed this Annual Report on Form 10-K of JPMorgan Chase & Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal controls over financial reporting, or caused such internal controls over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 23, 2016

/s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

Exhibit 31.2
JPMorgan Chase & Co.

CERTIFICATION

I, Marianne Lake, certify that:

1. I have reviewed this Annual Report on Form 10-K of JPMorgan Chase & Co.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal controls over financial reporting, or caused such internal controls over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 23, 2016

/s/ Marianne Lake

Marianne Lake
Executive Vice President and Chief Financial Officer

Exhibit 32

JPMorgan Chase & Co.

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of JPMorgan Chase & Co. on Form 10-K for the period ended December 31, 2015 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of JPMorgan Chase & Co., certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of JPMorgan Chase & Co.

Date: February 23, 2016

By: /s/ James Dimon

James Dimon
Chairman and Chief Executive Officer

Date: February 23, 2016

By: /s/ Marianne Lake

Marianne Lake
Executive Vice President and Chief Financial Officer

This certification accompanies this Annual Report and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section.

A signed original of this written statement required by Section 906 has been provided to, and will be retained by, JPMorgan Chase & Co. and furnished to the Securities and Exchange Commission or its staff upon request.

J.P. Morgan Securities LLC and Subsidiaries

(An indirect wholly-owned subsidiary of JPMorgan Chase & Co.)

Consolidated Statement of Financial Condition
December 31, 2015

J.P. Morgan Securities LLC and Subsidiaries

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Report of Independent Registered Public Accounting Firm

To Management and the Board of Managers of
J.P. Morgan Securities LLC and Subsidiaries:

In our opinion, the accompanying consolidated statement of financial condition presents fairly, in all material respects, the financial position of J.P. Morgan Securities LLC and its subsidiaries (the "Company") at December 31, 2015, in conformity with accounting principles generally accepted in the United States of America. The consolidated statement of financial condition is the responsibility of the Company's management. Our responsibility is to express an opinion on the consolidated statement of financial condition based on our audit. We conducted our audit of this statement in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated statement of financial condition is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated statement of financial condition, assessing the accounting principles used and significant estimates made by management, and evaluating the overall presentation of the consolidated statement of financial condition. We believe that our audit provides a reasonable basis for our opinion.

PricewaterhouseCoopers LLP

February 29, 2016

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J.P. Morgan Securities LLC and Subsidiaries

(An indirect wholly-owned subsidiary of JPMorgan Chase & Co.)

Consolidated Statement of Financial Condition

December 31, 2015

(in millions)	
Assets	
Cash	$ 732
Cash and securities segregated under federal and other regulations	27,062
Securities purchased under resale agreements (included $15,170 at fair value)	129,159
Securities borrowed	80,077
Securities received as collateral, at fair value	3,996
Receivables from customers	14,283
Receivables from brokers, dealers, clearing organizations and others	16,446
Financial instruments owned, at fair value (included assets pledged of $57,246)	95,470
Goodwill	1,356
Other assets (included $12 at fair value)	1,099
Total assets[(a)]	**$ 369,680**
Liabilities	
Commercial paper	$ 15,562
Short-term borrowings (included $116 at fair value)	18,059
Securities sold under repurchase agreements (included $2,798 at fair value)	157,255
Securities loaned	13,613
Obligation to return securities received as collateral, at fair value	3,996
Payables to customers	84,771
Payables to brokers, dealers, clearing organizations and others	7,994
Financial instruments sold, not yet purchased, at fair value	30,782
Accounts payable and other liabilities	2,535
Beneficial interests issued by consolidated variable interest entities (“VIE”) (included $258 at fair value)	472
Long-term debt (included $5,000 at fair value)	5,500
Total liabilities[(a)]	**340,539**
Commitments and contingencies (see Note 17)	
Subordinated liabilities	14,630
Member’s equity	
Member’s interest	6,167
Retained earnings	8,344
Total member’s equity	**14,511**
Total liabilities and member’s equity	**$ 369,680**

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Company at December 31, 2015. The difference between total VIE assets and liabilities represents the Company’s interests in those entities, which were eliminated in consolidation.

(in millions)	
Assets	
Financial instruments owned	$ 535
Total assets	**$ 535**
Liabilities	
Beneficial interests issued by consolidated VIEs	$ 472
Total liabilities	**$ 472**

The assets of consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of the Company.

The accompanying notes are an integral part of this Consolidated Statement of Financial Condition.

1. Organization

The Consolidated Statement of Financial Condition includes the accounts of J.P. Morgan Securities LLC ("JPMorgan Securities") and its subsidiaries (collectively the "Company"). The Company is an indirect wholly-owned subsidiary of JPMorgan Chase & Co. ("JPMorgan Chase"), which is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide. For purposes of this report, an "affiliate" is defined as JPMorgan Chase or a direct or indirect subsidiary of JPMorgan Chase. The Company is a registered broker-dealer and investment adviser with the United States Securities and Exchange Commission ("SEC") and a futures commission merchant ("FCM") with the Commodities Futures Trading Commission ("CFTC"). The Company is provisionally registered with the National Futures Association ("NFA") as a swap dealer, and the Company is progressing toward final registration. The Company is also a member of the Securities Investor Protection Corporation ("SIPC"), the New York Stock Exchange ("NYSE") and other exchanges.

JPMorgan Securities has the following ratings as of December 31, 2015.

	Long-term issuer	Short-term issuer	Outlook
Standard & Poor's (S&P)	A+	A-1	Stable
Moody's Investors Service	Aa3	P-1	Stable
Fitch Ratings	AA-	F1+	Stable

Nature of business

The Company acts as a primary dealer in U.S. government securities; makes markets in money market instruments and U.S. government agency securities; underwrites and trades various types of debt and equity securities (including securities issued by JPMorgan Chase or its affiliates); advises clients on business strategies, capital structures and financial strategies; structures derivative transactions to meet client needs; engages in the execution and clearance of exchange-traded futures and options, and clears over-the-counter ("OTC") derivative contracts in connection with JPMorgan Chase's and its affiliates' client-driven market-making and risk management activities. The Company also enters into securities purchased under resale agreements ("resale agreements") and securities sold under repurchase agreements ("repurchase agreements"), and securities borrowed and loaned transactions to finance securities activities. The Company, through its wholly-owned subsidiary J.P. Morgan Clearing Corp. ("Clearing Corp."), provides securities clearing, customer financing, securities lending and related services. Additionally, Clearing Corp. acts as a clearing broker carrying and clearing (i) customer cash and margin accounts for correspondents on either a fully disclosed or omnibus basis, and (ii) the proprietary trading accounts of hedge funds, brokers and dealers and other professional trading firms (collectively "clearing clients"). Clearing Corp. also acts as a carrying and clearing broker for certain activities of its affiliates, including JPMorgan Securities, on either a fully disclosed or omnibus basis.

2. Significant accounting policies

The accounting and financial reporting policies of the Company conform to accounting principles generally accepted in the U.S. ("U.S. GAAP"). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

(a) Accounting and reporting developments

Financial Accounting Standards Board ("FASB") Standards Adopted during 2015

Standard	Summary of guidance	Effects on consolidated statement of financial condition
Simplifying the presentation of debt issuance costs	• Requires that unamortized debt issuance costs be presented as a reduction of the applicable liability rather than as an asset. • Does not impact the amortization method for these costs.	• There was no material impact on the Company's Consolidated Statement of Financial Condition.
Disclosures for investments in certain entities that calculate net asset value per share (or its equivalent)	• Removes the requirement to categorize investments measured under the net asset value ("NAV") practical expedient from the fair value hierarchy. • Limits disclosures required for investments that are eligible to be measured using the NAV practical expedient to investments for which the entity has elected the practical expedient.	• The application of this guidance only affected the disclosures related to these investments and had no impact on the Company's Consolidated Statement of Financial Condition. • For further information, see Note 3.
Repurchase agreements and similar transactions	• Amends the accounting for certain secured financing transactions. • Requires enhanced disclosures with respect to transactions recognized as sales in which exposure to the derecognized assets is retained through a separate agreement with the counterparty. • Requires enhanced disclosures with respect to the types of financial assets pledged in secured financing transactions and the remaining contractual maturity of the secured financing transactions.	• There was no material impact on the Company's Consolidated Statement of Financial Condition. • For further information, see Note 6.

FASB Standards Issued but not yet Adopted

Standard	Summary of guidance	Effects on consolidated statement of financial condition
Amendments to the consolidation analysis *Issued February 2015*	• Eliminates the deferral issued by the FASB in February 2010 of certain VIE-related accounting requirements for certain investment funds, including mutual funds, private equity funds and hedge funds. • Amends the evaluation of fees paid to a decision maker or a service provider, and exempts certain money market funds from consolidation.	• Required effective date January 1, 2016. • Will not have a material impact on the Company's Consolidated Statement of Financial Condition.
Measuring the financial assets and financial liabilities of a consolidated collateralized financing entity *Issued August 2014*	• Provides an alternative for consolidated financing VIEs to elect: (1) to measure their financial assets and liabilities separately under existing U.S. GAAP for fair value measurement with any differences in such fair values reflected in earnings; or (2) to measure both their financial assets and liabilities using the more observable of the fair value of the financial assets or the fair value of the financial liabilities.	• Required effective date January 1, 2016. • Will not have a material impact on the Company's Consolidated Statement of Financial Condition.
Revenue recognition – revenue from contracts with customers *Issued May 2014*	• Requires that revenue from contracts with customers be recognized upon transfer of control of a good or service in the amount of consideration expected to be received. • Changes the accounting for certain contract costs, including whether they may be offset against revenue in the statements of income, and requires additional disclosures about revenue and contract costs. • May be adopted using a full retrospective approach or a modified, cumulative effect-type approach wherein the guidance is applied only to existing contracts as of the date of initial application, and to new contracts transacted after that date.	• Required effective date January 1, 2018.[(a)] • The Company plans to adopt the revenue recognition guidance in the first quarter of 2018 and is currently evaluating the potential impact on the Consolidated Statement of Financial Condition and its selection of transition method.
Recognition and measurement of financial assets and financial liabilities *Issued January 2016*	• Requires that certain equity instruments be measured at fair value, with changes in fair value recognized in earnings. • For financial liabilities where the fair value option has been elected, the portion of the total change in fair value caused by changes in Company's own credit risk is required to be presented separately in Other comprehensive income ("OCI"). • Generally requires a cumulative-effective adjustment to its retained earnings as of the beginning of the reporting period of adoption.	• Required effective date January 1, 2018. • The Company is evaluating the potential impact of the guidance on the Consolidated Statement of Financial Condition.
Leases *Issued February 2016*	• Requires recognition of lease assets and liabilities on the Consolidated Statement of Financial Condition and disclosure of key information about leasing arrangements. • Lessees will be required to recognize all leases longer than twelve months on the Consolidated Statement of Financial Condition as lease liabilities with corresponding right-of-use assets. • Requires lessees and lessors to classify most leases using principles similar to existing lease accounting, but eliminates the "bright line" classification tests.	• Required effective date January 1, 2019.[(a)] • The Company is currently evaluating the potential impact on the Consolidated Statement of Financial Condition.

(a) Early adoption is permitted.

(b) Basis of presentation

Consolidation

The Consolidated Statement of Financial Condition includes the accounts of the Company and entities in which the Company has a controlling financial interest as of December 31, 2015. All material intercompany balances and transactions have been eliminated. The Company determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting interest entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity's operations. For these types of entities, the Company's determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Company has a controlling financial interest, through ownership of the majority of the entities' voting equity interests, or through other contractual rights that give the Company control, are consolidated by the Company. Investments in companies in which the Company has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Company to recognize its proportionate share of the entity's net earnings), or (ii) at fair value if the fair value option was elected. At December 31, 2015, the Company did not have any equity method investments.

Variable interest entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity's operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity ("SPE"). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE's investors and other parties that have rights to those cash flows. SPEs are generally structured to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Company has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Company considers all facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset managers, collateral managers, servicers, owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE.

To assess whether the Company has the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE, the Company considers all of its economic interests, including debt and equity investments, derivatives or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Company apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held within the VIE's capital structure; and the reasons why the interests are held by the Company.

The Company performs ongoing reassessments of (1) whether any entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Company's involvement with a VIE cause the Company's consolidation conclusion to change. For further discussion, see Note 13 about VIEs.

Offsetting assets and liabilities
U.S. GAAP permits entities to present resale agreements and repurchase agreements as well as derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the Consolidated Statement of Financial Condition when a legally enforceable master netting agreement exists. U.S. GAAP also permits resale and repurchase agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Company has elected to net such balances when the specified conditions are met.

The Company uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivatives transactions, resale and repurchase agreements, and securities borrowed and loaned agreements. A master netting agreement is a single contract with a counterparty that permits multiple transactions governed by that contract to be terminated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due after expiration of any grace period). Upon the exercise of termination rights by the non-defaulting party, (i) all transactions are terminated, (ii) all transactions are valued and the positive value or "in the money" transactions are netted against the negative value or "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of repurchase agreement and securities loaned default rights (i) all securities loaned transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.

Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in or title transfer of securities or cash collateral/margin to the party that has the right to demand margin (the "demanding party"). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty. For further discussion of the Company's derivative instruments and securities financing activities see Notes 5 and 6, respectively.

Assets held for clients in an agency or fiduciary capacity
Assets owned by customers, including those that collateralize margin or other similar transactions and are held for clients in an agency or fiduciary capacity by the Company, are not assets of the Company and are not included on the Consolidated Statement of Financial Condition.

Use of estimates in the preparation of the Consolidated Statement of Financial Condition
The preparation of the Consolidated Statement of Financial Condition requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

(c) Cash and securities segregated under federal and other regulations
The Company is required by its primary regulators, including the SEC and CFTC, to segregate cash and securities to satisfy rules regarding the protection of assets of customers and proprietary accounts of broker-dealers. For further discussion, see Note 18.

(d) Financial instruments
Financial instruments owned and financial instruments sold, not yet purchased are accounted for at fair value. For further discussion related to the Company's valuation methodologies under fair value measurement, see Note 3. Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures numbers ("CUSIPs").

(e) Securities transactions
Principal securities transactions in regular way trades are recorded on the trade date, the date on which an agreement is executed to purchase or sell a security. Principal securities transactions in non-regular way trades are recorded on the settlement date (the date on which the payment of funds and delivery of securities are to take place) with changes in value recorded on the Consolidated Statement of Financial Condition between trade and settlement dates. Payables to brokers,

dealers, clearing organizations and others included approximately $66 million of net unsettled principal securities transactions.

(f) Customer transactions
Receivables from and payables to customers primarily include amounts arising from securities and margin transactions. These customer securities transactions are recorded on the Consolidated Statement of Financial Condition on a settlement date basis. In the event of fails to deliver or receive securities, the Company records corresponding receivables from customers or payables to customers, respectively.

The Company monitors the market value of collateral held to secure receivables from customers. It is the Company's policy to request and obtain additional collateral when appropriate.

(g) Goodwill
Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate that there may be impairment.

Impairment testing
Goodwill impairment testing is performed in two steps. In the first step, the current fair value of the Company is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of goodwill is determined by comparing the fair value of the Company (as determined in step one) to the fair value of the net assets of the Company, as if the Company were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the Company's goodwill. If the carrying value of the goodwill exceeds its implied current fair value then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than or equal to its implied current fair value, then no goodwill impairment is recognized. Goodwill was not impaired at December 31, 2015, nor was any goodwill written off due to impairment for the year ended December 31, 2015.

Declines in business performance, increases in equity capital requirements, or increases in the estimated cost of equity, could cause the estimated fair value of the Company or its associated goodwill to decline in the future, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

(h) Income taxes
The results of operations of the Company are included in the consolidated federal, New York State, New York City and other state income tax returns filed by JPMorgan Chase. Pursuant to a tax sharing agreement, JPMorgan Chase allocates to the Company its share of the consolidated income tax expense or benefit based upon statutory rates applied to the Company's earnings as if it were filing separate income tax returns. The Company uses the asset and liability method to provide for income taxes on all transactions recorded in the Consolidated Statement of Financial Condition. Valuation allowances are established when necessary to reduce deferred tax assets to an amount that, in the opinion of management, is more likely than not to be realized. State and local income taxes are provided on the Company's taxable income at the effective income tax rate applicable to the consolidated JPMorgan Chase entity.

The guidance on accounting for uncertainty in income taxes describes how uncertain tax positions should be recognized, measured, presented and disclosed in the Consolidated Statement of Financial Condition. This guidance requires the evaluation of tax positions taken or expected to be taken in the course of preparing the Company's Consolidated Statement of Financial Condition to determine whether the tax positions are more likely than not to be realized as a tax benefit or expense in the current year. Aftertax interest and penalties, as well as the related unrecognized tax benefits, are recognized in income tax expense.

The tax sharing agreement between JPMorgan Chase and the Company allows for intercompany payments to or from JPMorgan Chase for outstanding current and deferred tax assets or liabilities.

For further discussion of income taxes, see Note 7.

(i) Foreign currency remeasurement
The Company revalues assets and liabilities denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

3. Fair value measurement of financial instruments

The Company carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Company's Consolidated Statement of Financial Condition).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below.

The level of precision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Company believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Company's businesses and portfolios.

The Company uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions by other market participants compared with those used by the Company could result in a different estimate of fair value at the reporting date.

Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated Statement of Financial Condition at fair value. JPMorgan Chase's valuation control function, which is part of JPMorgan Chase's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Company's positions are recorded at fair value. In addition, JPMorgan Chase's firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across JPMorgan Chase. The VGF is chaired by the Firmwide head of the valuation control function (under the direction of JPMorgan Chase's Chief Financial Officer ("CFO")), and includes sub-forums covering its lines of business and the Company.

The valuation control function verifies the fair value estimates leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, additional review is performed by the valuation control function to ensure the reasonableness of estimates, and may include: evaluating the limited market activity including client unwinds; benchmarking of valuation inputs to those for similar instruments; decomposing the valuation of structured instruments into individual components; comparing expected to actual cash flows; reviewing profit and loss trends; and reviewing trends in collateral valuation. In addition there are additional levels of management review for more significant or complex positions.

The valuation control function determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied to the quoted market price for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across JPMorgan Chase.

Liquidity valuation adjustments

Liquidity valuation adjustments are considered where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are applied and determined based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.

The Company manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that

a relevant market participant would consider in the transfer of the net open risk position including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.

Unobservable parameter valuation adjustments may be made when positions are valued using prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the resulting valuation estimate.

Where appropriate, the Company also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality and the impact of funding, applying a consistent framework across the Company.

Valuation model review and approval
If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

The Model Risk function within JPMorgan Chase is independent of the model owners. It reviews and approves a wide range of models, including risk management, valuation and regulatory capital models used by the Company. The Model Risk review and governance functions are part of JPMorgan Chase's Model Risk unit, and its Model Risk Executive reports to JPMorgan Chase's Chief Risk Officer ("CRO"). When reviewing a model, the Model Risk function analyzes and challenges the model methodology, and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes.

New valuation models, as well as material changes to existing valuation models, are reviewed and approved prior to implementation except where specified conditions are met, including the approval of an exception granted by the head of the Model Risk function. The Model Risk function performs an annual status assessment that considers developments in the product or market to determine whether valuation models which have already been reviewed need to be, on a full or partial basis, reviewed and approved again.

Valuation hierarchy
A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The following is a description of the valuation methodologies used by the Company to measure its more significant products/ instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Securities financing agreements	Valuations are based on discounted cash flows, which consider: • Derivative features: for further information refer to the discussion of derivatives below. • Market rates for the respective maturity • Collateral	Level 2
Financial instruments	Quoted market prices for securities are used where available.	Level 1
	In the absence of quoted market prices, financial instruments are valued based on: • Relevant broker quotes • Observed market prices for similar instruments (excludes loans) • Observed market prices for loans (circumstances are infrequent) Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Yield • Lifetime credit losses • Loss severity • Prepayment speed • Servicing costs (applicable to loans) *Mortgage- and asset-backed securities specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity *Collateralized loan obligations ("CLOs"), specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 2 or 3

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Derivatives	Exchange-traded derivatives that are actively traded and valued using the exchange price.	Level 1
	Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g., plain vanilla options and interest rate and credit default swaps). Inputs include: • Contractual terms including the period to maturity • Readily observable parameters including interest rates and volatility • Credit quality of the counterparty and of the Company • Market funding levels • Correlation levels In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs: *Certain long-dated equity option specific inputs include:* • Long-dated equity volatilities *Certain interest rate specific inputs include:* • Interest rate correlation • Interest rate spread volatility • Parameters describing the evolution of underlying interest rates	Level 2 or 3
Beneficial interests issued by consolidated VIEs	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Short-term borrowings and Long-term debt	• Valuations are based on discounted cash flow analysis that consider the embedded derivative and the terms and payment structure of the note • The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivative valuation	Level 2 or 3

The following table presents the assets and liabilities measured at fair value as of December 31, 2015, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Securities purchased under resale agreements	$ –	$ 15,170	$ –	$ –	$ 15,170
Securities received as collateral[a]	3,996	–	–	–	3,996
Financial instruments owned:					
Mortgage-backed securities:					
U.S. government agencies - mortgage-backed securities	6	31,787	51	–	31,844
Nonagency - mortgage-backed securities	–	1,412	267	–	1,679
Total - mortgage-backed securities	**6**	**33,199**	**318**	**–**	**33,523**
U.S. Treasury, government agencies and non-U.S. government securities	7,776	6,975	–	–	14,751
Corporate debt securities	–	7,670	364	–	8,034
Equity securities[b]	30,924	192	143	–	31,259
Loans	–	248	64	–	312
Certificates of deposit, bankers' acceptances and commercial paper	–	1,173	20	–	1,193
State and municipal obligations	–	2,450	–	–	2,450
Asset-backed securities	–	1,945	1,753	–	3,698
Total debt and equity instruments[a][c]	**38,706**	**53,852**	**2,662**	**–**	**95,220**
Derivative receivables:					
Interest rate	268	2,266	1	(2,409)	126
Credit	–	365	–	(326)	39
Foreign exchange	–	4	–	(4)	–
Equity[d]	–	18,589	1,066	(19,579)	76
Total derivative receivables[e]	**268**	**21,224**	**1,067**	**(22,318)**	**241**
Total financial instruments owned	**38,974**	**75,076**	**3,729**	**(22,318)**	**95,461**
Private equity investments	–	–	12	–	12
Total assets at fair value	**$ 42,970**	**$ 90,246**	**$ 3,741**	**$ (22,318)**	**$ 114,639**
Short-term borrowings	$ –	$ 104	$ 12	$ –	$ 116
Securities sold under repurchase agreements	–	2,798	–	–	2,798
Obligation to return securities received as collateral	3,996	–	–	–	3,996
Financial instruments sold, not yet purchased:					
Debt and equity instruments[c]	23,207	6,656	5	–	29,868
Derivative payables:					
Interest rate	249	2,046	–	(2,179)	116
Credit	–	217	–	(187)	30
Foreign exchange	–	45	–	(45)	–
Equity[d]	–	18,833	1,629	(19,694)	768
Total derivative payables[e]	**249**	**21,141**	**1,629**	**(22,105)**	**914**
Total financial instruments sold, not yet purchased	**23,456**	**27,797**	**1,634**	**(22,105)**	**30,782**
Beneficial interests issued by consolidated VIEs	–	236	22	–	258
Long-term debt	–	3,768	1,232	–	5,000
Total liabilities at fair value	**$ 27,452**	**$ 34,703**	**$ 2,900**	**$ (22,105)**	**$ 42,950**

(a) Securities received as collateral and financial instruments owned that are pledged or otherwise provided to counterparties (which the counterparty has the right to sell or repledge or otherwise use) include $22.5 billion of U.S government agency-mortgage-backed securities, $504 million of nonagency-mortgage-backed securities, $3.5 billion of U.S. Treasury, government agencies and non-U.S. government securities, $3.2 billion of corporate debt securities, $30.0 billion of equity securities, $521 million of state and municipal obligations and $980 million of asset-backed securities.

(b) The Company adopted new accounting guidance for investments in certain entities that calculate net asset value per share (or its equivalent). As a result of the adoption of this new guidance, certain investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not required to be classified in the fair value hierarchy.

(c) Balances reflect the reduction of financial instruments owned (long positions) by the amount of financials instruments sold, not yet purchased (short positions) when the long and short positions have identical CUSIPs.

(d) Equity derivative receivables and payables in level 3 primarily relate to positions with affiliates.

(e) As permitted under U.S. GAAP, the Company can net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the table above, the Company does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a presentation based on the transparency of inputs to the valuation of an asset or liability. For further discussion, see Note 5.

Transfers between levels for instruments carried at fair value on a recurring basis
For the year ended December 31, 2015, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2015, transfers from level 3 to level 2 and from level 2 to level 3 included the following:

- $561 million of state and municipal obligations, specifically auction rate securities, driven by greater price transparency
- $1.2 billion of equity derivative receivables and $2.2 billion of equity derivative payables, primarily with affiliates, as a result of an increase in observability and a decrease in the significance in unobservable inputs, partially offset by transfers into level 3 resulting in net transfers of $681 million and $1.6 billion respectively

All transfers are assumed to occur at the beginning of the interim reporting period in which they occur.

Level 3 valuation
Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Company. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs including, but not limited to, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

The following table presents the Company's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, and the significant unobservable inputs and the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Company manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value.

In the Company's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the company's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Company and the relative distribution of instruments within the range of characteristics. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices. The input range and weighted average values will therefore vary from period-to-period and parameter to parameter based on characteristics of the instruments held by the Company at each consolidated statement of financial condition date.

For the Company's net equity derivatives and long-term debt and short-term borrowings classified within level 3, respectively, the equity volatilities are concentrated at the lower half end of the range and the equity correlation inputs used in estimating fair value were concentrated at the lower end of the range.

Level 3 inputs[a]

December 31, 2015 (in millions, except for ratios)

Product/instrument	Fair value	Principal valuation technique	Unobservable inputs	Range of input values			Weighted average
Residential mortgage-backed securities and loans	$ 208	Discounted cash flows	Yield	4%	–	7%	6%
			Prepayment speed	3%	–	14%	7%
			Conditional default rate	0%	–	33%	8%
			Loss severity	20%	–	100%	72%
Commercial mortgage-backed securities and loans	110	Discounted cash flows	Yield	7%	–	18%	7%
			Conditional default rate	0%	–	68%	18%
			Loss severity		40%		40%
Corporate debt securities, state and municipal obligations, and other	2,214	Discounted cash flows	Yield	1%	–	11%	3%
Collateralized loan obligations	142	Market comparables	Price	$13	–	$99	$70
Net equity derivative receivables/ (payables)	(563)	Option pricing	Equity volatility	20%	–	65%	
Long-term debt and short-term borrowings[b]	1,244	Option pricing	Equity correlation	(50)%	–	80%	
Beneficial interests issued by consolidated VIEs[c]	22	Discounted cash flows	Yield	4%	–	17%	8%
			Prepayment speed	1%	–	5%	4%
			Conditional default rate	5%	–	15%	7%
			Loss severity	50%	–	100%	98%

(a) The categories presented in the table have been aggregated based upon product type, which may differ from their classification on the Consolidated Statement of Financial Condition.
(b) Long-term debt and short-term borrowings include fully funded derivatives issued by affiliates of the Company that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of fully funded derivatives is predominantly based on the derivative features embedded within the instruments. The significant unobservable inputs are broadly consistent with those presented for derivative payables.
(c) The parameters are related to residential mortgage-backed securities and loans.

Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent as a change in one unobservable input may give rise to a change in another unobservable input, and where relationships exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline). Such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

In addition, the following discussion provides a description of attributes of the underlying instruments and external market factors that affect the range of the inputs used in the valuation of the Company's positions.

Yield – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

The yield of a particular mortgage-backed security primarily reflects the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield reflects the range of risk inherent in various instruments owned by the Company. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, loan to value ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages.

Prepayment speed - The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

Conditional default rate – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral have high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement. Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Company's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

Loss severity – The loss severity (the inverse of which is termed the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement. The loss severity applied in valuing a mortgage-backed security investment depends on a host of factors relating to the underlying mortgages. This includes the loan-to-value ratio, the nature of the lender's lien on the property and various other instrument-specific factors.

Correlation – Correlation is a measure of the relationship between the movements of the two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. The range of correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input as the relationship between the underlying risks may be different over different time periods. Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

Volatility – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option, the tenor of the derivative as well as the strike price of the option.

Additional disclosures about the fair value of financial instruments (including financial instruments not carried at fair value)

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair values. Financial instruments within the scope of these disclosure requirements are included in the following table. Certain financial instruments that are not carried at fair value on the Consolidated Statement of Financial Condition are carried at amounts that approximate fair value due to their short-term nature and generally

negligible credit risk. These instruments include cash, cash and securities segregated under federal and other regulations, securities purchased under resale agreements with short-dated maturities, securities borrowed with short-dated maturities, short-term receivables and accrued interest receivable, commercial paper, short-term borrowings, securities sold under repurchase agreements with short-dated maturities, securities loaned with short-dated maturities, accounts payable and other liabilities.

The following table presents the carrying values and estimated fair values at December 31, 2015, of financial assets and liabilities, excluding financial instruments which are carried at fair value on a recurring basis, and information is provided on their classification within the fair value hierarchy.

(in millions)	Carrying value	Estimated fair value hierarchy			Total estimated fair value
		Level 1	Level 2	Level 3	
Financial assets					
Cash	$ 732	$ 732	$ –	$ –	$ 732
Cash and securities segregated under federal and other regulations	27,062	–	27,062	–	27,062
Securities purchased under resale agreements	113,989	–	113,989	–	113,989
Securities borrowed	80,077	–	80,077	–	80,077
Receivables from customers	14,283	–	14,283	–	14,283
Receivables from brokers, dealers, clearing organizations and others	16,446	–	16,446	–	16,446
Other assets	993	–	923	70	993
Financial liabilities					
Commercial paper	$ 15,562	$ –	$ 15,562	$ –	$ 15,562
Short-term borrowings	17,943	–	17,943	–	17,943
Securities sold under repurchase agreements	154,457	–	154,457	–	154,457
Securities loaned	13,613	–	13,613	–	13,613
Payables to customers	84,771	–	84,771	–	84,771
Payables to brokers, dealers, clearing organizations and others	7,994	–	7,994	–	7,994
Accounts payable and other liabilities	1,458	–	1,414	44	1,458
Beneficial interests issued by consolidated VIEs	214	–	213	1	214
Long-term debt	500	–	500	–	500
Subordinated liabilities	14,630	–	14,529	–	14,529

4. Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets and financial liabilities.

Elections

Elections were made by the Company to:

- Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (e.g. certain instruments elected were previously accounted for on an accrual basis) while the associated risk management instruments are accounted for on a fair value basis;
- Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid investments); and/or
- Better reflect those instruments that are managed on a fair value basis.

Elections include the following:

- Loans managed on a fair value basis.
- Securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.
- Certain equity investments, to better reflect the investments which are managed on a fair value basis.
- Short-term borrowings and long-term debt.

- Long-term beneficial interests issued by consolidated securitization trusts where the underlying assets are carried at fair value.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding
The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2015, for loans reported as financial instruments owned, long-term debt and long-term beneficial interests issued by consolidated VIEs for which the fair value option has been elected.

(in millions)	Contractual principal outstanding	Fair value	Fair value over/ (under) contractual principal outstanding
Loans reported as financial instruments owned	**$ 346**	**$ 312**	**$ (34)**
Long-term debt			
Principal-protected debt	111 [b]	119	8
Nonprincipal-protected debt[a]	NA	4,881	NA
Total long-term debt	**NA**	**5,000**	**NA**
Long-term beneficial interests issued by consolidated VIEs			
Nonprincipal-protected debt[a]	NA	258	NA
Total long-term beneficial interests issued by consolidated VIEs	**NA**	**258**	**NA**

(a) Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Company is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Company to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the note. However, investors are exposed to the credit risk of the Company as issuer for both nonprincipal-protected and principal-protected notes.
(b) Where the Company issues principal-protected zero-coupon or discount notes, the balance reflects the contractual principal payment at maturity or, if applicable, the contractual principal payment at the Company's next call date.

5. Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sale price. The Company uses derivatives to manage its own risk exposures.

Risk management derivatives
The Company manages its market risk exposures using various derivative instruments. Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates. Fixed rate assets and liabilities appreciate or depreciate in market value as interest rates change. The Company generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings. Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities increase or decrease.

The Company uses credit derivatives to manage the counterparty credit risk associated with debt-related securities. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of credit default swaps.

Derivative counterparties and settlement types
The Company enters into OTC derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Company also enters into, as principal, certain exchange-traded derivatives ("ETD") such as futures and options and cleared over-the-counter ("OTC cleared") derivatives contracts with central counterparties ("CCPs"). ETD contracts are generally standardized contracts traded on an exchange and cleared directly with a central counterparty. In contrast, OTC-cleared derivatives are initially negotiated on a bilateral basis and then novated to a CCP. CCPs require that ETDs and OTC-cleared contracts are settled through a registered clearing member, and after executing a transaction either on an exchange or OTC. The Company is a clearing member of the major CCPs in the U.S., however, for foreign markets where the Company does not hold a clearing membership, it may use a JPMorgan Chase affiliate clearing member. All OTC, ETD and OTC-cleared derivatives that the Company executes for its own account are reported on the Company's Consolidated Statement of Financial Condition as derivative receivables and payables until such time as they are settled.

Accounting for derivatives

All free-standing derivatives that the Company executes for its own account are required to be recorded on the Consolidated Statement of Financial Condition at fair value. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The Company does not have any derivatives that are designated as hedges. As permitted under U.S. GAAP, the Company nets derivative assets and liabilities, and the related cash collateral received and paid, when a legally enforceable master netting agreement exists between the Company and the derivative counterparty.

Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2015.

(in millions)	Notional amounts[b]
Interest rate contracts	
Swaps	$ 206,299
Futures and forwards	346,913
Written options	27,376
Purchased options	2,326
Total interest rate contracts	**582,914**
Credit derivatives[a]	**9,552**
Foreign exchange contracts	
Swaps	1
Futures and forwards	15,301
Written options	–
Purchased options	–
Total foreign exchange contracts	**15,302**
Equity contracts	
Swaps	88,694
Futures and forwards	10,729
Written options	168,402
Purchased options	144,849
Total equity contracts	**412,674**
Total derivative notional amounts	**$ 1,020,442**

(a) For more information on volumes and types of credit derivative contracts, see the credit derivative discussion in this Note.
(b) Represents the sum of gross long and gross short third-party and affiliate notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Company's derivative activity, the notional amounts significantly exceed, in the Company's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.

Impact of derivatives on the Consolidated Statement of Financial Condition

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Company's Consolidated Statement of Financial Condition as of December 31, 2015, by contract type. This includes derivative receivables and payables with affiliates. For further discussion, see Note 16 regarding derivative activities with affiliates.

Derivative receivables and payables[(a)]

(in millions)	Gross derivative receivables	Net derivative receivables	Gross derivative payables	Net derivative payables
Financial instruments owned and financial instruments sold, not yet purchased				
Interest rate	$ 2,535	$ 126	$ 2,295	$ 116
Credit	365	39	217	30
Foreign exchange	4	–	45	–
Equity	19,655	76	20,462	768
Total fair value of financial instruments owned and financial instruments sold, not yet purchased	**$ 22,559**	**$ 241**	**$ 23,019**	**$ 914**

(a) As permitted under U.S. GAAP, the Company has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

The following table presents, as of December 31, 2015, the gross and net derivative receivables by contract and settlement type under U.S. GAAP. Derivative receivables have been netted on the Consolidated Statement of Financial Condition against derivative payables and cash collateral payables to the same counterparty with respect to derivative contracts for which the Company has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the receivables are not eligible under U.S. GAAP for netting on the Consolidated Statement of Financial Condition, and are shown separately in the table below.

(in millions)	Gross derivative receivables	Amounts netted on the Consolidated Statement of Financial Condition[(b)(c)]	Net derivative receivables
U.S. GAAP nettable derivative receivables			
Interest rate contracts:			
Over-the-counter	$ 2,384	$ (2,266)	$ 118
OTC-cleared	151	(143)	8
Exchange-traded[(a)]	–	–	–
Total interest rate contracts	**2,535**	**(2,409)**	**126**
Credit contracts:			
Over-the-counter	359	(326)	33
OTC-cleared	6	–	6
Exchange-traded[(a)]	–	–	–
Total credit contracts	**365**	**(326)**	**39**
Foreign exchange contracts:			
Over-the-counter	4	(4)	–
OTC-cleared	–	–	–
Exchange-traded[(a)]	–	–	–
Total foreign exchange contracts	**4**	**(4)**	**–**
Equity contracts:			
Over-the-counter	18,029	(17,954)	75
OTC-cleared	–	–	–
Exchange-traded[(a)]	1,626	(1,625)	1
Total equity contracts	**19,655**	**(19,579)**	**76**
Derivative receivables with appropriate legal opinion	**$ 22,559**	**$ (22,318)**	**$ 241**
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	–	–	–
Total derivative receivables recognized on the Consolidated Statement of Financial Condition	**$ 22,559**	**$ (22,318)**	**$ 241**

(a) Exchange-traded derivative amounts that relate to futures contracts are settled daily.
(b) As permitted under U.S. GAAP, the Company has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists. At December 31, 2015, there was additional collateral available that was eligible under U.S. GAAP for net presentation on the Company's Consolidated Statement of Financial Condition related to derivative instruments where an appropriate legal opinion has been obtained but was not netted nor material.
(c) Included cash collateral netted of $397 million.

The following table presents, as of December 31, 2015, the gross and net derivative payables by contract and settlement type under U.S. GAAP. Derivative payables have been netted on the Consolidated Statement of Financial Condition against derivative receivables and cash collateral receivables from the same counterparty with respect to derivative contracts for which the Company has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the payables are not eligible under U.S. GAAP for netting on the Consolidated Statement of Financial Condition, and are shown separately in the table below.

(in millions)	Gross derivative payables	Amounts netted on the Consolidated Statement of Financial Condition[(b)(c)]	Net derivative payables
U.S. GAAP nettable derivative payables			
Interest rate contracts:			
Over-the-counter	$ 2,152	$ (2,036)	$ 116
OTC-cleared	143	(143)	–
Exchange-traded[(a)]	–	–	–
Total interest rate contracts	**2,295**	**(2,179)**	**116**
Credit contracts:			
Over-the-counter	209	(187)	22
OTC-cleared	8	–	8
Exchange-traded[(a)]	–	–	–
Total credit contracts	**217**	**(187)**	**30**
Foreign exchange contracts:			
Over-the-counter	45	(45)	–
OTC-cleared	–	–	–
Exchange-traded[(a)]	–	–	–
Total foreign exchange contracts	**45**	**(45)**	**–**
Equity contracts:			
Over-the-counter	18,073	(18,069)	4
OTC-cleared	–	–	–
Exchange-traded[(a)]	2,389	(1,625)	764
Total equity contracts	**20,462**	**(19,694)**	**768**
Derivative payables with appropriate legal opinion	**$ 23,019**	**$ (22,105)**	**$ 914**
Derivative payables where an appropriate legal opinion has not been either sought or obtained	–	–	–
Total derivative payables recognized on the Consolidated Statement of Financial Condition	**$ 23,019**	**$ (22,105)**	**$ 914**

(a) Exchange-traded derivative amounts that relate to futures contracts are settled daily.
(b) As permitted under U.S. GAAP, the Company has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists. At December 31, 2015, there was additional collateral available that was eligible under U.S. GAAP for net presentation on the Company's Consolidated Statement of Financial Condition related to derivative instruments where an appropriate legal opinion has been obtained but was not netted nor material.
(c) Included cash collateral netted of $183 million.

In addition to the cash collateral received and transferred that is presented on a net basis with net derivative receivables and payables, the Company receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Company's derivative instruments but are not eligible for net presentation, because (a) the collateral is comprised of non-cash financial instruments (generally U.S. government and agency securities and other government bonds), (b) the amount of collateral held or transferred exceeds the fair value exposure, at the individual counterparty level, as of the date presented, or (c) the collateral relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained.

Liquidity risk and credit-related contingent features
In addition to the specific market risks introduced by each derivative contract type, derivatives expose the Company to credit risk – the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and

the collateral, if any, held by the Company proves to be of insufficient value to cover the payment obligation. It is the policy of the Company to actively pursue, where possible, the use of legally enforceable master netting agreements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated Statement of Financial Condition is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Company.

While derivative receivables expose the Company to credit risk, derivative payables expose the Company to liquidity risk, as the derivative contracts typically require the Company to post cash or securities collateral with counterparties as the fair value of the contracts moves in the counterparties' favor. Where the Company has legally enforceable master netting agreements and margin agreements with its affiliates, any associated derivatives are marked to market daily and the fair value of the related collateral is monitored with margin calls made daily between the Company and the affiliates.

The Company has no derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade of the Company or its affiliates.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Company uses credit derivatives primarily to mitigate credit risk associated with its credit market products and mortgage-backed securities.

Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Company purchases and sells protection on index-reference obligations. Single-name CDS and index CDS contracts are typically OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index comprises a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first $1 million of realized credit losses in a $10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

The following table presents a summary of the notional amounts of credit derivatives the Company sold and purchased as of December 31, 2015.

The Company does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives because notional amount does not take into account the probability of occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Company's view, the risk associated with such derivatives.

Total credit derivatives

	Maximum payout/Notional amount			
(in millions)	Protection sold	Purchased protection with identical underlyings[b]	Net protection (sold)/ purchased[c]	Other protection purchased[d]
Credit derivatives				
Credit default swaps	$ (4,496)	$ 4,713	$ 217	$ 139
Other credit derivatives[a]	–	–	–	204
Total	$ (4,496)	$ 4,713	$ 217	$ 343

(a) Represents total return swaps with affiliates.
(b) Represents the notional amount of protection purchased where the underlying reference instrument is identical to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.
(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.
(d) Represents protection purchased by the Company on referenced instruments (portfolio or index) where the Company has not sold any protection on the identical reference instrument.

The following table summarizes the notional and fair value amounts of credit derivatives as of December 31, 2015, where the Company is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives where the Company is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives ratings[a]/maturity profile

December 31, 2015 (in millions)	< 1 Year	1 - 5 Years	> 5 Years	Total notional amount	Fair value receivables[b]	Fair value payables[b]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (78)	$ (277)	$ (221)	$ (576)	$ 3	$ (28)	$ (25)
Noninvestment-grade	(27)	(124)	(3,769)	(3,920)	3	(191)	(188)
Total	**$ (105)**	**$ (401)**	**$ (3,990)**	**$ (4,496)**	**$ 6**	**$ (219)**	**$ (213)**

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's Investors Service.
(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Company.

6. Securities financing activities

The Company enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, "securities financing agreements") primarily to finance the Company's inventory positions, acquire securities to cover short positions, accommodate customers' financing needs, and settle other securities obligations.

Resale and repurchase agreements are carried on the Consolidated Statement of Financial Condition at the amounts at which the securities will be subsequently sold or repurchased, plus accrued interest, except for amounts reported at fair value. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. For further discussion of the offsetting of assets and liabilities, see Note 2.

Securities borrowed and securities loaned are recorded at the amount of cash collateral advanced or received. In accordance with US GAAP, certain securities are borrowed against securities collateral and the borrower is not required to record the transactions on its Consolidated Statement of Financial Condition. In addition, certain securities are loaned against securities collateral and the lender is required to record the securities received and related obligation to return securities received as collateral on its Consolidated Statement of Financial Condition.

The Company has elected the fair value option for certain resale and repurchase agreements. For further discussion of the fair value option, see Note 4.

Secured financing transactions expose the Company to credit and liquidity risk. To manage these risks, the Company monitors the value of the underlying securities that it has received from or provided to its counterparties compared to the value of cash proceeds and exchanged collateral and either requests additional collateral or returns securities or collateral when appropriate. Margin levels are initially established based upon the counterparty, the type of underlying securities, and the permissible collateral, and are monitored on an ongoing basis.

In resale agreements and securities borrowed transactions, the Company is exposed to credit risk to the extent the value of the securities received is less than initial cash proceeds and any collateral amounts exchanged. In repurchase agreements and securities loaned transactions, credit risk exposure arises to the extent that the value of underlying securities exceeds the value of the initial cash proceeds and any collateral amounts exchanged.

Additionally, the Company typically enters into master netting agreements and other similar arrangements with its counterparties, which provide for the right to liquidate the underlying securities and any collateral amounts exchanged in the event of a counterparty default. It is also the Company's policy to take possession, where possible, of the securities underlying resale agreements and securities borrowed transactions.

The following table presents as of December 31, 2015, the gross and net securities purchased under resale agreements and securities borrowed. Securities purchased under resale agreements have been presented on the Consolidated Statement of Financial Condition net of securities sold under repurchase agreements where the Company has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities purchased under resale agreements are not eligible for netting and are shown separately in the table below. Securities borrowed are presented on a gross basis on the Consolidated Statement of Financial Condition.

(in millions)	Gross asset balance	Amounts netted on the Consolidated Statement of Financial Condition	Net asset balance	
Securities purchased under resale agreements				
Securities purchased under resale agreements with an appropriate legal opinion	$ 282,622	$ (133,908)	$ 148,714	
Securities purchased under resale agreements where an appropriate legal opinion has not been either sought or obtained	440	–	440	
Total securities purchased under resale agreements	**$ 283,062**	**$ (133,908)**	**$ 149,154**	(a)(b)
Securities borrowed	**$ 80,077**	**NA**	**$ 80,077**	(c)

(a) Securities purchased under resales agreements include $20.0 billion of securities included in cash and securities segregated under federal and other regulations.
(b) Securities purchased under resale agreements include $15.2 billion accounted for at fair value.
(c) Includes $29.9 billion of securities borrowed where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2015, regarding the securities purchased under resale agreements and securities borrowed for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The table excludes information related to resale agreements and securities borrowed where such a legal opinion has either not been sought or obtained.

		Amounts not nettable on the Consolidated Statement of Financial Condition[a]		
(in millions)	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure
Securities purchased under resale agreements with an appropriate legal opinion	$ 148,714	$ (146,711)	$ (104)	$ 1,899
Securities borrowed	$ 50,195	$ (48,328)	$ –	$ 1,867

(a) For some counterparties, the sum of the financial instruments and cash collateral not nettable on the Consolidated Statement of Financial Condition may exceed the net asset balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net resale agreement or securities borrowed asset with that counterparty. As a result a net exposure amount is reported even though the Company, on a portfolio-wide basis for both its securities purchased under resale agreements and securities borrowed portfolios, has received securities collateral with a total fair value that is greater than the funds provided to counterparties.
(b) Includes financial instrument collateral received, repurchase liabilities and securities loaned liabilities with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated Statement of Financial Condition because other U.S. GAAP netting criteria are not met.

The following table presents as of December 31, 2015, gross and net securities sold under repurchase agreements and securities loaned. Securities sold under repurchase agreements have been presented on the Consolidated Statement of Financial Condition net of securities purchased under resale agreements where the Company has obtained an appropriate legal opinion with respect to the master netting agreement and where other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities sold under repurchase agreements are not eligible for netting, and are shown separately in the table below. Securities loaned are presented on a gross basis on the Consolidated Statement of Financial Condition.

(in millions)	Gross liability balance	Amounts netted on the Consolidated Statement of Financial Condition	Net liability balance	
Securities sold under repurchase agreements				
Securities sold under repurchase agreements with an appropriate legal opinion	$ 282,290	$ (133,908)	$ 148,382	
Securities sold under repurchase agreements where an appropriate legal opinion has not been either sought or obtained	8,873	–	8,873	
Total securities sold under repurchase agreements	**$ 291,163**	**$ (133,908)**	**$ 157,255**	[b]
Securities loaned[a]	**$ 17,609**	**$ –**	**$ 17,609**	[c]

(a) Included securities-for-securities borrow vs. pledge transactions of $4.0 billion when acting as lender that are reported in Obligation to return securities received as collateral on the Consolidated Statement of Financial Condition.
(b) Securities sold under repurchase agreements include $2.8 billion accounted for at fair value.
(c) Includes $41 million of securities loaned where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2015, regarding securities sold under repurchase agreements and securities loaned for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to repurchase agreements and securities loaned where such a legal opinion has not been either sought or obtained.

		Amounts not nettable on the Consolidated Statement of Financial Condition[a]		
(in millions)	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]
Securities sold under repurchase agreements with an appropriate legal opinion	$ 148,382	$ (147,006)	$ (932)	$ 444
Securities loaned	$ 17,568	$ (17,568)	$ –	$ –

(a) For some counterparties, the sum of the financial instruments and cash collateral not nettable on the Consolidated Statement of Financial Condition may exceed the net liability balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net repurchase agreement or securities loaned liability with that counterparty.
(b) Includes financial instrument collateral transferred, resale agreements and securities borrowed assets with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated Statement of Financial Condition because other U.S. GAAP netting criteria are not met.
(c) Net amount represents exposure of counterparties to the Company.

During 2015, the Company adopted new accounting guidance, which requires enhanced disclosures with respect to the types of financial assets pledged in secured financing transactions and the remaining contractual maturity of the secured financing transactions; the following tables present this information as of December 31, 2015.

	Gross liability balance	
(in millions)	Securities sold under repurchase agreements	Securities loaned
Mortgage-backed securities	$ 11,917	$ –
U.S. Treasury and government agencies	247,286	865
Non-U.S. government securities	1	220
Corporate debt securities	13,044	132
Equity securities	13,923	16,392
State and municipal obligations	1,316	–
Asset-backed securities	3,676	–
Total	**$ 291,163**	**$ 17,609**

	Remaining contractual maturity of the agreements				
(in millions)	Overnight and continuous	Up to 30 days	30-90 days	Greater than 90 days	Total
Total securities sold under repurchase agreements	$ 124,713	$ 83,436	$ 53,248	$ 29,766	$ 291,163
Total securities loaned	$ 7,020	$ –	$ 397	$ 10,192	$ 17,609

7. Income taxes

Deferred income tax expense/(benefit) results from differences between assets and liabilities as measured for financial reporting and income tax return purposes. The Company's tax sharing agreement requires periodic settlement with JPMorgan Chase for increases or decreases in the net federal, state and local deferred tax balance. Until settlement, net balances are recorded as a component of accounts payable and other liabilities in the Consolidated Statement of Financial Condition. As of December 31, 2015, the Company's unsettled net deferred tax liability was $193 million. The significant components of the Company's deferred tax balance generally relate to federal and state tax benefits in regards to tax reserves and investments in partnerships. As of December 31, 2015, management has determined it is more likely than not that the Company will realize its deferred tax assets.

At December 31, 2015, the Company had a current income tax payable to JPMorgan Chase of $158 million included in Accounts payable and other liabilities in the Consolidated Statement of Financial Condition.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the year ended December 31, 2015.

(in millions)	Unrecognized tax benefits
Balance at December 31, 2014	**$ 361**
Increases based on tax positions related to prior periods	17
Decreases based on tax positions related to prior periods	(291)
Decreases related to settlements with taxing authorities	(9)
Balance at December 31, 2015	**$ 78**

At December 31, 2015, the Company's unrecognized tax benefit, excluding related interest expense and penalties, was $78 million, of which $51 million, if recognized, would reduce the annual effective tax rate.

At December 31, 2015, in addition to the Company's liability for unrecognized tax benefits, the Company had accrued $38 million for income tax-related interest and no penalties.

The Company is a member of the JPMorgan Chase consolidated group which is subject to ongoing tax examinations by the tax authorities of the various jurisdictions in which it operates, including U.S. federal, state and non-U.S. jurisdictions. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2015.

December 31, 2015	Periods under examination	Status
JPMorgan Chase - U.S.	2003 - 2005	Field examination completed, at Appellate level
JPMorgan Chase - U.S.	2006 - 2010	Field examination completed, JPMorgan Chase filed amended returns and intends to appeal
JPMorgan Chase - U.S.	2011 - 2013	Field examination
JPMorgan Chase - New York State	2008 - 2011	Field examination
JPMorgan Chase - California	2011 - 2012	Field examination

8. Commercial paper

As of December 31, 2015, the outstanding commercial paper had maturities ranging from January 2016 to December 2016 with both fixed and floating interest rates.

The maximum face amount of commercial paper outstanding during the year ended December 31, 2015, was $25.3 billion, which was outstanding on January 15, 2015.

9. Short-term borrowings

At December 31, 2015, the Company had $15.3 billion of unsecured short-term borrowings from JPMorgan Chase pursuant to a committed $20 billion credit facility. The borrowings are short-term obligations that bear interest based on short-term rates.

In addition, there was $116 million of unsecured fully funded OTC derivatives with affiliates which qualify as short-term borrowings for accounting purposes based on the funding component of the instrument. Interest expense on these instruments is based on the performance of a single equity security or basket of equity securities, or an equity index. The Company has elected to measure these instruments at fair value.

The Company also had $2.6 billion of third-party short-term borrowings of which $2.5 billion represented secured short-term financings that bear interest at a rate based upon London Interbank Borrowing Offered Rate ("LIBOR").

10. Long-term debt

At December 31, 2015, the Company had issued $5.0 billion in unsecured long-term debt to affiliates, which represents fully funded OTC derivatives that qualify as long-term debt for accounting purposes based on the funding component of the

instrument. Interest expense on these instruments is based on the performance of a single equity security or basket of equity securities, or an equity index. The Company has elected to measure these instruments at fair value.

At December 31, 2015, the Company had issued $500 million of third-party secured long-term debt bearing interest at a rate based upon LIBOR and maturing in January 2017.

The following table is a summary of long-term debt carrying values and the ranges of maturities at December 31, 2015.

(in millions)		Less than 1 year to maturity	1-5 years to maturity	Greater than 5 years to maturity	Total
Long-term debt	Variable rate notes	$ 2,756	$ 2,539	$ 205	$ 5,500

11. Subordinated liabilities

The Company has commitments from JPMorgan Chase that provide subordinated liabilities up to a maximum amount of $20.6 billion. At December 31, 2015, $14.6 billion was payable under these subordinated borrowing agreements, and they mature as follows.

(in millions)

Year	Amount
2017	$12,730
2018	1,900
Total subordinated liabilities	**$14,630**

Of the total commitment, $8.7 billion relates to Clearing Corp, and of the actual amount payable, $5.0 billion relates to Clearing Corp. All subordinated liabilities of the Company have been approved by the Financial Industry Regulatory Authority ("FINRA"), Chicago Mercantile Exchange ("CME") and by the NFA, and therefore, qualify as capital in computing net capital under the SEC's Uniform Net Capital Rule ("Net Capital Rule"). The subordinated debt obligations may only be repaid if the Company is in compliance with the applicable terms of the Net Capital Rule.

The subordinated liabilities bear interest at a rate based upon LIBOR.

12. Employee compensation and benefits

The Company's employees participate, to the extent they meet minimum eligibility requirements, in various benefit plans sponsored by JPMorgan Chase. The following is a discussion of JPMorgan Chase's significant benefit plans.

Employee stock-based awards

Certain employees of the Company participate in JPMorgan Chase's long-term stock-based incentive plans, which provide for grants of common stock-based awards, including stock options, stock-settled stock appreciation rights ("SARs") and restricted stock units ("RSUs"). Employees receive annual incentive compensation based on their performance, the performance of their business and JPMorgan Chase's consolidated operating results.

U.S. GAAP requires all share-based payments to employees that qualify as equity awards be measured at their grant-date fair values. JPMorgan Chase uses the Black-Scholes valuation model to estimate the fair value of stock options and SARs. JPMorgan Chase separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, JPMorgan Chase accrues the estimated value of awards expected to be awarded to employees as of the grant date, without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee's full-career eligibility date or the vesting date of the respective tranche.

JPMorgan Chase RSUs

RSUs are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest 50% after two years and 50% after three years and convert to shares of JPMorgan Chase common stock at the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All of these awards are

subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSU is outstanding.

JPMorgan Chase employee stock options and SARs
Employee stock options and SARs have generally been granted with an exercise price equal to the fair value of JPMorgan Chase's common stock on the grant date. JPMorgan Chase periodically grants employee stock options to individual employees. There were no material grants of stock options or SARs in 2015. Prior grants of SARs generally become exercisable ratably over five years (i.e., 20% per year) and contain full-career eligibility provisions and clawback provisions similar to RSUs. SARs generally expire ten years after the grant date.

The following table presents grant and forfeiture activity of JPMorgan Chase stock-based awards to the Company's employees for the year ended December 31, 2015.

(in thousands)	
RSUs	
Granted	7,296
Forfeited	639
Options and SARs	
Granted	5
Forfeited	4

At December 31, 2015, the Company's employees held 18 million unvested RSUs. In addition, 3 million options and SARs were held by the Company's employees at December 31, 2015, of which 669 thousand awards had not vested. In the normal course of business, the employment relationship of certain employees may transfer between the Company and JPMorgan Chase or its subsidiaries which may impact the Company's outstanding awards.

There are no separate plans solely for the employees of the Company and, therefore, the stock-based compensation expense for the Company is determined based upon employee participation in the JPMorgan Chase plans and effected through a charge from JPMorgan Chase, which is cash settled monthly.

For a discussion of the accounting policies and other information relating to employee stock-based compensation, refer to Note 10 of JPMorgan Chase & Co.'s 2015 Annual Report on Form 10K for the year ended December 31, 2015 ("JPMorgan Chase's 2015 Annual Report").

Pension and other postretirement employee benefits
JPMorgan Chase has various defined benefit pension plans and other postretirement employee benefit ("OPEB") plans that provide benefits to its employees. The Company's employees are eligible to participate in JPMorgan Chase's qualified, noncontributory U.S. defined benefit pension plan and they may also participate in JPMorgan Chase's defined contribution plan. In addition, postretirement medical and life insurance benefits are offered to certain retirees, and postretirement medical benefits are offered to qualifying U.S. employees, through JPMorgan Chase's U.S. OPEB plans. Benefits vary with length of service and date of hire and provide for limits on the Company's share of covered medical benefits. The medical and life insurance benefits are both contributory. There are no separate plans solely for employees of the Company and, therefore, pension expense, defined contribution and OPEB expense for the Company is determined based upon employee participation in the JPMorgan Chase plans and are recorded through an intercompany charge from JPMorgan Chase, which is cash settled monthly.

Consolidated disclosures about the defined benefit pension, defined contribution and OPEB plans of JPMorgan Chase, including their funded status, plan assumptions, investment strategy and asset allocation, fair value measurement of plan assets and liabilities, and other disclosures about the plans are included in Note 9 of JPMorgan Chase's 2015 Annual Report.

13. Variable interest entities

At December 31, 2015, the Company consolidated the assets and liabilities of certain VIEs as it was deemed to be the primary beneficiary as it has both the power to direct the activities of those VIEs that most significantly impacts the VIEs' economic performance and, through its interests in the VIEs, the obligation to absorb losses or the right to receive benefits from the VIEs that could potentially be significant to the VIEs.

Affiliate-sponsored mortgage and other securitization trusts
The Company engages in underwriting and trading activities involving securities issued by JPMorgan Chase-sponsored securitization trusts. As a result, the Company at times retains senior and/or subordinated interests (including residual interests) in residential and commercial mortgage securitizations upon securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances as a result of the positions retained or reacquired, when considered together with the power to direct the activities of the VIEs, the Company is deemed to be the primary beneficiary of certain securitization trusts.

At December 31, 2015, the Company recorded $858 million of interests held in affiliate-sponsored residential and commercial mortgage securitization VIEs (these VIEs are not consolidated by the Company as it is not the primary beneficiary). The interest held is recorded as financial instruments owned on the Company's Consolidated Statement of Financial Condition and valued at fair value. The principal amount outstanding of assets in nonconsolidated JPMorgan Chase-sponsored securitization VIEs with continuing involvement was $66.8 billion at December 31, 2015. JPMorgan Chase considers a "sponsored" VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize its assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase-administered asset-backed commercial paper conduit.

Residential mortgages
The Company does not consolidate a residential mortgage securitization (affiliate-sponsored or third-party-sponsored) when it does not hold a beneficial interest in the trust that could potentially be significant to the trust or when the Company does not have the power to direct the activities of the VIE. Generally, the Company is not the servicer of these securities and therefore does not have the power to direct the most significant activities of the trust. At December 31, 2015, the Company did not consolidate the assets of certain JPMorgan Chase-sponsored residential mortgage securitization VIEs, in which the Company had continuing involvement, primarily due to the fact that the Company did not hold an interest in these trusts that could potentially be significant to the trusts.

Commercial mortgages and other consumer securitizations
The Company engages in underwriting and trading activities involving the securities issued by JPMorgan Chase-sponsored securitization trusts. The Company may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization. The Company does not service the underlying commercial loans in commercial mortgage securitizations. The Company does not consolidate commercial mortgage securitizations as it does not have the power to direct the significant activities of the VIE which are generally held by the servicer or investors in a specified class of securities ("controlling class").

Re-securitizations
The Company engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Federal National Mortgage Association ("Fannie Mae"), Federal Home Loan Mortgage Company ("Freddie Mac") and Government National Mortgage Association ("Ginnie Mae")), and non-agency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Company's consolidation analysis is largely dependent on the Company's role and interests in the re-securitization trusts. During the year ended December 31, 2015, the Company transferred $21.9 billion of securities to agency VIEs and $777 million of securities to private label VIEs.

Most re-securitizations with which the Company is involved are client-driven transactions in which a specific client or group of clients are seeking a specific return or risk profile. For these transactions, the Company has concluded that the decision-making power of the entity is shared between the Company and its clients, considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the clients hold in the re-securitization trust; therefore, at December 31, 2015, the Company did not consolidate such re-securitization VIEs.

In more limited circumstances, the Company creates a re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Company is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Company consolidates the re-securitization VIE if the Company holds an interest that could potentially be significant.

Additionally, the Company may invest in beneficial interests of third-party securitizations and generally purchases these interests in the secondary market. In these circumstances, the Company does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it wasn't involved in the initial design of the trust, or

the Company is involved with an independent third-party sponsor and demonstrates shared power over the creation of the trust; therefore, at December 31, 2015, the Company did not consolidate such re-securitization VIEs.

As of December 31, 2015, the Company did not consolidate any agency re-securitizations. As of December 31, 2015, the Company consolidated an insignificant amount of assets and liabilities of JPMorgan Chase-sponsored private-label re-securitizations.

As of December 31, 2015, total assets (including the notional amount of interest-only securities) of nonconsolidated JPMorgan Chase affiliate-sponsored private label re-securitization entities in which the Company has continuing involvement was $2.2 billion. The Company held approximately $4.6 billion of interests in nonconsolidated agency re-securitization entities and $27 million of senior and subordinated interests in nonconsolidated private-label re-securitization entities.

Municipal bond vehicles
Municipal bond vehicles or Tender Option Bonds ("TOB") trusts allow investors to finance their municipal bond investments at short-term rates. In a typical TOB transaction, the trust purchases highly rated municipal bond(s) of a single issuer and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates ("Floaters") and (2) inverse floating-rate residual interests ("Residuals"). The Floaters are typically purchased by money market funds or other short-term investors and may be tendered, with requisite notice, to the TOB trust. The Residuals are retained by the investor seeking to finance its municipal bond investment.

TOB transactions where the Residual is held by a third party investor are typically known as Customer TOB trusts, and Non-Customer TOB trusts are transactions where the Residual is retained by the Company, JPMorgan Chase or an affiliate. The Company serves as sponsor for certain Non-Customer TOB transactions and certain Customer TOB transactions established prior to 2014.

The Company may provide various services to a TOB trust, including remarketing agent, liquidity or tender option provider, and/or sponsor.

The Company may serve as a remarketing agent on the Floaters for TOB trusts. The remarketing agent is responsible for establishing the periodic variable rate on the Floaters, conducting the initial placement and remarketing tendered Floaters. The remarketing agent may, but is not obligated to make markets in Floaters. At December 31, 2015, the Company held an insignificant amount of these Floaters on its Consolidated Statement of Financial Condition.

The Company often serves as the sole liquidity or tender option provider for the TOB trusts. The liquidity provider's obligation to perform is conditional and is limited by certain events ("Termination Events"), which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment-grade. In addition, the liquidity provider's exposure is typically further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or, in certain transactions, the reimbursement agreements with the Residual holders.

Holders of the Floaters may "put," or tender, their Floaters to the TOB trust. If the remarketing agent cannot successfully remarket the Floaters to another investor, the liquidity provider either provides a loan to the TOB trust for the purchase of or directly purchases the tendered Floaters.

TOB trusts are considered to be variable interest entities. The Company consolidates Non-Customer TOB trusts because as the Residual holder, the Company has the right to make decisions that significantly impact the economic performance of the municipal bond vehicle, and have the right to receive benefits and bear losses that could potentially be significant to the municipal bond vehicle. The Company does not consolidate Customer TOB trusts, since the Company does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle.

Consolidated VIE assets and liabilities
As of December 31, 2015, the Company included the following on its Consolidated Statement of Financial Condition related to consolidated VIEs.

	Assets	Liabilities
(in millions)	Financial instruments owned	Beneficial interests issued by consolidated VIEs
Mortgage securitization entities	$322	$258
Municipal bond vehicles	213	214
Total	**$535**	**$472**

14. Enterprise-wide risk management

Risk is an inherent part of JPMorgan Chase's business activities. For example, when JPMorgan Chase makes markets in securities, or offers other products or services, JPMorgan Chase takes on some degree of risk. JPMorgan Chase's overall objective is to manage its businesses, and the associated risks, in a manner that balances serving the interests of its clients, customers and investors and protects the safety and soundness of JPMorgan Chase.

JPMorgan Chase firmwide Risk Management is overseen and managed on an enterprise-wide basis. JPMorgan Chase's approach to risk management covers a broad spectrum of risk areas, such as credit, market, model, operational, legal, compliance, reputation and liquidity risk, with controls and governance established for each area, as appropriate.

JPMorgan Chase believes that effective risk management requires:

- Acceptance of responsibility, including identification and escalation of risk issues, by all individuals within JPMorgan Chase;
- Ownership of risk management within each of the lines of business and corporate functions; and
- JPMorgan Chase firmwide structures for risk governance.

The Company is included in this risk management approach.

JPMorgan Chase's Operating Committee, which consists of JPMorgan Chase's Chief Executive Officer ("CEO"), Chief Risk Officer ("CRO") and other senior executives, is responsible for developing and executing JPMorgan Chase's risk management framework. The framework is intended to provide controls and ongoing management of key risks inherent in JPMorgan Chase's business activities and create a culture of transparency, awareness and personal responsibility through reporting, collaboration, discussion, escalation and sharing of information. The Operating Committee is responsible and accountable to JPMorgan Chase's Board of Directors.

JPMorgan Chase strives for continual improvement through ongoing employee training and development, as well as talent retention. JPMorgan Chase follows a disciplined and balanced compensation framework with strong internal governance and independent Board oversight. The impact of risk and control issues are carefully considered in JPMorgan Chase's performance evaluation and incentive compensation processes. JPMorgan Chase is also engaged in a number of activities focused on conduct risk and in regularly evaluating its culture with respect to its business principles.

The following outlines several key risks that are inherent in the Company's business activities.

Credit risk

Credit risk is the risk of loss arising from the default of a customer, client or counterparty. For further discussion, see Note 15.

Market risk

Market risk is the potential for adverse changes in the value of JPMorgan Chase's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

Market Risk management, part of the independent risk management function, is responsible for identifying and monitoring market risks throughout JPMorgan Chase and defines market risk policies and procedures. The Market Risk function reports to JPMorgan Chase's CRO.

Market Risk seeks to control risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into JPMorgan Chase's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and JPMorgan Chase firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

Model risk
Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports.

JPMorgan Chase uses models for many purposes including the valuation of positions and the measurement of risk. Valuation models are employed by JPMorgan Chase to value certain financial instruments for which quoted prices may not be readily available. Valuation models may be employed as inputs into risk measurement models including value-at-risk ("VaR"), regulatory capital, estimation of stress loss and the allowance for credit losses.

The Model Risk review and governance functions review and approve a wide range of models, including risk management, valuation, and regulatory capital models used by JPMorgan Chase. Independent of the model owners, the Model Risk review and governance functions are part of JPMorgan Chase's Model Risk unit, and JPMorgan Chase's Firmwide Model Risk Executive reports to JPMorgan Chase's CRO.

Operational risk
Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or due to external events that are neither market- nor credit-related. Operational risk is inherent in JPMorgan Chase's activities and can manifest itself in various ways, including fraudulent acts, business interruptions, inappropriate behavior of employees, failure to comply with applicable laws and regulations or failure of vendors to perform in accordance with their arrangements. These events could result in financial losses, litigation and regulatory fines, as well as other damage to JPMorgan Chase. The goal is to keep operational risk at appropriate levels, in light of JPMorgan Chase's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject.

To monitor and control operational risk, JPMorgan Chase maintains an Operational Risk Management Framework ("ORMF") designed to enable JPMorgan Chase to maintain a sound and well-controlled operational environment. The four main components of the ORMF include: governance, risk identification and assessment, monitoring and reporting, and measurement.

Cybersecurity
JPMorgan Chase devotes significant resources maintaining and regularly updating its systems and processes that are designed to protect the security of JPMorgan Chase's computer systems, software, networks and other technology assets against attempts by unauthorized parties to obtain access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. Third parties with which JPMorgan Chase does business or that facilitate JPMorgan Chase's business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecurity risk to JPMorgan Chase, including with respect to breakdowns or failures of their systems, misconduct by the employees of such parties, or cyberattacks which could affect their ability to deliver a product or service to JPMorgan Chase or result in lost or compromised information of JPMorgan Chase or its clients. In addition, customers with which or whom JPMorgan Chase does business can also be sources of cybersecurity risk to JPMorgan Chase, particularly when their activities and systems are beyond JPMorgan Chase's own security and control systems. Customers will generally be responsible for losses incurred due to their own failure to maintain the security of their own systems and processes.

JPMorgan Chase and several other U.S. financial institutions have experienced significant distributed denial-of-service attacks from technically sophisticated and well-resourced unauthorized parties which are intended to disrupt online banking services. JPMorgan Chase and its clients are also regularly targeted by unauthorized parties using malicious code and viruses. The cyberattacks experienced to date have not resulted in any material disruption to JPMorgan Chase's operations nor have they had a material adverse effect on JPMorgan Chase's results of operations. JPMorgan Chase's Board of Directors and the Audit Committee are regularly apprised regarding the cybersecurity policies and practices of JPMorgan Chase as well as JPMorgan Chase's efforts regarding significant cybersecurity events.

Cybersecurity attacks highlight the need for continued and increased cooperation among businesses and the government, and JPMorgan Chase continues to work to strengthen its partnerships with the appropriate government and law enforcement agencies and other businesses, including JPMorgan Chase's third-party service providers, in order to understand the full spectrum of cybersecurity risks in the environment, enhance defenses and improve resiliency against cybersecurity threats.

JPMorgan Chase has established, and continues to establish, defenses to mitigate other possible future attacks.

Business and Technology Resiliency
JPMorgan Chase's global resiliency and crisis management program is intended to ensure that JPMorgan Chase has the ability to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a business interruption, and to remain in compliance with global laws and regulations as they relate to resiliency risk. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives aimed to ensure that risks are properly identified, assessed, and managed.

JPMorgan Chase has established comprehensive tracking and reporting of resiliency plans in order to proactively anticipate and manage various potential disruptive circumstances such as severe weather and flooding, technology and communications outages, cyber incidents, mass transit shutdowns and terrorist threats, among others. The resiliency measures utilized by JPMorgan Chase include backup infrastructure for data centers, a geographically distributed workforce, dedicated recovery facilities, providing technological capabilities to support remote work capacity for displaced staff and accommodation of employees at alternate locations. JPMorgan Chase continues to coordinate its global resiliency program across JPMorgan Chase and mitigate business continuity risks by reviewing and testing recovery procedures.

Legal risk
Legal risk is the risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which JPMorgan Chase is subject.

In addition to providing legal services and advice to JPMorgan Chase, and communicating and helping the lines of business adjust to the legal and regulatory changes they face, including the heightened scrutiny and expectations of JPMorgan Chase's regulators, the global Legal function is responsible for working with the businesses and corporate functions to fully understand and assess their adherence to laws and regulations. In particular, Legal assists Oversight & Control, Risk, Finance, Compliance and Internal Audit in their efforts to ensure compliance with all applicable laws and regulations and JPMorgan Chase's corporate standards for doing business. JPMorgan Chase's lawyers also advise JPMorgan Chase on potential legal exposures on key litigation and transactional matters, and perform a significant defense and advocacy role by defending JPMorgan Chase against claims and potential claims and, when needed, pursuing claims against others.

Compliance risk
Compliance risk is the risk of failure to comply with applicable laws, rules, and regulations.

Each line of business is accountable for managing its compliance risk. JPMorgan Chase's Compliance Organization ("Compliance"), which is independent of the lines of business, works closely with the Operating Committee and management to provide independent review, monitoring and oversight of business operations with a focus on compliance with the legal and regulatory obligations applicable to the offering of JPMorgan Chase's products and services to clients and customers.

These compliance risks relate to a wide variety of legal and regulatory obligations, depending on the line of business and the jurisdiction, and include those related to products and services, relationships and interactions with clients and customers, and employee activities.

Reputation risk
Reputation risk is the risk that an action, transaction, investment or event will reduce trust in JPMorgan Chase's integrity or competence by our various constituents, including clients, counterparties, investors, regulators, employees and the broader public. Maintaining JPMorgan Chase's reputation is the responsibility of each individual employee of JPMorgan Chase. JPMorgan Chase's Reputation Risk Governance policy explicitly vests each employee with the responsibility to consider the reputation of JPMorgan Chase when engaging in any activity. Since the types of events that could harm JPMorgan Chase's reputation are so varied across JPMorgan Chase's lines of business, each line of business has a separate reputation risk governance infrastructure in place, which consists of three key elements: clear, documented escalation criteria appropriate to the business; a designated primary discussion forum - in most cases, one or more dedicated reputation risk committees; and a list of designated contacts, to whom questions relating to reputation risk should be referred. Line of business reputation risk governance is overseen by a JPMorgan Chase Firmwide Reputation Risk Governance function, which provides oversight

of the governance infrastructure and process to support the consistent identification, escalation, management and reporting of reputation risk issues JPMorgan Chase firmwide.

Liquidity risk

Liquidity risk is the risk that JPMorgan Chase will be unable to meet its contractual and contingent obligations or that it does not have the appropriate amount, composition and tenor of funding and liquidity to support its assets.

JPMorgan Chase has a liquidity risk oversight function whose primary objective is to provide assessment, measurement, monitoring, and control of liquidity risk across JPMorgan Chase. Liquidity risk oversight is managed through a dedicated JPMorgan Chase firmwide Liquidity Risk Oversight group. JPMorgan Chase's CIO, Treasury and Corporate ("CTC") CRO, as part of the independent risk management function, has responsibility for JPMorgan Chase firmwide Liquidity Risk Oversight. Liquidity Risk Oversight's responsibilities include but are not limited to:

- Establishing and monitoring limits, indicators, and thresholds, including liquidity appetite tolerances;
- Defining, monitoring, and reporting internal JPMorgan Chase firmwide and legal entity stress tests, and monitoring and reporting regulatory defined stress testing;
- Monitoring and reporting liquidity positions, balance sheet variances and funding activities;
- Conducting ad hoc analysis to identify potential emerging liquidity risks.

15. Customer activities

Customer credit risks

The Company's activities for both clearing clients and customers, including affiliates (collectively "customers"), involve the execution, settlement and financing of customers' securities, and derivative transactions. Derivative transactions primarily include futures, swaps, contracts for difference, forwards, options and various structured products. The Company provides the ability for customers to execute and settle securities and derivative transactions on listed exchanges, as well as, in the OTC markets. Securities and derivative transactions may be settled on a cash basis or financed on a margin basis. The collateral requirement on a margin loan is established based on either regulatory guidelines or internal risk-based requirements for clients that use leverage products offered by the Company.

In connection with certain customer activities, the Company executes and settles customer transactions involving the short sale of securities ("short sales"). When a customer sells a security short, the Company may be required to borrow securities to settle a customer short sale transaction and, as such, these transactions may expose the Company to a potential loss if customers are unable to fulfill their contractual obligations and customers' collateral balances are insufficient to fully cover their losses. In the event customers fail to satisfy their obligations, the Company may be required to purchase financial instruments at prevailing market prices to fulfill the customers' obligations.

It is the policy of the Company to mitigate the risks associated with its customers' activities by requiring customers to maintain margin collateral in compliance with various regulatory and internal guidelines. The Company monitors required margin levels and, pursuant to such guidelines, may require customers to deposit additional cash or other collateral, or to reduce positions, when deemed necessary. The Company also establishes credit limits for customers engaged in derivative activities and monitors credit compliance. Additionally, with respect to the Company's correspondent clearing activities, introducing correspondent firms generally guarantee the contractual obligations of their customers. Further, it is the policy of the Company to reduce credit risk by entering into legally enforceable master netting agreements with customers, which permit receivables and payables with such customers to be offset in the event of a customer default.

In connection with the Company's customer financing and securities settlement activities, the Company may pledge customers' securities as collateral to satisfy the Company's margin deposit requirements with exchanges or to support its various secured financing sources such as borrowings, securities loaned and repurchase agreements. In the event counterparties are unable to meet their contractual obligations to return customers' securities pledged as collateral, the Company may be exposed to the risk of acquiring the securities at prevailing market prices to satisfy its obligations to such customers. The Company seeks to control this risk by monitoring the market value of securities pledged and by requiring adjustments of collateral levels in the event of excess exposure. Moreover, the Company establishes credit limits for such activities and monitors compliance with such credit limits.

Concentrations of credit risks

The Company is engaged in providing securities processing services to a diverse group of individuals and institutional investors, including affiliates. A substantial portion of the Company's transactions are collateralized and may be executed

with, or made on behalf of, institutional investors, including other brokers and dealers, commercial banks, insurance companies, pension plans, mutual funds, hedge funds and other financial institutions. The Company's exposure to credit risk associated with the nonperformance of customers in fulfilling their contractual obligations pursuant to securities and derivative transactions can be directly affected by volatile or illiquid trading markets, which may impair customers' ability to satisfy their obligations to the Company. The Company attempts to minimize credit risk associated with these activities by monitoring customers' credit exposure and collateral values and requiring, when deemed necessary, additional collateral to be deposited with the Company.

A significant portion of the Company's securities processing activities include clearing and settling transactions for hedge funds, brokers and dealers and other professional traders, including affiliates. Due to the nature of these operations, which may include significant levels of credit extension such as leveraged purchases, short selling and option writing, the Company may have significant credit exposure should these customers be unable to meet their commitments. In addition, the Company may be subject to concentration risk through providing margin to those customers holding large positions in certain types of securities, securities of a single issuer, including sovereign governments, issuers located in a particular country or geographic area or issuers engaged in a particular industry, where the Company receives such large positions as collateral. The Company seeks to control these risks by monitoring margin collateral levels for compliance with both regulatory and internal guidelines. Additional collateral is obtained when necessary. To further control these risks, the Company has developed automated risk control systems that analyze the customers' sensitivity to major market movements. The Company will require customers to deposit additional margin collateral, or reduce positions, if it is determined that customers' activities may be subject to above normal market risk.

The Company acts as a clearing broker for securities and futures and options activities of certain affiliates on either a fully disclosed or omnibus basis. Such activities are conducted on either a cash or margin basis. The Company requires its affiliates to maintain margin collateral in compliance with various regulatory guidelines. The Company monitors required margin levels and requests additional collateral when deemed appropriate.

16. Related parties

The Company has significant transactions with JPMorgan Chase and its subsidiaries. Various JPMorgan Chase subsidiaries engage the Company to arrange for the purchase or sale of securities, clearing activities, collateralized transactions, manage portfolios of securities, market derivative instruments, structure complex transactions and provide and receive operational support and services.

Balances with related parties as of December 31, 2015, are listed below.

(in millions)		
Assets		
Cash	$	479
Cash and securities segregated under federal and other regulations		7,069
Securities purchased under resale agreements		17,103
Securities borrowed		5,491
Receivables from customers		17
Receivables from brokers, dealers, clearing organizations and others		1,202
Financial instruments owned, at fair value		1,580
Other assets		81
Liabilities		
Short-term borrowings (included $116 at fair value)	$	15,453
Securities sold under repurchase agreements		69,731
Securities loaned		1,386
Payables to customers		4,246
Payables to brokers, dealers, clearing organizations and others		4,872
Financial instruments sold, not yet purchased, at fair value		444
Accounts payable and other liabilities		7
Long-term debt, at fair value		5,000
Subordinated liabilities		14,630

As of December 31, 2015, financial instruments owned included $65 million of derivative receivables from affiliates; the remaining $1.5 billion is comprised of corporate debt and structured notes obligations of its affiliates, as well as common and preferred shares issued by JPMorgan Chase. Financial instruments sold, not yet purchased included $3 million of derivative payables to affiliates; the remaining $441 million is comprised of corporate debt obligations issued by JPMorgan Chase and its affiliates.

17. Commitments, pledged assets, collateral and contingencies

Underwriting commitments

As of December 31, 2015, the Company had $5 million of outstanding firm securities underwriting commitments.

Collateralized committed facilities

Collateralized committed facilities are conditional lending commitments issued by the Company for secured financings. The Company has such facilities in place with certain customers and certain clearing houses of which it is a member. The Company does not hold collateral to support undrawn commitments under these facilities. However, before advancing funds the Company takes possession of collateral (generally securities) and continues to monitor the market value of the collateral during the term of the financing, which includes requesting or returning additional collateral when appropriate. At December 31, 2015, the Company had commitments of $5.2 billion outstanding under such collateralized committed facilities.

Unsettled resale and repurchase agreements

In the normal course of business, the Company enters into resale and repurchase agreements that settle at a future date. At settlement, these commitments require that the Company advance cash to and accept securities from the counterparty. These agreements generally do not meet the definition of a derivative, and therefore, are not recorded on the Consolidated Statement of Financial Condition until settlement date. At December 31, 2015, commitments related to forward starting resale and repurchase agreements were $4.5 billion and $1.8 billion, respectively.

Pledged assets

At December 31, 2015, assets were pledged or otherwise provided to collateralize repurchase agreements, securities loan agreements and other financing agreements, to cover customer short sales and to satisfy margin deposits at clearing and depository organizations. At December 31, 2015, financial instruments with a market value of approximately $72.7 billion were pledged or otherwise provided to collateralize financing transactions and for other purposes. Certain of these pledged assets may be sold or repledged or otherwise used by the secured parties and are identified as financial instruments owned on the Consolidated Statement of Financial Condition. In addition, the Company had pledged $11.0 billion of financial assets that may not be sold or repledged or otherwise used by the secured parties. The above amount of assets pledged do not include assets of consolidated VIEs, which are used to settle the liabilities of those entities.

Collateral

At December 31, 2015, the Company had accepted assets as collateral that could be repledged, delivered or otherwise used with a fair value of approximately $502.2 billion. This collateral was generally obtained under resale agreements, securities borrowing agreements and customer margin loans. In many instances, the Company is permitted to rehypothecate the securities received as collateral, subject to regulations which prohibit the rehypothecation of customer fully-paid and excess margin securities, as set forth in SEC Rule 15c3-3, Customer Protection. Of the collateral received, approximately $436.1 billion was repledged, delivered or otherwise used, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales.

Guarantees of subsidiaries

In the normal course of its business, JPMorgan Securities guarantees certain of the obligations of its consolidated subsidiaries. These obligations predominantly relate to JPMorgan Securities' guarantee of the obligations of Clearing Corp, which totaled $124.0 billion at December 31, 2015. The obligations of the consolidated subsidiaries are included on the Company's Consolidated Statement of Financial Condition or are reflected as off-balance sheet commitments; therefore, the Company has not recognized a separate liability for these guarantees. The Company believes that the occurrence of any events that would trigger payments under these guarantees is remote.

Derivatives qualifying as guarantees

The Company is both a purchaser and seller of credit protection in the credit derivatives market. For further discussion of credit derivatives, see Note 5.

Clearing services

The Company provides clearing services for clients entering into securities purchases and sales and derivative transactions, with CCPs, including ETDs such as futures and options, as well as OTC-cleared derivative contracts. As a clearing member, the Company stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin. Variation margin is posted on a daily basis based on the value of clients' derivative contracts. Initial margin which is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As a clearing member, the Company is exposed to the risk of nonperformance by its clients, but is not liable to clients for the performance of the CCP's. Where possible, the Company seeks to mitigate its risks to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. The Company may cease providing clearing services to a client if the client does not adhere to their obligations under the clearing agreement. In the event of nonperformance by a client, the Company would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Company as a clearing member.

The Company reflects its exposure to nonperformance risk of the client through the recognition of margin payables or receivables to clients and CCPs, but does not reflect the clients' underlying securities or derivative contracts on its Consolidated Statement of Financial Condition.

It is difficult to estimate the Company's maximum possible exposure through its role as a clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based on credit risk management practices and historical experience, and the credit risk mitigants available to the Company, management believes it is unlikely that the Company will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

Exchange and clearing house guarantees

The Company is a member of several securities and derivative exchanges and clearing houses, both in the U.S. and other countries, and it provides clearing services. Membership in some of these organizations requires the Company to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Company's contribution to the guarantee fund maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may be a full pro-rata share of the residual losses after applying the guarantee fund. Additionally, certain clearing houses require the Company as a member to pay a pro rata share of losses resulting from the clearing house's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. It is difficult to estimate the Company's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Company that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

The selection of clearing houses, as well as custodians and bank depositories, is reviewed as part of the Company's risk management process.

Sale of business contingent consideration

In connection with the sale of a portion of the Broker Dealer Services business in 2014, the Company recorded an estimate of the fair value of contingent sale consideration based on estimated client conversions. The sale granted the buyer exclusive rights to negotiate with current Company clients as to the transfer of their accounts to the buyer. The final sale consideration will be based on accepted clients, as defined, as of December 31, 2015 (with final conversions and final sale consideration to be completed in 2016). The remaining contingent consideration at December 31, 2015, is recorded in other assets on the Consolidated Statement of Financial Condition.

Lease commitments

The following table presents required future minimum rental payments for office space under noncancelable operating leases that expire after December 31, 2015.

Year ended December 31, 2015 (in millions)		
2016	$	3
2017		3
2018		3
2019		1
2020		1
After 2020		1
Total minimum payments required	$	12

Litigation

The Company has established reserves for certain of its currently outstanding legal proceedings. In accordance with the provisions of U.S. GAAP for contingencies, the Company accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount of the loss can be reasonably estimated. The Company is a defendant in a number of legal proceedings involving mortgage-backed securities litigation and other matters. While the outcome of litigation is inherently uncertain, management believes, in light of all information known to it at December 31, 2015, that the Company's litigation reserves were adequate at such date. Management evaluates its outstanding legal proceedings periodically, and makes adjustments in such reserves, upwards or downward, as appropriate, based on management's best judgment after consultation with counsel.

In view of the inherent difficulty of predicting the outcome of legal proceedings, the Company cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses or impact related to those matters. The Company believes, based upon its current knowledge, after consultation with counsel and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on its Consolidated Statement of Financial Condition. The Company notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance that the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued. As a result, the outcome of a particular matter may be material to the Company's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of the Company's income for that period. The Company believes it has meritorious defenses to the claims asserted against it in its currently outstanding litigation and, with respect to such litigation, intends to continue to defend itself vigorously, litigating or settling cases according to management's judgment. For further discussion of certain legal proceedings relating to JPMorgan Chase, including the estimate of the range of reasonably possible losses for JPMorgan Chase's legal proceedings, please refer to Note 31 of JPMorgan Chase's 2015 Annual Report.

The litigation noted above involves multiple companies that are subsidiaries or affiliates of JPMorgan Chase, including the Company. Due to the overlapping nature of claims, JPMorgan Chase does not disaggregate the estimate of reasonably possible losses by individual subsidiary or affiliate. Where JPMorgan Chase and/or one or more of its subsidiaries or affiliates are named as defendants in a particular litigation, JPMorgan Chase has procedures to determine the proper allocation of legal costs among the several defendants.

18. Net capital and other regulatory requirements

JPMorgan Securities is a registered broker-dealer and FCM and, accordingly, is subject to Rule 15c3-1 under the Net Capital Rule and Rule 1.17 under the CFTC. The SEC has approved JPMorgan Securities' use of Appendix E of the Net Capital Rule, which establishes alternative net capital requirements ("net capital") for broker-dealers that are part of entities subject to consolidated supervision at the ultimate holding company level. Appendix E allows JPMorgan Securities to calculate net capital charges for market risk and derivatives-related credit risk based on mathematical models provided that it holds tentative net capital in excess of $1 billion and net capital in excess of $500 million. JPMorgan Securities is also required to notify the SEC in the event that tentative net capital is less than $5 billion. JPMorgan Securities is also subject to the CFTC's minimum financial requirements which require the maintenance of net capital, as defined, equal to 8% of customer risk maintenance margin requirements plus 8% of non-customer risk maintenance margin requirements, all as defined in the capital rules of the CFTC.

At December 31, 2015, JPMorgan Securities' net capital of $14.2 billion exceeded the minimum net capital requirement of $2.3 billion by $11.9 billion. JPMorgan Securities' net capital computation includes $3.8 billion, which is the net capital of Clearing Corp. in excess of 5% of Clearing Corp.'s aggregate debit items arising from customer transactions.

JPMorgan Securities and Clearing Corp are subject to the customer protection Rule 15c3-3 under the Securities Exchange Act of 1934. As of December 31, 2015, JPMorgan Securities and Clearing Corp segregated in a special reserve account, for the exclusive benefit of customers, cash and qualified securities of $922 million and $15.1 billion, respectively. This amount is included on the Consolidated Statement of Financial Condition in cash and securities segregated under federal and other regulations.

JPMorgan Securities and Clearing Corp. also perform the computation for assets in the proprietary accounts of broker-dealers ("PAB") in accordance with the PAB reserve computation set forth in Rule 15c3-3 under the Securities Exchange Act of 1934, so as to enable introducing brokers to include PAB assets as allowable assets in their net capital computations (to the extent allowable under the Net Capital Rule). As of December 31, 2015, JPMorgan Securities and Clearing Corp. segregated in a special reserve account, for the exclusive benefit of PAB customers qualified securities of $18 million and $3.9 billion, respectively. This amount is included on the Consolidated Statement of Financial Condition in cash and securities segregated under federal and other regulations.

Additionally, JPMorgan Securities and Clearing Corp., in their capacity as a FCM are required to perform computations of the requirements of Section 4d(2), Regulation 30.7, and Regulation 22.2 under the Commodity Exchange Act. As of December 31, 2015, assets segregated, secured and sequestered by JPMorgan Securities and Clearing Corp. totaled $27.5 billion and $1.4 billion, respectively, which exceeded requirements by $2.7 billion and $428 million, respectively.

19. Subsequent events

The Company has performed an evaluation of events that have occurred subsequent to December 31, 2015, and through February 29, 2016 (the date of the filing of this report). There have been no material subsequent events that occurred during such period that would require disclosure in this report or would be required to be recognized on the Company's Consolidated Statement of Financial Condition as of December 31, 2015.

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	X	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes		**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

J.P. Morgan Securities LLC

Company Name

Rhett Bredy

Name and Title of Authorized Representative (Print or Type)

Rhett M. Bredy — March 7, 2016

Signature — **Date**

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-103919

Date Filed:
08/24/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

J.P. Morgan Securities LLC
New York, NY United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Municipal bond underwriting services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
JPMorgan Chase & Co.	New York, NY United States	X	
J.P. Morgan Broker-Dealer Holdings Inc.	New York, NY United States	X	
Cherwin, Matthew L.	New York, NY United States	X	
Hernandez, Carlos M.	New York, NY United States	X	
Hill, Erin E.	New York, NY United States	X	
Holmes, Robert C.	Dallas, TX United States	X	
Kirby, Patrick C.	New York, NY United States	X	
Quental, Gregory G.	New York, NY United States	X	
Sippel, Jason E.	New York, NY United States	X	
Stein Sr., Eric J.	New York, NY United States	X	
Walker Jr., James R.	New York, NY United States	X	

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-103919

Date Filed:
08/24/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

J.P. Morgan Securities LLC
New York, NY United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Municipal bond underwriting services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

NOTARY PUBLIC STATE OF TEXAS
GLENN D NOLASCO
My Commission Expires
December 18, 2016

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said DOUGLAS HARTMAN, this the 24 day of AUGUST, 20 16, to certify which, witness my hand and seal of office.

Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath
	GLENN D. NOLASCO	NOTARY PUBLIC

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Morgan Stanley & Co., LLC. ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Morgan Stanley & Co., LLC. having offices at 106 East Sixth Street, Suite 836, Austin, TX 78701 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Morgan Stanley & Co., LLC. Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

Morgan Stanley & Co., LLC.	CITY OF AUSTIN
Blaine Brunson	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Blaine Br	
Signature	Signature
Vice President	Senior Buyer Supervisor
Title:	Title:
6/24/2016	7/8/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Morgan Stanley

Company Address: 1585 Broadway

City, State, Zip: New York, NY 10036

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Blaine Brunson

Title: Vice President

Signature of Officer or Authorized Representative: Blaine Brun

Date: 3/7/2016

Email Address: Blaine.Brunson@morganstanley.com

Phone Number: (512) 322-5766

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Morgan Stanley

Company Address: 1585 Broadway

City, State, Zip: New York, NY 10036

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Blaine Brunson

Title: Vice President

Signature of Officer or Authorized Representative: Blaine Brun

Date: 3/7/2016

Email Address: Blaine.Brunson@morganstanley.com

Phone Number: (512) 322-5766

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No X **If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**

Yes ____ **If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Morgan Stanley

Company Name

Blaine Brunson, Vice President

Name and Title of Authorized Representative (Print or Type)

Blaine Brunson

Signature

3/7/2016

Date

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-134704

Date Filed:
11/09/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Morgan Stanley
New York, NY United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin Electric Utility System

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

20161006-014
Bond Underwriting

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Haynes & Boone	Houston, TX United States		X
Ramirez & Co. Inc.	Austin, TX United States		X
Citigroup Global Markets Inc.	Dallas, TX United States		X
JP Morgan	Dallas, TX United States		X
Loop Capital Markets	Houston, TX United States		X
Assomull, Mohit	New York, NY United States	X	
Kryska, Lissa	New York, NY United States	X	
Weaver, Marcus	New York, NY United States	X	
Fraunfelder, Grant	New York, NY United States	X	
Brunson, Blaine	Austin, TX United States	X	
Perry, Jim	Washington, DC, DC United States	X	
Berke, Matthew	New York, NY United States	X	
Healy, Brian	New York, NY United States	X	
Stern, Michael	New York, NY United States	X	
Wipf, Thomas G.	New York, NY United States	X	
Lupetin, Sergio	New York, NY United States	X	
McEvoy, Graeme	New York, NY United States	X	
Sunada-Wong, Rodney	New York, NY United States	X	

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-134704

Date Filed:
11/09/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Morgan Stanley
New York, NY United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin Electric Utility System

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

20161006-014
Bond Underwriting

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Richter, Rose-Anne N.	New York, NY United States	X	
Clune, Katherine	New York, NY United States	X	
Faulkner, John H.	New York, NY United States	X	
Jenkins, Mariel	New York, NY United States	X	
D'Amico, Curtis	New York, NY United States	X	
Hale, Luke	New York, NY United States	X	
Balanoff, Glen	New York, NY United States	X	
Wynne, Brian	New York, NY United States	X	

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

ANGELA WASHINGTON
NOTARY PUBLIC-STATE OF NEW YORK
No. 01WA6236247
Qualified in New York County
My Commission Expires February 28, 2019

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said James Perry, this the 9 day of November 20 16, to certify which, witness my hand and seal of office.

Angela Washington — Angela Washington — Executive Assistant

Signature of officer administering oath — Printed name of officer administering oath — Title of officer administering oath

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
RBC Capital Markets, LLC ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between RBC Capital Markets, LLC having offices at 303 Pearl Parkway, Suite 220, San Antonio, TX 78215 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 RBC Capital Markets, LLC Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence**: Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work**: There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract**: The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement**: The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

RBC CAPITAL MARKETS, LLC	CITY OF AUSTIN
Matt Boles	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
Managing Director	Senior Buyer Supervisor
Title:	Title:
06/23/2016	7/8/16
Date:	Date:

City of Austin, Texas

Request for Qualification Statements (RFQS)

Solicitation No: TVN0103REBID

MARCH 8, 2016

RBC Capital Markets

RBC Capital Markets

Royal Bank of Canada
RBC Capital Markets, LLC
303 Pearl Parkway, Suite 220
San Antonio, Texas, 78215

March 8, 2016

Terry Nicholson
Senior Buyer Specialist
City of Austin
124 W 8th Street
Austin, TX 78701

Dear Mr. Nicholson:

RBC Capital Markets, LLC ("RBCCM" or the "Firm") is pleased to respond to the Response to Request for Qualifications for Underwriter/Investment Banking Services for the City of Austin (the "City") and is responding in the ***National*** firm category. As summarized below and described in detail herein, RBCCM is both well positioned and ideally suited to serve as the City's senior managing underwriter.

Significant Global Presence and Resources. Royal Bank of Canada ("RBC") is one of the world's largest banks, with over $821 billion of assets and a market capitalization of over $80 billion. Founded in 1869, RBC and its subsidiaries serve over 16 million governmental, corporate and individual clients with some 78,000 employees in 39 different countries. RBCCM, RBC's U.S. broker-dealer subsidiary, is a national, full-service investment bank with strong regional roots comprised of over 7,100 professionals and support staff operating from 70 offices in 15 countries.

Although RBCCM is a worldwide investment banking, sales and trading group that includes one of the leading municipal finance organizations in the U.S., we maintain our deep Texas roots that have been providing municipal finance services to issuers in the State since 1933.

Ability and Willingness to Commit Capital. Underwriting bonds in a volatile interest rate environment is the strongest commitment an underwriter can make to an issuer; underwriting unsold balances saves the issuer the penalty of pricing at a higher market clearing level. RBCCM has a track record of using its capital to do just that. Our parent company is one of the strongest financial institutions in the world and is the highest rated bank in the municipal market ("Aa3/AA-/AA") today. As such, RBCCM regularly commits capital to support its senior managed clients.

Unsurpassed Distribution Capabilities – Largest on Wall Street. Our 58 national institutional salespeople are served by 27 municipal traders and underwriters, making our institutional sales force one of the largest in the nation. We cover the full spectrum of retail and institutional purchasers. Targeting a combination of investor segments, Tier I, as well as Tiers II and III, creates competition for bonds among the investor segments, preventing a few Tier I investors from dictating the pricing levels of a transaction. RBCCM is uniquely positioned to provide the City the broadest spectrum of institutional sales channels in addition to the Firm's proven willingness to commit capital and preserve low interest rates for our issuer clients.

Longstanding Commitment to Texas. RBCCM has demonstrated a commitment to the State of Texas for over 80 years. Through its predecessor firm, Rauscher Pierce Refsnes, Inc., the Firm has continuously operated in Texas since 1933. Today our presence encompasses 15 offices in 10 cities employing over 400 professionals and support staff. RBCCM has been the most active senior managing underwriter of negotiated Texas debt issuances over the past 10 years and has been the #1 senior managing underwriter by number of transactions 7 out of the last 10 years. This commitment ensures our underwriters have access to in-depth, real-time market knowledge, which translates to improved execution.

RBCCM's Team Assigned to the City. The RBCCM team can provide the full complement of expertise and services to the City. Our team has been developed based on each individual's (i) experience with the City and similar credit financings; (ii) quantitative analysis and structuring expertise, (iii) understanding of the various City credits and investor issues related to the City financings; (iv) use of bank products, interest rate and risk

management structures; and (v) pricing and underwriting city bonds. We trust that we have recently demonstrated that our bench of experienced professionals is deep and that our commitment to the City has been unwavering. Currently members of our team have extensive knowledge and experience in working with the City and are top industry professionals in their specific sectors. Richard Acosta and Stephanie Henning lead the local Texas banking coverage with Tom Yang heading coverage of Austin Airport, Tim Williams heading Austin Water and Sewer and Greg Dawley heading Austin Energy. Recently our team has been focusing on Austin Airport, providing several rating agency strategies and structuring options throughout various meetings with the City's Treasury and Aviation departments in addition to their respective financial advisors. Listed below is a summary of our recent coverage.

City of Austin Airport System Presentation History

Date	Description
09/02/2015	Market Update; Refunding Analysis; Credit Solutions
09/23/2015	New Money Financing Update
12/17/2015	Airport Market Update; Credit Analysis; New Money Financing Update; Refunding Analysis
01/26/2016	Airport Credit Rating Strategies; Overview of Fitch Preliminary Assessment

Summary of Refunding Analysis Results

	General Obligation		Electric Utility System		Water & Wastewater System	
	Prior Analysis (12/17/2015)	Current Analysis	Prior Analysis (12/17/2015)	Current Analysis	Prior Analysis (12/17/2015)	Current Analysis
Delivery Date	02/01/2016	04/14/2016	02/01/2016	04/14/2016	02/01/2016	04/14/2016
Refunded Par	$ 59,175,000	$ 59,175,000	$ 70,500,000	$ 70,500,000	$149,080,000	$187,245,000
Avg Coupon of Refunded Bonds	4.96%	4.67%	4.94%	5.24%	5.00%	4.86%
All-In TIC	2.57%	2.27%	3.63%	3.42%	3.23%	2.91%
Arbitrage Yield	2.26%	1.97%	2.89%	2.71%	2.68%	2.42%
Escrow Yield	1.27%	1.33%	1.25%	1.37%	1.41%	1.54%
Net Debt Service Savings	$ 6,502,038	$ 8,631,444	$ 7,730,805	$ 11,071,825	$ 16,866,812	$ 30,634,472
Avg Annual Debt Service Savings	$ 541,608	$ 719,287	$ 386,393	$ 553,591	$ 766,603	$ 1,392,476
Net PV Savings	**$ 5,432,107**	**$ 7,394,056**	**$ 5,738,895**	**$ 8,310,652**	**$ 12,146,864**	**$ 22,886,026**
PV Savings as % of Refunded Par	**9.18%**	**12.50%**	**8.14%**	**11.79%**	**8.15%**	**12.22%**
Negative Arbitrage	**$ 1,541,752**	**$ 922,683**	**$ 3,003,000**	**$ 2,275,303**	**$ 5,226,415**	**$ 4,308,159**
Neg Arb as % of PV Savings	**28.38%**	**12.48%**	**52.33%**	**27.38%**	**43.03%**	**18.82%**

Tom Yang leads our successful national airport practice with senior managed underwriting experience for several large airport systems throughout the country. This practice continues to grow; we were recently hired as Senior Manager on March 3rd for a $220 million Minneapolis Airport transaction to fund parking and terminal improvements which demonstrates our vibrant thriving practice. We would be honored to serve the City in such capacity for its airport financing anticipated later this year.

Experience with the City. RBCCM has been involved in the City's bond sales since 1974 and most recently senior co-managed the City's $244,495,000 Airport System Revenue Bonds, Series 2014 transaction. In total, the Firm has senior or co-managed 70 transactions with a total par amount in excess of $7.44 billion. The following tombstones outline our recent underwriting experience with the City.

$244,495,000
City of Austin
Airport Sys Rev Bonds, Series 2014
Senior Co-Manager
December 2014

$9,600,000
City of Austin
Certificates of Obligation, Taxable Series 2014
Senior Manager
September 2014

$10,000,000
City of Austin
Public Improvement Bonds, Taxable Series 2014
Senior Manager
September 2014

$26,485,000
City of Austin
4.5% Hotel Occupancy Tax Revenue Refunding Bonds, Series 2013
Co-Manager
December 2013

$107,715,000
City of Austin
Electric Utility System Revenue Refunding Bonds, Taxable Series 2012B
Co-Manager
December 2012

$267,770,000
City of Austin
Electric Utility System Revenue Refunding Bonds, Series 2012A
Co-Manager
December 2012

$336,820,000 **City of Austin** Water & Wastewater System Revenue Refunding Bonds, Series 2012 Co-Manager *July 2012*	**$20,185,000** **City of Austin** Hotel Occupancy Tax Subord Lien Rev Ref Bonds, Series 2012 Co-Manager *March 2012*	**$237,530,000** **City of Austin** Water & Wastewater System Revenue Refunding Bonds, Series 2011 Co-Manager *November 2011*	**$76,855,000** **City of Austin** Water & Wastewater System Revenue Refunding Bonds, Series 2010A Co-Manager *November 2010*	**$100,970,000** **City of Austin** Water & Wastewater System Revenue Refunding Bonds, Taqxable Series 2010B Co-Manager *November 2010*	**$16,450,000** **City of Austin** Public Property Finance Contractual Obligations, Series 2010 Co-Manager *September 2010*

Achieving the lowest cost of financing for the City remains a very important strategic goal for the Firm. With our strong balance sheet, deep roots in the State of Texas, and proven ability to underwrite bonds, we believe we are well positioned to be the City's senior managing underwriter. We appreciate the opportunity to submit our credentials and look forward to hearing from you.

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: RBC Capital Markets, LLC

Company Address: 303 Pearl Parkway, Suite 220

City, State, Zip: San Antonio, TX 78215

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Richard Acosta

Title: Director

Signature of Officer or Authorized Representative: _____

Date: March 7, 2016

Email Address: richard.acosta@rbccm.com

Phone Number: (210) 805-1148

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award***

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Part I	Business Organization
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Part III	Background and Prior Experience
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Disclaimer

RBC Capital Markets, LLC ("RBCCM"), seeks to serve as an underwriter on a future transaction and not as a financial advisor or municipal advisor. The information provided is for discussion purposes only in anticipation of being engaged to serve as an underwriter. The primary role of an underwriter is to purchase securities with a view to distribution in an arm's-length commercial transaction with the issuer. The underwriter has financial and other interests that differ from those of the Issuer. RBCCM is not recommending an action to you as the municipal entity or obligated person. RBCCM is not acting as an advisor to you and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to you with respect to the information and material contained in this communication. RBCCM is acting for its own interests. You should discuss any information and material contained in this communication with any and all internal or external advisors and experts that you deem appropriate before acting on this information or material.

Part I – Business Organization

State full name and address of your organization and identify parent company if you are a subsidiary. Specify the branch office or other subordinate element which will perform, or assist in performing, work herein. Indicate whether you operate as a partnership, corporation, or individual. Include the State in which incorporated or licensed to operate.

RBC Capital Markets, LLC
200 Vesey Street, 9th Floor
New York, NY 10281

RBCCM is the corporate and investment banking division of the Royal Bank of Canada ("RBC") and is wholly owned by RBC. RBC is a publicly traded corporation and operates in the United States as a ***national firm*** with both retail and institutional distribution of municipal bonds. RBC is a publicly traded company on the New York Stock Exchange under the ticker RY. Operating since 1869, RBC, the parent firm of RBCCM, is one of North America's leading diversified financial services companies and among the largest and safest banks in the world.

RBCCM, with our national headquarters in New York City and Texas municipal finance offices in Dallas, Houston, and San Antonio, is well positioned as a full-service, national yet regionally focused financial institution. RBCCM is a full-service investment bank and broker-dealer with over 7,100 professionals operating from 70 offices in 15 different countries. We provide our clients with a full spectrum of products and services across a range of industries, including investment banking, commodities, currencies, fixed income, equities and research. We provide a full range of balance sheet solutions including derivatives and various credit products through RBC and are part of a global governmental and infrastructure finance network.

The lead bankers will support the City from its San Antonio and Dallas offices with sector specific bankers, detailed in Section IV of our response, brought in according to the type of City credit. The lead underwriter dedicated to Texas issuers will be responsible for the pricing and marketing of the City's bonds from the underwriting desks located in our Dallas or Houston office. Additionally, the Firm would be honored to host the City at our New York office to price its transaction(s) from its 700-person trading floor, the largest on Wall Street.

RBCCM is a registered broker/deal with the SEC, 17 Self-Regulatory Organizations, and 53 U.S. states and territories including the State of Texas. The full profile of the Firm and confirmation of its registrations can be found at the link below:

http://brokercheck.finra.org/Firm/Summary/31194

i. Management / Ownership: Provide any recent or proposed changes in the firm's management or ownership.

The Firm has not had any recent relevant changes in ownership, management or staffing and does not foresee any changes in the near future.

ii. Confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response.

By signing the enclosed Offer Sheet on page III, the Firm acknowledges the requirements of the non-discrimination certificate.

iii. Confirm an understanding that the firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.

RBCCM acknowledges that the Firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the Firm's proposal response.

iv. Municipal sales offices in the United States.

A key beneficiary of RBC's investment in its U.S. platform is the Firm's Municipal Markets Group. Municipal Markets is organized to provide investment banking and securities sales, trading and underwriting services to

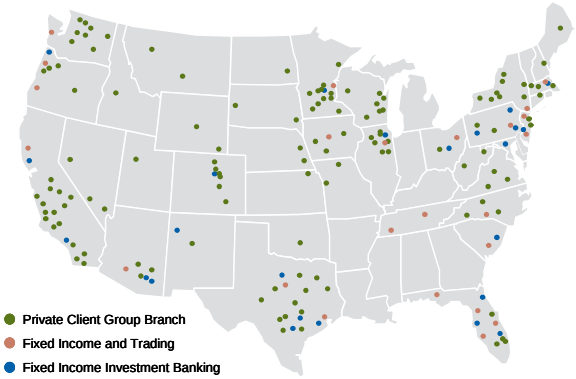
investors in, and issuers of, tax-exempt and taxable debt securities. Municipal Markets is comprised of the Municipal Finance, Municipal Products, Public Fund Services and Sales, Trading and Underwriting departments. In addition, municipal bond retail accounts are supported through our vast retail distribution network.

The Firm's Municipal Markets group represents one of the largest fixed income investment banking operations in the country, serving public sector and non-profit clients in all 50 states. With the strength and resources of a national securities firm, coupled with the local commitment and community involvement, RBCCM truly offers the best of both worlds to issuers seeking the highest levels of service, execution and proximity. Our passionate dedication to superior client service and investment banking innovation explains the continued success and growing market share enjoyed by our department in an increasingly demanding and competitive marketplace.

The growth of our municipal finance practice has been built upon maintaining significant banking presence in select, major population centers across the country.

The municipal markets banking group presently operates 27 offices across the country, with three in the State of Texas. In addition, RBCCM sales and trading hubs in Boston, Chicago, Dallas, Houston, Nashville, New York City, and San Francisco are strategically located to ensure our sales force has direct access to the major institutional buyers of municipal securities. Our 177 wealth management offices are located throughout 42 states in the U.S including 12 offices in Texas.

RBCCM Office Locations



v. Account Executives employed selling municipal bonds in the United States.

RBCCM operates one of the largest municipal finance departments in the country. The Firm currently has 58 fixed income institutional salespeople covering Tier I, II, and III tax-exempt and taxable investors. In addition, the Firm has approximately 1,800 retail sales professionals across the various wealth management offices throughout the country. We believe that once rates increase and retail accounts return to the market, RBCCM's depth of retail brokers along with our institutional sales force will add greater distribution value to the City.

vi. Texas offices and locations, if any, along with the number of Account Executives selling municipal bonds in each Texas office identified.

RBCCM maintains 15 offices in the State of Texas including three public finance offices located in Dallas, Houston, and San Antonio in addition to the 12 RBC Wealth Management offices in the State of Texas: ***Austin***, San Antonio, Dallas, Houston Center, Houston Galleria, Houston West, Longview, Midland, Fort Worth, Plano, Sugar Land, and Tyler. The 136 financial advisors in these offices service nearly 53,000 retail accounts in Texas, representing nearly $16.4 billion in assets under management. Of the $16.4 billion, approximately $2.7 billion is invested in municipal securities. In addition, RBCCM employs 11 institutional salespeople from the Dallas and Houston offices. The included table details the Firm's sales office locations in the State of Texas as well as the number of retail and institutional sales personnel that sell municipal bonds in each office.

RBCCM's Texas Presence

RBCCM Texas Office Locations and Sales Professionals

Location	Institutional Sales	Retail Sales	Total
Austin		17	17
Dallas - 100 Crescent Ct		22	22
Dallas - 200 Crescent Ct*	8		8
Fort Worth		13	13
Houston Center*	3		3
Houston Center		17	17
Houston Galleria		10	10
Houston West		10	10
Longview		6	6
Midland		4	4
Plano		16	16
San Antonio*			
San Antonio		9	9
Sugar Land		9	9
Tyler		3	3
Total	**11**	**136**	**147**

****Public Finance offices***

Texas is a key state in the RBCCM municipal finance footprint. We have been a leading underwriter and financial advisor in the State for many years. The added advantage of our deep roots as a Texas founded firm means that through our deep history in the State we are a well-established member of the Texas public finance community,

with a strong reputation and in-depth institutional knowledge about the local market as well as Texas public finance laws and practices. RBCCM and our predecessor firms have continuously operated offices in the State of Texas since 1933 and have been involved with the City's bond sales since 1974.

Part II – Authorized Negotiator

Include name, address, and telephone number of the person in your organization authorized to negotiated contract terms and render binding decisions on contract matters.

The co-lead bankers, Mr. Richard Acosta, Director, and Ms. Stephanie Henning, Vice President, are authorized to negotiate contract terms and render binding decisions on contract matters on behalf of the Firm. The contact information for these individuals is provided in the business cards below.

RBC Capital Markets

Richard Acosta
Director

RBC Capital Markets, LLC
303 Pearl Parkw ay
Suite 220 Tel: (210) 805-1148
San Antonio, TX 78215 Fax: (210) 805-1119

richard.acosta@rbccm.com

RBC Capital Markets

Stephanie Henning
Vice President

RBC Capital Markets, LLC
200 Crescent Court
Suite 1500 Tel: (214) 989-1727
Dallas, TX 75201 Fax: (214) 989-1650

stephanie.henning@rbccm.com

Part III – Background and Prior Experience

Describe only relevant corporate experience and individual experience for personnel who will be actively engaged in the contract. Do not include corporate experience unless personnel assigned to this project actively participated. Do not include experience prior to 2000. Supply the project title, year, and reference name, title, present address, and phone number of principal person for whom prior projects were accomplished.

RBCCM, through its predecessor firm, Rauscher Pierce Refsnes, Inc., has continuously operated in Texas since 1933. RBCCM has been one of the most active senior managing underwriters of negotiated Texas debt issuances since 2000 (1,703 total senior managed transactions) and has been the #1 senior managing underwriter by number of transactions 11 out of the last 15 years.

Given the large amount in underwriting volume that we have participated in since 2000, we have provided a representative sample of ten relevant deals per assigned lead banker for the City's reference. We are happy to provide a larger list upon request.

Richard Acosta (Co-Lead Banker)

Issuer	Project Title	Par Amount	Year	Reference Name	Title	Present Address	Phone Number
Northside ISD	Unlimited Tax Refunding Bonds	$81,070,000*	2016	David Rastellini	Deputy Sup't for Business & Finance	5900 Evers Road San Antonio, TX 78238	(210) 397-8903
Bexar County	Tax-Exempt Venue Rev Refunding Bonds	78,935,000	2015	David Smith	Chief Investment Officer	101 W. Nueva, Suite 901 San Antonio, TX 78204	(210) 335-2405
CPS Energy	Jr. Lien Variable Rate Bonds	100,000,000	2015	Frank Almaraz	Senior VP of Finance & Accounting	145 Navaroo San Antonio, TX 78205	(210) 353-5136
City of Dallas	GO Refunding & Improvement Bonds	195,075,000	2015	Corrine Steeger	Treasury Manager	1500 Marilla, Room 2B South Dallas, TX 75201	(214) 670-3536
Bexar County	Comb Tax & Rev C/O	331,725,000	2013	David Smith	Chief Investment Officer	101 W. Nueva, Suite 901 San Antonio, TX 78204	(210) 335-2405
Dallas Fort Worth International Airport	Joint Revenue Improvement Bonds	372,240,000	2013	Michael Phemister	VP Treasury Management	2400 Aviation Drive DFW Airport, TX 75261-9428	(972) 973-5447
City of Dallas	GO Refunding Bonds	214,495,000	2012	Corrine Steeger	Treasury Manager	1500 Marilla, Room 2B South Dallas, TX 75201	(214) 670-3536
Dallas Fort Worth International Airport	Joint Revenue Improvement Bonds	221,750,000	2011	Michael Phemister	VP Treasury Management	2400 Aviation Drive DFW Airport, TX 75261-9428	(972) 973-5447
Texas Water Development Board	Water Fin Assistance Bonds	32,350,000	2010	Bech Bruun	Board Member	1700 N Congress Avenue, 5th Fl Austin, TX 78701	(512) 463-7384
Judson ISD	Unlimited Tax Refunding Bonds	24,404,982	2010	Jose Elizondo Jr.	Chief Financial Officer	8012 Shin Oak Dr. Live Oak, TX 78233	(210) 945-5502

** Preliminary; subject to change*

Some of the transactions listed above reflect experience at previous firm prior to joining RBCCM

Stephanie Henning (Co-Lead Banker)

Issuer	Project Title	Par Amount	Year	Reference Name	Title	Present Address	Phone Number
Texas A&M University System	Rev Financing System Bonds	$418,375,000*	2016	Maria Robinson	Chief Investment Officer & Treasurer	301 Tarrow, 5th Floor College Station, TX 77840	(979) 458-6330
Spring ISD	U/L Tax Refunding Bonds	136,870,000	2015	Ann Westbrooks	Chief Financial Officer	16717 Ella Blvd Houston, TX 77090	(281) 891-6077
Cypress-Fairbanks ISD	U/L Tax School Building & Ref Bonds	209,045,000	2015	Stuart Snow	Assoc Sup't for Business and Financial Services	10300 Jones Road Houston, TX 77065	(281) 897-3856
City of Houston (General Oblibation)	GO Encumbrance Line 7-yr Term	150,000,000	2015	Jennifer Olenick	Assistant Director of Treasury	901 Bagby, 10th Floor Houston, TX 77002	(832) 393-9112
City of Houston (Airport System)	Airport System Encumbrance Line 7-yr Term	450,000,000	2015	Matt Townsend	Chief Financial Officer	16930 JFK Boulevard Houston, TX 77032	(281) 233-1877
Houston ISD	Limited Tax Refunding Bonds	365,395,000	2014	Kenneth Huewitt	Chief Financial Officer	4400 W. 18th Street Houston, TX 77092	(713) 556-6400
City of Houston (Combined Utility System)	CUS Encumbrance Line 3rd Lien 5-yr Term	250,000,000	2013	Susan Bandy	Deputy Director	611 Walker, 25th Floor Houston, TX 77002	(832) 395-2468
City of Dallas	WW & SS Rev Refunding Bonds	156,540,000	2013	Corrine Steeger	Treasury Manager	1500 Marilla, Room 2B South Dallas, TX 75201	(214) 670-3536
City of Houston (Combined Utility System)	CUS 1st Lien Rev Refunding Bonds	249,075,000	2012	Susan Bandy	Deputy Director	611 Walker, 25th Floor Houston, TX 77002	(832) 395-2468
University of Texas System	Rev Financing System Refunding Bonds	385,380,000	2010	Terry Hull	Associate Vice Chancellor for Finance	702 Colorado St, Suite 2500 Austin, TX 78701	(512) 499-4494

** Preliminary; subject to change*

Tom Yang (Airport Specialist)

Issuer	Project Title	Par Amount	Year	Reference Name	Title	Present Address	Phone Number
Minneapolis-St Paul Metro Airports Comm	Airport Rev Bonds	$224,000,000*	2016	Robert Schauer	Director of Finance	6040-28th Avenue South Minneapolis, MN 55450	(612) 726-8150
Alaska	Intl Airports Sys Rev Ref Bonds	175,860,000	2016	Deven Mitchell	State Debt Manager	333 Willoughby Juneau, AK 99811-0400	(907) 465-3750
McCarran International Airport	Airport Sys Revenue Bonds	59,915,000	2015	Joseph Piurkowski	Chief Financial Officer	5757 Wayne Newton Boulevard Las Vegas, NV 89119	(702) 261-6029
Tulsa Trustee Airport Imp Trust	General Airport Revenue Bonds	76,005,000	2015	Carl Remus	Deputy Airport Director	7777 E. Apache, A217 Tulsa, OK 74115	(918) 838-5010
San Francisco City & Co Airport Comm	Second Series Revenue Bonds	473,610,000	2014	Kevin Kone	Director	575 McDonnell Road, 3rd Floor San Francisco, CA 94128	(650) 821-2888
Minneapolis-St Paul Metro Airports Comm	Subordinate Airport Rev Ref Bonds	264,380,000	2014	Robert Schauer	Director of Finance	6040-28th Avenue South Minneapolis, MN 55450	(612) 726-8150
Tulsa Trustee Airport Imp Trust	General Airport Revenue Ref Bonds	36,940,000	2013	Carl Remus	Finance Director	7777 E. Apache, A217 Tulsa, OK 74115	(918) 838-5010
McCarran International Airport	Airport Sys Jr Sub Lien Rev Notes	174,285,000	2013	Joseph Piurkowski	Chief Financial Officer	5757 Wayne Newton Boulevard Las Vegas, NV 89119	(702) 261-6029
Dallas Fort Worth International Airport	Joint Revenue Improvement Bonds	372,240,000	2013	Chris Poinsatte	Chief Financial Officer	2400 Aviation Drive DFW Airport, TX 75261-9428	(972) 973-5211
McCarran International Airport	Airport Sys Jr Sub Lien Rev Notes	180,000,000	2012	Joseph Piurkowski	Chief Financial Officer	5757 Wayne Newton Boulevard Las Vegas, NV 89119	(702) 261-6029

** Preliminary; subject to change*

Greg Dawley (Public Power Specialist)

Issuer	Project Title	Par Amount	Year	Reference Name	Title	Present Address	Phone Number
Southern California Public Power Authority	Southern Transmission Project	$116,534,000	2015	Kevin Crawford	Chief Financial Officer	1160 Nicole Court Glendora, CA 91740	(626) 793-9364
CPS Energy	Revenue Bds	100,000,000	2015	Paula Gold-Williams	Interim President & CEO	145 Navarro St San Antonio, TX 78205	(210) 353-4399
Los Angeles Department of Water & Power	Power System Revenue Bds	322,000,000	2014	Mario Ignacio	Assistant CFO & Treasurer	111 North Hope Street Los Angeles, CA 90012	(213) 367-0690
Los Angeles Department of Water & Power	Power System Revenue Bds	271,000,000	2014	Mario Ignacio	Assistant CFO & Treasurer	111 North Hope Street Los Angeles, CA 90012	(213) 367-0690
Los Angeles Department of Water & Power	Power System Revenue Bds	527,310,000	2013	Mario Ignacio	Assistant CFO & Treasurer	111 North Hope Street Los Angeles, CA 90012	(213) 367-0690
Southern California Public Power Authority	Southern Transmission Project	39,935,000	2012	Kevin Crawford	Chief Financial Officer	1160 Nicole Court Glendora, CA 91740	(626) 793-9364
Guam Power Authority	Revenue Bds	340,620,000	2012	Corazon Montellano	Chief Financial Officer	688 Route 15 Fadian Mangilao, Guam	(671) 648-3119
Los Angeles Department of Water & Power	Power System Revenue Bds	694,130,000	2011	Mario Ignacio	Assistant CFO & Treasurer	111 North Hope Street Los Angeles, CA 90012	(213) 367-0690
Southern California Public Power Authority	Magnolia Power Project	62,265,000	2011	Kevin Crawford	Chief Financial Officer	1160 Nicole Court Glendora, CA 91740	(626) 793-9364
Los Angeles Department of Water & Power	Power System Revenue Bds	668,130,000	2010	Mario Ignacio	Assistant CFO & Treasurer	111 North Hope Street Los Angeles, CA 90012	(213) 367-0690

Some of the transactions listed above reflect experience at previous firm prior to joining RBCCM

Tim Williams (Water & Wastewater Specialist)

Issuer	Project Title	Par Amount	Year	Reference Name	Title	Present Address	Phone Number
OWDA	Water Pollution Control Loan Fund Bds	$240,000,000	2015	Scott Campbell	Chief Operating Officer	480 South High St Columbus, OH 43215	(614) 466-0170
Philadelphia Water Department	Water & Wastewater Revenue Bds	417,560,000	2015	Missy LaBuda	Deputy Commissioner	1101 Market Street, 5th Floor Philadelphia, PA 19102	(215) 685-6177
Iowa Finance Authority	State Revolving Fund Rev Bds (Green Bds)	321,530,000	2015	Lori Beary	SRF Program Coordinator	2015 Grand Ave Des Moines, IA 50312	(515) 725-4900
Massachusetts Clean Water Trust	State Revolving Fund Bds (Green Bds)	228,155,000	2014	Nate Keenan	Deputy Director	Three Center Plaza Suite 430, Boston, MA 02108	(617) 367-9333 ext. 508
San Antonio Water System	Water System Jr Lien Rev & Ref Bds	103,930,000	2014	Doug Evanson	Vice President & CFO	P.O. Box 2449 San Antonio, TX 78298	(210) 233-3803
Houston CUS	First Lien Revenue Refunding Bds	605,195,000	2014	Susan Bandy	Deputy Director	611 Walker, 25th Fl Houston, TX 77002	(832) 395-2468
Hampton Roads Sanitation District	Wastewater Revenue Refunding Bds	111,345,000	2014	Steve De Mik	Director of Operations	1434 Air Rail Avenue Virginia Beach, VA 23455	(757) 460-2261
Hartford County Metropolitan District	Revenue Bds	140,000,000	2014	John Zinzarella	Chief Financial Officer	555 Main Street Hartford, CT 06142	(860) 278-7850 ext. 3345
Texas Water Development Board	Water Financial Assistance Ref Bds	138,855,000	2013	Bech Bruun	Board Member	1700 N Congress Avenue, 5th Fl Austin, TX 78701	(512) 463-7384
Tarrant Regional Water District	Water Revenue Refunding Bds	98,960,000	2012	Sandy Newby	Chief Financial Officer	800 East North Side Dr Fort Worth, TX 76102	(817) 335-2491

Some of the transactions listed above reflect experience at previous firm prior to joining RBCCM

i. Provide the year the firm was founded.

RBC was founded in 1869 and for over 147 years has been putting our clients first.

ii. Provide a brief history of the firm.

The public finance practice that is now a part of RBCCM has evolved over decades – since at least 1929, when J.M. Dain began underwriting municipal bonds in Minnesota, and 1933, when Rauscher Pierce began doing the same in Texas. RBC acquired Dain Rauscher in early 2001 and continued to expand its distribution capabilities and investment banking resources, by acquiring additional U.S. firms with significant fixed income presence. In 2008, the two broker-dealers of RBC Dain Rauscher and RBC Capital Markets were merged to create one broker-dealer, aligning the fixed income banking, sales, trading, and research activities of RBC Dain Rauscher under the RBCCM global umbrella. In 2010, the company converted from a corporation to a limited liability company and thus changed its name to RBC Capital Markets, LLC.

iii. Provide the location of the firm's headquarters and municipal trading desk(s).

RBCCM operates one of the largest municipal finance departments in the country. **Headquartered in New York City** at 200 Vesey Street and employing some 270 banking, sales, trading, and underwriting professionals, the size and breadth of our municipal group has matured. RBCCM's sales and trading desks in ***Boston, Chicago, Dallas, Houston, Minneapolis, Nashville, New York, Philadelphia, and San Francisco*** are strategically located to ensure our sales force has direct access to the major institutional buyers of municipal securities.

RBCCM's 700-Person New York Sales & Trading Floor

Unlike many Wall Street firms that have reduced the dedicated municipal sales force to single digits since the market destabilization, RBCCM has added 16 new municipal sales and trading professionals during the same period. We cover the full spectrum of retail and institutional purchasers. Targeting a combination of investor segments, Tier I, as well as Tiers II & III, creates competition for bonds among the investor segments, preventing a few Tier I investors from dictating the pricing levels of a transaction.

As the most active underwriter in the industry, our underwriters and salespersons are in constant contact with the investment community. By accessing the market more often than any of our competitors, we have information and market awareness that frequently enable us to price deals more aggressively. Our extensive distribution system and constant market activity allows our underwriters and salespeople to efficiently collaborate to reach all investor segments without the necessity of having to favor certain investors in order to fill an order book but rather work towards achieving optimal pricing levels through the broadest distribution on behalf of our clients.

Institutional Distribution

RBCCM provides complete coverage of a national account base which includes bond funds, pension funds, arbitrage accounts, hedge funds, insurance companies, corporations, investment advisors and high net worth individuals. In order to ensure optimal marketing and distribution performance, our targeted approach to the successful distribution of municipal bonds involves the deployment of key aspects of our extensive domestic distribution network:

- 58 fixed income institutional salespeople covering Tier I, II, and III tax-exempt and taxable investors;
- 27 municipal traders and underwriters, providing an unmatched depth of market intelligence and secondary trading support for municipal issues; and
- 6 professionals who specialize solely in the distribution of short-term (i.e. BANs and variable or adjustable rate) bonds, including administering a $15.2 billion remarketing portfolio covering 487 separate issues.

Retail Distribution

RBCCM provides access to individual investors directly by leveraging RBC Wealth Management's extensive retail distribution networks in the nation. RBCCM's retail business is carried out by more than 1,800 financial consultants operating from 177 different offices nationwide in 42 states, which represents one of the largest retail operations in the nation. RBCCM currently has $213.5 billion in assets under management, of which $30.0 billion, or 14.06% of total assets, are composed of municipal debt.

Direct retail presence is an important component of our distribution platform. In addition to our institutional trading presence, RBC Municipal Markets has a team of 10 retail traders dedicated to the RBC Wealth Management retail network. These traders are responsible for facilitating the purchase and sale of tax-exempt and taxable municipal securities with all of our retail customers. On average, they're holding over 1,000 individual securities daily in an effort to provide liquidity to our retail customers.

The strength of our multi-tiered platform for distributing tax-exempt bonds lies in our deep, regional roots. We cover Tier I investors as well as any other Wall Street firm, and our regional office network aggressively covers Tier II and III "middle market institutions" long ignored by many other firms. We are committed to achieving optimal pricing results for our clients, and our Wealth Management professionals enhance our ability to sell bonds at low interest rates.

Part IV – Personnel

Include names, titles, and qualifications of key professional personnel who will be assigned to this contract. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

We have assigned a financing team designed to provide the City with access to the full range of resources and dedicated individuals available from the Firm to ensure that the City's financial objectives are met. Mr. Richard Acosta, Director, and Ms. Stephanie Henning, Vice President, will serve as the lead bankers and can assist the City with any questions or requests for additional data. Mr. Marc Greer, Director, is the lead underwriter dedicated to Texas issuers and will be responsible for the pricing and marketing of the City's bonds. Any taxable transactions will be overseen by Jaime Durando from our pricing desk in New York.

Mr. Acosta and Ms. Henning will split banking duties equally and Mr. Williams, Mr. Dawley, and Mr. Yang will be utilized according to the specific credit of the City. Mr. Carlson will assist the City with any credit solution needs. Each professional listed is available to assist the City at any time and under any circumstance. Should we be fortunate to be selected as senior underwriter for the City we will devote 100% of our resources to ensure the best pricing and seamless execution is met. Brief resumes outlining the professionals' areas of expertise can be found in **Appendix A**.

RBCCM Team Assigned to the City of Austin

Name	Role	Title	Office	Phone	Years of Experience
Richard Acosta	Co-Lead Banker	Director	San Antonio	(210) 805-1148	15
Stephanie Henning	Co-Lead Banker	Vice President	Dallas	(214) 989-1727	8
Tom Yang	Airport Specialist / Banker	Managing Director	San Francisco	(415) 445-8206	19
Tim Williams	Head of Public Power & Utilities	Managing Director	New York	(212) 519-8473	18
Greg Dawley	Public Power Specialist / Banker	Managing Director	Los Angeles	(213) 362-4126	23
Thomas J. Carlson	Credit Solutions	Director	St. Petersburg	(727) 895-8899	14
Clay Mauldin	Analytical & Execution Support	Analyst	Dallas	(214) 989-1722	2
Jaime Durando	Head of Municipal Syndicate	Managing Director	New York	(212) 618-5628	33
Marc Greer	Senior Tax Exempt Underwriter	Director	Houston	(713) 651-3343	30

Part V – Innovative Financing Techniques

Provide two innovative financing techniques, suggestions or ideas which would be relevant, or of interest to the City of Austin. This can also include derivatives, debt restructuring, and self-liquidity ideas. If the idea(s) was (were) used in actual transaction(s), this section should include the following:

i. Indicate the individuals referenced in Part IV above who were involved in the transaction.

Mr. Tom Yang, Airport Specialist, is responsible for and leads RBCCM's transactions for the Alaska International Airports System. The financing team involved with the Encumbrance Line transactions for the City of Houston include Mr. Tom Carlson and Ms. Stephanie Henning.

ii. Provide the name, title, organization, address and telephone number of the issuer.

Case Study: State of Alaska International Airports System ("AIAS")

$175,860,000 International Airports System Revenue and Refunding Bonds, Series 2016
$171,060,000 International Airports System Revenue and Refunding Bonds, Series 2010
$344,595,000 International Airports System Revenue Bonds, Series 2006
$94,925,000 International Airports System Revenue Bonds, Series 2003
$140,780,000 International System Revenue and Revenue Refunding Bonds, Series 2002

Mr. Tom Yang has senior managed four financings for AIAS and served as co-senior for another, comprised of Anchorage and Fairbanks, and the State's Department of Revenue. In addition to providing underwriting services, Tom has worked actively with the finance team in developing its ongoing CIP funding plan and credit strategy over the past 10 years.

The **2002** issue was significant for several reasons: (1) the financing plan was conceived after the events of 9/11; (2) this transaction represented the first ratings upgrade by Standard & Poor's for an airport post 9/11; and (3) Tom led the efforts to reclassify the 1993 private activity bonds. With bond counsel approval, bonds were structured such that those subject to AMT were amortized first, followed by the non-AMT bonds, resulting in the lowest overall cost of capital. To provide rate relief to the airlines, Tom recommended the use of PFC revenues to offset a portion of the AIAS' debt service for eligible projects.

The **2003** Bonds primarily funded the completion of Concourse C at Anchorage. The cost increase, which resulted from environmental challenges, had received some negative press coverage. Tom recommended a forthcoming approach to the rating agencies since cost overruns and changing capital needs are not uncommon for airport projects. He emphasized it was much more important to demonstrate the ability to complete Concourse C within the new revised estimate.

The **2006** financing had three key highlights that are worthy of note. As part of an overall asset/liability management program, Tom recommended a tranche of variable rate series, the first for AIAS. Tom assisted the finance team over a six-month period to develop a carefully orchestrated rating strategy that included two sets of credit presentations, and participated in discussions with the Airlines Affairs Committee. AIAS ultimately secured triple upgrades from all three rating agencies.

The **2010** financing was a project financing and refunding/restructuring of a portion of outstanding debt to achieve several long-term System objectives including (i) to better match economic life of the Concourse C terminal and average life of the bonds for the corresponding projects, accomplished by extending the final maturity of refunding bonds by three years; (ii) to maintain current rate structure; and (iii) to achieve present value savings above 3% for the refunded bonds. RBCCM developed the plan of finance which included cash defeasance of FY2011 debt service to reduce collection of coverage, optimized redemption of outstanding bonds to maintain targeted rate structure, and systematic replacement of surety policies.

The **2016** financing priced in January 2016 and consisted of four refunding series. Two series of bonds were forward-delivery bonds and carried a closing date of July 6, 2016 to allow them to refund a series of non-advance refundable bonds with an October 1, 2016 call date. This six-month forward delivery required a delayed delivery purchase contract and was priced at approximately 45 basis points above the current delivery bonds.

The following reference can provide information related to RBCCM's performance for each of these transactions.

Alaska International Airports System
Deven Mitchell, State Debt Manager
333 Willoughby
Juneau, AK 99811
(907) 465-3750
deven.mitchell@alaska.gov

Relevance to the City of Austin: Airport system with large capital plan. Demonstrates our extensive experience with airport credits and the value that we can bring forth as it relates to credit rating strategy and innovative financing plans. Comprehensive marketing plan constructed to tell the "credit story" and to differentiate the credit from other comparable credits.

Case Study: City of Houston Encumbrance Line

The RBCCM team developed an Encumbrance Line product as an alternative to a Line of Credit and/or Commercial Paper (CP) specifically to meet contract needs for the City of Houston in 2013. The Encumbrance Line provided an identified source of funds for appropriation / "contract letting" purposes, as well as for the funding of such contracts when needed through the public bond market, and has since engaged in two more encumbrance lines with the City of Houston for a total product amount of $850 million (details follow). Through the creation and implementation of the Encumbrance Line product, the City of Houston is saving approximately $2 million and $300,000 annually on its Combined Utility System and General Obligation debt respectively. For the Airport System, this was new encumbrance capacity so savings from historic product cannot be analyzed.

City of Houston - Appropriation Line / Forward BPA

	2013 Combined Utility System	2015 General Obligation	2015 Airport System
Contract Amount	$250,000,000	$150,000,000	$450,000,000
Annual Fee	20.0 bps flat Paid quarterly in arrears	17.5 bps flat Paid quarterly in arreras	16.7 bps Paid quarterly in arrears
Security	3rd Lien Net System Revenues	General Obligation	Inferior (subordinate) lien on Net Revenues
Term	Five (5) years, initially	Seven (7) years, initially	Seven (7) years, initially
Financial Close	October 2013	February 2015	November 5, 2015
RBCCM Role	Sole Underwriter	Sole Underwriter	Sole Underwriter
Bond Counsel	Andrews Kurth LLP	Andrews Kurth LLP	Bracewell & Giuliani LLP
Underwriter's Counsel	Bracewell & Giuliani LLP	Bracewell & Giuliani LLP	Andrews Kurth LLP
Financial Advisor	First Southwest Company	First Southwest Company	First Southwest Company

There are multiple issuers nationally that have utilized CP programs or lines of credit for this contract letting purpose. Much of the authorized CP or lines of credit are never utilized, but the respective issuers are still required to pay relatively high letter of credit or line of credit fees to banks. There are three primary benefits of the Encumbrance Line product compared to a Line of Credit or Commercial Paper Program. First, the Encumbrance Line product typically has the lowest unutilized costs of funds. Second, the Encumbrance Line product has a longer term (up to seven years). Third, the Encumbrance Line product does not include additional bank rights, remedies and covenants that are usual and customary for lending transactions.

In order to lower costs for contracting, as well as provide a competitive cost of funding, RBCCM designed our Encumbrance Line product to be structured around a Forward Bond Purchase Agreement that provides for a public sale of Index Floating Rate Bonds (FRNs) or Fixed Rate Bonds, each with a soft put. The Encumbrance Line includes several other documents including a General Ordinance or Series Ordinance, delegation parameters, Series Purchase Contract, and specimen Preliminary Official Statement. Upon execution of all documents including the Forward Bond Purchase Agreement, the City of Houston quickly had the required identified source of funds and was able to let contracts. As part of RBCCM's ongoing transaction responsibilities, RBCCM delivers a quarterly Market Capacity and Pricing Certificate detailing our expert judgment regarding market capacity and pricing for the sale of the aforementioned FRNs or fixed rate bonds. This certificate is used by the City of Houston's controller to determine if sufficient capacity exists for contracting purposes.

Furthermore, upon the City of Houston's need to deliver funds to pay for projects or contracts, the City of Houston would request RBCCM undertake a public sale of FRNs or Fixed Rate Bonds. The resulting publicly offered bond yields would be determined by market conditions on the pricing date. RBCCM's Encumbrance Line product reduces encumbrance costs while eliminating the City of Houston's exposure to bank covenants. The Encumbrance Line contains only usual and customary public bondholder terms, similar to the City of Houston's

senior lien bonds. There are no bank rights and remedies, ratings grids, increased costs, most favored nations, or other regulatory risk terms.

As detailed previously, RBCCM executed three separate Encumbrance Line transactions for the City of Houston's (i) General Obligation Bonds ($150 million), (ii) Combined Utility System ($250 million) and (iii) Airports System ($450 million). **The financing team individuals involved with the Encumbrance Line transactions for the City of Houston include Mr. Tom Carlson and Ms. Stephanie Henning.**

The following references can provide information related to RBCCM's performance and the Encumbrance Line product for each of these credits.

Houston Combined Utility System
Susan Bandy, Deputy Director
611 Walker, 25th Floor
Houston, TX 77002
(832) 395-2468
susan.bandy@houstontx.gov

Houston General Obligation
Jennifer Olenick, Ass't Director of Treasury
901 Bagby, 10th Floor
Houston, TX 77002
(832) 393-9112
jennifer.olenick@houstontx.gov

Houston Airport System
Matt Townsend, CFO
16930 JFK Boulevard
Houston, TX 77032
(281) 233-1877
matt.townsend@houstontx.gov

Relevance to the City of Austin: Large city issuer with similar profile to the City of Austin, including a large capital plan. RBCCM has developed a product that provides value and saves issuers money given current legislation. The City of Dallas is currently vetting our proprietary product. While we understand that the City of Austin typically uses reimbursement resolutions for reimbursing costs associated with letting contracts, RBCCM looks forward to further discussions and working with the City of Austin and its municipal advisor on potential benefits/uses of our Encumbrance Line product. This case study also evidences our tailored approach to working with our clients to address and solve their particular needs.

Part VI – Financial Viability

Provide the most recent audited annual Audit Report and most recent interim financial report as an attachment or appendix item. Hard copies must be included in the original submittal.

Please refer to **Appendix B** for the Firm's 2015 Annual Report (December 31, 2015) and **Appendix C** for the Firm's latest FOCUS report as of January 31, 2016. Due to the size of the annual report, we have provided the link to the report below as well.

http://www.rbc.com/investorrelations/pdf/ar_2015_e.pdf

i. Provide the current equity capital positions (total equity capital, net equity capital and excess net equity capital) in accordance with GAAP, or corresponding equity information if a bank. Do not refer to the annual audit as a response to this question.

The following table provides the capital structure for RBCCM, including total firm capital, total equity capital, net equity capital, and excess net equity capital for each of the last three years and the most recent data from the January 2016 FOCUS report calculated in accordance with SEC Rule 15c3-1. Also provided is the capital structure of RBC, for the last three fiscal years (as of FYE October 31).

Capital Position: RBC Capital Markets

	12/31/2013	12/31/2014	12/31/2015	01/31/2016
Total Regulatory Capital	$5,545,384,000	$5,808,082,000	$6,063,682,000	$6,131,646,000
Total Equity Capital	4,145,384,000	4,408,082,000	4,663,682,000	4,731,646,000
Net Capital	1,252,015,000	1,198,350,000	1,521,593,000	1,655,543,000
Excess Net Capital	1,132,072,000	1,044,489,000	1,312,631,000	1,444,614,000

Based on Basel II calculation

Capital Position: Royal Bank of Canada

	10/31/2013	10/31/2014	10/31/2015
Total Regulatory Capital	$42,802,155,000	$43,116,973,000	$46,563,378,000
Total Equity Capital	48,180,662,000	46,981,295,000	51,331,781,000
Tier 1 Capital	36,293,195,000	36,377,898,000	40,572,369,000

Based on Basel II calculation

As shown, RBCCM maintained excess net capital of $1.444 billion as reported in the Firm's most recent FOCUS report. From an operational standpoint, RBCCM does not specifically allocate capital to our various corporate groups, but has access to over $46 billion in capital. One of the most valuable commitments an underwriter can make to an issuer is underwriting unsold balances during turbulent market conditions and RBCCM regularly makes some of the largest capital commitments in the municipal market. We understand that committing our capital saves the issuer the penalty of pricing at a higher interest rate market-clearing level. Because of our strong financial position and low cost internal funding, RBCCM can stand committed to deploy our capital to support senior managed clients.

Case Study: The City of New York

On March 10-12, 2015, RBCCM served as Senior Bookrunning Manager for The City of New York's $799.66 million Fiscal 2015 Series C ($672.36 million) and D ($127.29 million) General Obligation Bond issue. The issue was priced during the largest week of issuance year-to-date with $12.5 billion in par entering the market.

The Retail Order Period ("ROP") structure included a series of 3-5% coupon bonds with spreads ranging from +10 to +46 basis points over the "AAA" MMD index. The issue was well received by retail investors with the Day 1 of the ROP resulting in $209.755 million of orders. Day 2 ROP opened with minor adjustments to the offering coupons and yields, increasing the credit spread by 1 basis point in the 2027-2034 maturity range. Day 2 of the ROP resulted in an additional $60.89 million of orders (Series C: $42.915 million; Series D: $17.975 million) for a grand total of $270.645 million in orders for the two-day retail period.

Institutional orders were taken on March 12. The general market tone entering the institutional order period was positive with the 10-year Treasury bond opening 3 basis points lower in yield. Strong institutional demand resulted in modest oversubscription throughout the Series C maturity range and Series C was re-priced with credit spread reductions of 1-4 basis points. Certain subscribed maturities of par and discount Series D bonds were also re-priced 1-3 basis points lower, and the remaining unsubscribed Series D discount and par maturities were converted into 5% coupon premium bonds to better meet investor demand. **At the time of the verbal award on March 12, approximately $65 million in bonds were unsold and purchased by RBC.**

Part VII – Austin Bond Experience

In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

Part VIII – References

Provide exactly three (3) government client references, at least two of which are covered by individuals listed in Part IV above. For each reference provide a name, title, and organization, address and telephone number. In addition to the list provided, the City may independently solicit other references.

Texas Water Development Board
Bech Brunn, Chairman
1700 N. Congress Avenue
Austin, TX 78711
bech.brunn@twdb.texas.gov

Bexar County
David Smith, County Manager
101 W. Nueva, Suite 901
San Antonio, TX 78205
david.smith@bexar.org

San Francisco International Airport
Kevin Kone, Director
575 McDonnell Road, 3rd Floor
San Francisco, CA 94128
kevin.kone@flysfo.com

Appendix A

Financing Team Resumes

RBC Capital Markets

Richard Acosta, Director (Co-Lead Banker)
San Antonio, TX

Mr. Acosta recently joined RBC Capital Markets and brings over 15 years of public finance experience. Mr. Acosta is charged with originating, structuring and executing a broad array of municipal financings to help clients achieve short and long-term capital raising objectives. Since starting in public finance in 2001, Mr. Acosta has underwritten roughly $29.6 billion in par amount and $2.5 billion as senior manager. In addition to the underwritings, Mr. Acosta has acted as a financial advisor for roughly $755 million in par amount.

Mr. Acosta has worked on a vast and diverse group of clients such as the Cities of Houston, Dallas, San Antonio, Fort Worth, Austin and Seguin, CPS Energy, the San Antonio Water System, DFW Airport, San Antonio and Houston Airport Systems, the Counties of Harris, Bexar, Williamson, Hidalgo and Maverick County, Harris and Bexar County Hospital Districts, North Texas Tollway Authority, Harris County Toll Road Authority, TxDOT, Alamo Community College District, Dallas County Community College District, Houston Community College System, the University of Texas System, Texas A&M System, Texas Public Finance Authority, Texas Water Development Board and Tarrant Regional Water District.

Additionally, Mr. Acosta has served on the Ronald McDonald House Charities Board of Directors, the Rey Feo Consejo Education Foundation, the VIA Metropolitan Transit Citizens Advisory Committee, and the Education Foundation for Northside ISD, San Antonio ISD and Judson ISD.

Mr. Acosta received a BBA in Management from Texas A&M University and an MBA in Finance from the University of Texas at San Antonio. He maintains FINRA General Securities Representative (Series 7) and Uniform State Law (Series 63) licenses.

Stephanie Henning, Vice President (Co-Lead Banker)
Dallas, TX

Ms. Henning joined RBCCM in 2008. As a Vice President, her responsibilities include providing technical, analytical and quantitative analysis for various municipal issuers, including K-12 public school districts, charter schools, cities, counties and higher education issuers, throughout Texas. In addition, Ms. Henning is responsible for managing the day-to-day responsibilities of underwriting and financial advisory transactions.

Prior to joining RBCCM, Ms. Henning worked for Dell in Austin, Texas as a Senior Financial Analyst for the Corporate Finance team where she performed extensive numerical analysis and developed management reporting tools and procedures for the Dell Executives.

Ms. Henning is a FINRA registered representative, currently holding Series 7, 63 and 79 licenses. Ms. Henning graduated Summa Cum Laude from Texas A&M University with a BBA in Finance.

Ms. Henning is a past National Board of Women in Public Finance member. Additionally, she is a founding member and prior President of the Texas Chapter of Women in Public Finance.

Tom Yang, Managing Director (Airport Specialist)
San Francisco, CA

Mr. Yang has 19 years of public finance experience and joined RBCCM after nine years at UBS where he managed the transportation efforts including seaport, maritime and airport financings in the Western States. Mr. Yang has significant experience with diverse airport credits and security structures and the development of feasibility studies and airport strategy. Mr. Yang has senior and co-senior managed a number of airport transactions as the lead banker, including Alaska International Airports System, Burbank-Glendale-Pasadena Airport Authority, Cleveland Airport System, Colorado Springs Airport, Las Vegas McCarran International Airport, Dallas/Fort-Worth International Airport, Houston Airport System, Des Moines International Airport, Philadelphia International Airport, Minneapolis/St. Paul Airport, Phoenix Airport, Reno-Tahoe International Airport, San Diego Regional Airport Authority, and Denver International Airport.

Mr. Yang graduated with High Honors from University of California, Berkeley, with a degree in mechanical engineering. He currently holds Series 7 and 63 securities licenses.

Tim Williams, Managing Director (Head of Public Power & Utilities)
New York, NY

Mr. Williams heads RBCCM's Public Power and Water Utilities Group where he focuses on SRF and water & sewer issuers nationwide. Mr. Williams has over 18 years of public finance experience, senior managed, structured, and run cash flows for many SRF and water and sewer credits. Major SRF clients include new indenture SRF credits (Virginia, Illinois, and Oklahoma); restructured SRF credits (Iowa, Kansas); Reserve Fund SRF credits (New York, Michigan, Connecticut, Colorado, Massachusetts, Missouri, and Rhode Island), and Cash Flow and Hybrid SRF credits (Ohio, Florida, Arizona, North Dakota, Maine, Virginia, and South Dakota). Major senior managed water and sewer clients include City of Columbus, City of Atlanta, Denver, Massachusetts Water Resources Water Authority, DC Water, Hampton Roads, VA, Phoenix, St. Louis, and City of Tallahassee, FL.

Mr. Williams formerly worked at J.P. Morgan, UBS Securities and Merrill Lynch & Co. and has been involved in developing new bond approaches such as Green Bonds, as well as securing ratings upgrades, developing bond issuance strategies to meet capital improvements needs and providing the insight needed to address market constraints. He is active in the environmental finance community and speaks on occasion at the Council of Infrastructure Finance Water Authority conferences. Mr. Williams received a BA from Dartmouth College, an M.A. in Urban Planning from the University of Virginia, and an M.B.A. from the Wharton School.

Greg Dawley, Managing Director (Public Power Specialist)
Los Angeles, CA

Mr. Dawley recently joined RBC from another large investment banking firm. He has 23 years of municipal finance experience focusing primarily on utility financings. Mr. Dawley has senior managed transactions for a number of public power issuers, including SCPPA, Los Angeles Department of Water and Power, Burbank Water and Power, Imperial Irrigation District, Northern California Power Agency, Sacramento Municipal Utility District, Roseville Electric, San Antonio CPS, Colorado Springs Utilities, AMP Partners, Guam Power Authority and Omaha Public Power District. Prior to his career in investment banking, Mr. Dawley served as Assistant Chief of Staff to then Los Angeles Mayor Richard Riordan.

Mr. Dawley earned his B.A. from the University of Michigan and a MPP from the University of Southern California. He holds FINRA Series, 7, 24, 53 and 63 licenses.

Thomas J. Carlson, Director (Credit Solutions Group)
St. Petersburg, FL

Mr. Carlson joined RBC Capital Markets in 2001. He is one of the primary marketers for the firm's Client Solutions Group, specializing in direct purchase products, credit facilities, and public floating rate notes. His experience includes structuring over $4.7 billion of public and private variable rate transactions for a variety of issuer clients including general obligation, utility, transportation, healthcare, power, housing, and special district sectors. Mr. Carlson is a frequent guest speaker and has participated as moderator or speaker at the California and Texas Bond Buyer conferences as well as the National Association of Bonds Lawyers Tax and Strategies Institute.

Mr. Carlson was previously an officer in the United States Navy for 9 years where he was an F-14 Radar Intercept Officer (RIO) and flew 33 combat missions over Iraq during Operation Southern Watch. He graduated with honors from the United States Naval Academy with a BS in Political Science. He earned his MBA from The Citadel, and his MS in Finance from the University of Florida. Tom is a NASD General Securities Representative. He is currently registered with FINRA with Series 7, and Series 63 securities licenses.

Clay Mauldin, Analyst (Analytical & Execution Support)
Dallas, TX

Mr. Mauldin joined RBC Capital Markets in January 2014. As an Analyst, Mr. Mauldin's responsibilities include providing financial advisory, research, structuring, and execution support to the Municipal Finance investment banking teams located in the Dallas, Houston, and San Antonio offices. Prior to joining the firm, Mr. Mauldin was a Quantitative Analyst at Oak Hill Advisors, L.P. in Fort Worth, TX responsible for modeling and analysis of various high yield and distressed fixed income products.

Mr. Mauldin is a FINRA registered securities representative, currently holding Series 7, 52, 63, and 79 licenses.

Mr. Mauldin graduated Magna Cum Laude from Texas Tech University with a BBA in Finance and holds an MBA from Southern Methodist University Cox School of Business.

Jaime Durando, Managing Director (Head of Municipal Syndicate)
New York, NY

Mr. Durando is a Managing Director and Head of Municipal Syndicate for RBC Capital Markets. His primary responsibilities include RBC Capital Market's underwriting engagements for major transactions nationally. Mr. Durando has 33 years of experience in Municipal underwriting and trading, having directed senior managed transactions in excess of $75 billion in Municipal debt during his career. Prior to joining RBC Capital Markets in 2006, Mr. Durando spent his career at Wachovia Bank and its predecessor organizations where he was a Managing Director and Manager of Municipal Trading and Underwriting.

Mr. Durando graduated from the University of Delaware in 1980 with a BS-Finance degree and Seton Hall University in 1984 with a MBA-Finance. Mr. Durando is currently registered with FINRA and holds Series 7, 63 & 53 securities licenses.

Marc Greer, Director (Senior Tax-Exempt Underwriter)
Houston, TX

Mr. Greer is a more than 30 year veteran of the municipal bond industry and has been with RBCCM for 24 of those years (since 1991), working primarily in municipal trading and underwriting. Because of his daily involvement in municipal bond underwriting, Mr. Greer is a primary resource for determining current rate levels, market trends, market reaction and acceptance of alternative financing structures and legal opinion variations. In addition to his underwriting duties, Mr. Greer is responsible for regional municipal bond trading at RBCCM.

Mr. Greer is the senior underwriter for all tax-exempt offerings for Texas clients. He coordinates and leads the underwriting on all Texas transactions where RBCCM is a senior or co-managing underwriter. Additionally, he provides tax-exempt market information and confers on all Texas transactions for which RBCCM serves as financial advisor.

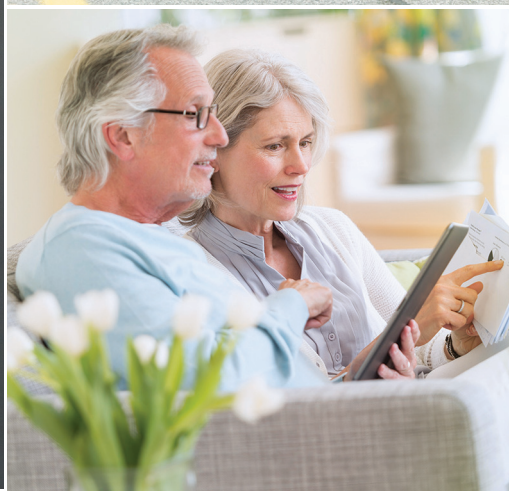
Mr. Greer holds a Bachelor of Business Administration from The University of Texas at Austin. He is a FINRA registered securities representative holding the Series 7, Series, 53, Series 63, and Series 79 securities licenses. Mr. Greer has been active in the municipal bond industry, having served on the Board of the Municipal Advisory Council of Texas and as President of the Houston Bond Club.

Mr. Greer will be the lead underwriter assigned to the City's bond transactions. All tax-exempt offerings will be priced by Mr. Greer from our Texas underwriting desks in either Dallas or Houston, depending on the City's preference. Any taxable transactions will be coordinated through Mr. Greer, but priced by one of our taxable underwriters out of our New York office.

Appendix B

RBC 2015 Annual Report

RBC Capital Markets



ROYAL BANK OF CANADA ANNUAL REPORT 2015

Helping clients thrive and communities prosper

RBC

By the numbers

#1
largest bank in Canada

#13
largest bank in the world

~40
countries

~78,000
employees

16 Million+
clients across a diversified mix of businesses

$100 Million+
donations, sponsorships and community investments to causes worldwide

All figures as at October 31, 2015. Geographic rankings based on market capitalization.

Our values guide, unite and inspire us to do what's right

Client First
We will always earn the right to be our clients' first choice

Collaboration
We win as One RBC

Accountability
We take ownership for personal and collective high performance

Diversity & Inclusion
We embrace diversity for innovation and growth

Integrity
We hold ourselves to the highest standards to build trust

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Delivering stability and growth 3
Helping communities prosper 4
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Directors and Executive Officers 210
Principal Subsidiaries 211
Shareholder Information 212

To view our online annual report, please visit: rbc.com/ar2015

Executing on our strategy

RBC is focused on markets and client segments where we can apply our strengths to win business, deepen relationships with clients and our communities, and create shareholder value. We are pursuing initiatives to drive sustainable growth and contribute to the success of our employees, clients, shareholders and communities.

Purpose

Helping clients thrive and communities prosper

Vision

To be among the world's most trusted and successful financial institutions

Strategic Goals

Highlights

In Canada: To be the undisputed leader in financial services

- Continued to lead across key businesses and client segments
- Delivered solid volume growth
- Led peers in retail client cross-sell
- Launched innovative products and services to meet clients' evolving needs and expectations
- Ranked as the most valuable brand[1] in Canada

In the U.S.: To be the preferred partner to corporate, institutional and high net worth clients and their businesses

- Announced acquisition of City National Bank[2] creates a powerful platform for long-term growth in the U.S., and provides significant opportunity to build deeper client relationships
- Expanded capabilities, presence and brand awareness
- Won several significant mandates in corporate and investment banking
- Strategically added top talent

In select global financial centres: To be a leading financial services partner valued for our expertise

- Prudently built out our wealth management, asset management and capital markets presence and capabilities
- Realized significant operational improvement in our custodial business and continued investment in client-focused technology solutions
- Refocused international wealth business to better serve high net worth clients from our key operational hubs
- Improved business performance in the Caribbean

1. Brand Finance
2. Acquisition closed on November 2, 2015

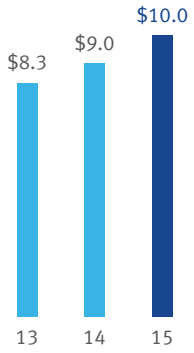
Achieving strong performance

In 2015, we grew earnings by 11%, increased our annual dividend by 8% from last year, delivered strong return on equity of 18.6% and strengthened our Common Equity Tier 1 capital ratio to 10.6%.

Metrics	Objectives	Results	Achieved
Diluted EPS Growth	7%+	12.2%	✓
Return on Equity	18%+	18.6%	✓
Capital Ratio (CET1)	Strong	Strong	✓
Dividend Payout Ratio	40% – 50%	46%	✓

Solid Earnings

Net Income (C$ Billion)



Profitable Growth

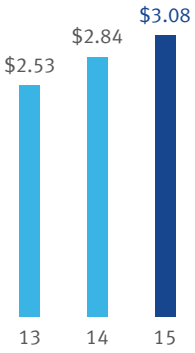
Return on Equity (ROE)

Financial Strength

Common Equity Tier 1 (CET1) Capital ratio

Solid Returns to Shareholders

Dividends Declared per Share



Total Shareholder Return[1]	Three-year	Five-year	Ten-year
RBC	14%	11%	10%
Global Peer Average	15%	12%	8%

Since 2005 we've increased our dividend by an annualized rate of 10%

1. Annualized TSR is calculated based on the TSX common share price appreciation plus reinvested dividend income. Source: Bloomberg, as at October 31, 2015. RBC is compared to our global peer group. The peer group average excludes RBC; for the list of peers, please refer to our financial performance objectives section of our 2015 Management's Discussion and Analysis

Delivering stability and growth

Our diversification by business and geography contributes to consistent performance and growth opportunities. Our employees collaborate across businesses and geographies to ensure our clients benefit from the full breadth of RBC's unmatched capabilities, advice, and solutions to meet their financial needs and aspirations.

Earnings by business segment

52% Personal & Commercial Banking
11% Wealth Management
7% Insurance
6% Investor & Treasury Services
24% Capital Markets

Personal & Commercial Banking

- Number 1 or 2 share in all key Canadian Banking product categories
- Largest sales force in Canada
- Continued to deliver client innovations:
  - Host Card Emulation technology allowing clients with Android devices to use RBC Wallet™ anywhere in the world
  - RBC Newcomer Advantage™ offering new financial solutions to help newcomers get established quickly
  - Cheque-Pro™ allowing high cheque volume clients to easily make deposits online
- Continued to focus on quality asset and revenue growth

Wealth Management

- Top 5 global wealth manager[2]:
  - #1 in Canada – Largest fund company[3] and leader in high net worth market share[4]
  - 7th largest brokerage firm in the U.S.[5]
  - Our Global Asset Management business is one of the fastest growing asset managers in the world[6]
- Announced key acquisition of City National Bank adding private and commercial banking capabilities complementing our presence in the U.S.
- Focused U.S. & International business to better serve high net worth and ultra-high net worth clients from our key operational hubs

Insurance

- A Canadian market leader and among the fastest growing insurance organizations in the country[7]
- Ranked as #1 Banking-Based Insurance Brand Globally[8]

Investor & Treasury Services

- Rated by our clients #1 global custodian for five consecutive years[9]
- Dominant offshore provider in Luxembourg and Dublin, and rated UCITS Fund Administrator of the Year[10]
- Canada's leading asset management provider[11] with number one ratings across client service, custody, fund administration and Canadian dollar transactions
- High level of investment in client-focused technology solutions

Capital Markets

- 10th largest bank globally and in the Americas[12]
- Best Investment Bank in Canada across Equity, Debt and M&A for 8th consecutive year[13]
- Strategically aligned with ~90% of global investment banking fee pool[12]
- Leveraged depth of capabilities including cross-border solutions to deepen client relationships

Revenue by geography

$35.3 Billion[1]

Canada **63%**

United States **19%**

International **18%**

We work together to bring the best of RBC to our clients to help them achieve their goals

- Helped over 200,000 Canadians buy a home this year
- Supported businesses globally with nearly $130 billion in business loans
- Helped 4.9 million clients bank online every month

1. Amount excludes Corporate Support
2. Scorpio Partnership Global Private Banking Benchmark 2015
3. Investment Funds Institute of Canada, June 2015 and company data
4. Investor Economics, April 2015
5. By assets under administration – company data
6. Boston Consulting Group, McKinsey
7. Company data
8. Brand Finance
9. *Global Investor ISF* Global Custody Survey 2011 to 2015
10. *Custody Risk*, European Awards, 2015
11. *Global Investor ISF* Global Custody Survey 2015; R&M Global Custody Survey 2015; *Global Investor ISF* Fund Administration Survey 2015; Global ISF Beneficial Owners Survey 2015; *The Banker*, November 2014
12. Thomson Reuters Global Investment Banking Review, Q3 2015
13. *Euromoney*

For more awards, please visit: **rbc.com/aboutus/awards.html**

Helping communities prosper

As a recognized leader in corporate citizenship, we're focused on delivering high-value impact through our efforts, initiatives and investments. We are proud to support our employees as they actively contribute their time, resources and expertise to making a difference in the world. Together, we're creating meaningful impact and contributing to a prosperous future.

Impact

Community and Social

Invest in communities where we live and work, and issued more than 4,500 grants to support the volunteer efforts of our employees.

Lead in corporate citizenship as our efforts make a positive and lasting impact.

Shape thought leadership by contributing our expertise to shape the future.

$100 Million+

Contributed in donations, community investments, and sponsorships in communities around the world.

Initiatives

Youth
We know that when you believe in young people, anything is possible. We support a wide range of key programs that span education, health, sports, entrepreneurship, career development and financial literacy, to make sure young people have the right skills and opportunities to succeed.

Arts
Our support of the arts is a long-standing priority, as we recognize the arts are the heart of our communities and culture. We are particularly focused on the next generation of artists through our Emerging Artists program.

Environment
The RBC Blue Water Project® is our 10-year global commitment of $50 million to help protect fresh water, now and for future generations. This year, nearly 25,000 employees participated in 850 Blue Water Day makeover events in over 25 countries.

Our contribution of time, funds and expertise to the world around us will continue to be a focus and drive our success moving forward

For more information, please visit: **rbc.com/community-sustainability/index.html**

Message from Dave McKay

At RBC, we help our clients thrive, and our communities prosper. This simple statement sums up who we are, what we stand for and what we seek to achieve each day when we come to work. It also reflects our successes and achievements throughout 2015, from record earnings, to our ongoing investments in delivering an exceptional client experience, to the deep commitment we have to making a positive difference in the communities where we live and work.

DAVE McKAY
President and Chief Executive Officer

We earned a record $10 billion, up 11% from last year, reflecting consistent strength across our businesses. We earned $6.73 per share on a diluted basis, delivered a return on equity of 18.6%, and strengthened our capital position, ending with a Common Equity Tier 1 capital ratio of 10.6%. We also raised our dividend twice during 2015, for an annual increase of 8%. I am pleased to say we met all of our financial objectives, which measure our progress toward maximizing Total Shareholder Returns (TSR). We delivered compound annual TSR of 14% and 11% over the three- and five-year periods, respectively.

We achieved these results despite a challenging macroeconomic environment. Global growth remains uneven, holding back investment and employment. Canada's economy struggled in the first half of the year due to a sharp pull-back in oil prices, which negatively affected other parts of the economy and impacted real GDP growth. Growth improved in the second half of the year due to strengthening export demand, higher consumer spending and residential investment spurred in part by lower energy prices and a weak Canadian dollar. Interest rates in Canada and abroad remained at or near historical lows, reflecting central bankers' ongoing concern about the near-term health of their economies.

Against this backdrop, our record earnings reflect our progress in attracting and serving the needs of personal, business and institutional clients, the power of our diversified business model, and our prudent approach to risk management. We also remained focused on managing costs and reducing the rate of growth of our expenses, while continuing to invest, with a particular focus on innovation, technology and digitization.

Focus on innovation

The financial services industry continues to face change including advancements in disruptive technology, new competitors, and a corresponding evolution in client needs and expectations. We have a long and successful history of innovation and are leveraging technology to improve the way we serve our clients by delivering simple, useful, timely and secure mobile and digital experiences.

The results we have seen to date show that we are having an impact. We have close to 5 million active digital customers per month, of which 2 million are mobile and tablet users. They deposited more than $2.5 billion by cheque through our mobile channel in the feature's first five months of availability.

Innovation also drives efficiency, and we continue to simplify how we work and digitize processes.

We are confident that we have a number of significant advantages which we can leverage as we navigate the digital transition including a brand which has the trust of millions of clients around the world, a proven innovation track record that has led to securing patents in areas including secure cloud payment and security technology, our global scale, and depth and breadth of products and services. At the same time, we will continue to move quickly to ensure we have the technology and solutions our clients want to see from their financial services provider.

An undisputed Canadian leader

Our success continues to be driven by the strength and stability of our businesses, centred first and foremost on our clients and their success.

See Dave McKay's video message to stakeholders: **annualreports.rbc.com/ar2015/ceo.html**

Looking forward, we are confident that we will continue to grow by appealing to key client segments including high and ultra-high net worth clients as well as newcomers to Canada who represent an important and growing market.

Our success continues to be driven by the strength and stability of our businesses, centred first and foremost on our clients and their success.

Beyond Canada, we are focusing our efforts on target geographic markets and desirable client segments.

In Canada, we continued to bolster our position as the undisputed financial services leader, building on our scale and breadth and ensuring we serve our clients as One RBC, bringing the best we have to offer from all our businesses.

We hold the number one or two market position in all key retail and business product categories. We remain the market leader in business banking, underwriting a quarter of all business loans under $25 million and providing a key source of capital to the small- and medium-sized businesses which fuel Canada's economy.

We continue to be Canada's top wealth manager with a leading share of the high net worth market, the largest fund company, the top investment bank with leading rankings across Equity, Debt & M&A for the 8th consecutive year, a market leader and among the fastest-growing insurance organizations in the country, and a leading provider of Canadian clearing, cash management and trade finance through our Investor & Treasury Services business.

Looking forward, we are confident that we will continue to grow by appealing to key client segments including high and ultra-high net worth clients as well as newcomers to Canada who represent an important and growing market. We will also continue to focus on underpenetrated commercial banking segments and building loyalty amongst our existing client base as a result of the differentiated experience they have with us.

Beyond Canada, we are focusing our efforts on target geographic markets and desirable client segments.

Preferred partner in the U.S.

We view the U.S. as our second home market – there simply is no other developed market which provides the same combination of size, earnings potential, access to new entrants and connectivity to Canada. Our goal is to be the preferred partner to U.S. corporate, institutional and high net worth clients and their businesses, primarily through our Capital Markets and Wealth Management businesses.

Our Capital Markets business derives half of its earnings from the U.S., and is a top 10 global investment bank. Our Wealth Management business is a leading global player, and the 7th largest brokerage firm in the U.S., where our brand, reputation and expertise are enabling us to continue to win new business and attract and retain top talent. We are acquiring new clients while strengthening and growing existing relationships by focusing on improving productivity and cross-selling.

The US$5.5 billion acquisition of Los Angeles-based City National Corporation marks a major milestone in our U.S. strategy and complements our existing capital markets and wealth management presence, providing significant opportunities to deepen our relationships with high net worth and mid-market commercial clients.

Since City National serves high net worth clients located in major metropolitan areas, it is strongly positioned to benefit from the significant wealth creation taking place in those markets. We announced this transaction in January, closed it in November and will start reporting combined results beginning in the first fiscal quarter of 2016.

A focus on select global financial centres

Internationally, our aim is to be a leading financial services partner in select global financial centres in the U.K., Europe, Asia and the Caribbean.

With that in mind, in 2015, we continued to refocus a number of our international businesses on specific markets where we can be a leader. We've strengthened our retail Caribbean banking business by exiting non-core regions, and we've largely completed the realignment of our U.S. & International Wealth Management business, which will let us better serve our clients from our key operational hubs in Canada, the United States, the British Isles, and Asia.

See Dave McKay's video message to stakeholders: **annualreports.rbc.com/ar2015/ceo.html**

We are prudently building out our wealth management, asset management and capital markets capabilities in the U.K. and Europe. I'm encouraged by our ongoing progress in winning client mandates as it demonstrates our strengthening market position in the region.

We continued to extend our Global Asset Management business internationally and, today, roughly 30% of our institutional assets are from outside of Canada. In Capital Markets, we opened offices in Frankfurt and Paris, and expanded a number of our research teams. We've also seen benefits from selectively expanding our investment banking sector and geographic coverage to markets and industry sectors that we know well, and we are also extending our loan book where it makes sense to help drive new origination.

Investor & Treasury Services built on its reputation for leading client service and further enhanced its strong position among global custodians, thanks to robust levels of activity from new and existing clients.

Our employees drive our results

Our successes this year would not have been possible without the dedication and professionalism of our talented and highly engaged employees. Our teams put clients first, collaborate effectively and look for ways to continue to deliver an exceptional client experience and nurture client trust. They also continue to create pride throughout the organization by giving their time and expertise to have a positive impact on our communities.

We will continue to build an even better workplace by ensuring our people succeed in an environment of respect and inclusion where everyone has the opportunity to contribute and realize their potential.

Helping our communities prosper

The depth of our commitment to clients and to our employees is matched by our passionate belief in making a positive social and community impact. In 2015, we contributed more than $100 million in donations, community investments, and sponsorships. However, we are giving much more than money in our efforts to help communities prosper. Over the course of the year, thousands of RBC employees, retirees, families, friends and community members donated their time to causes and initiatives that matter to them. This year's Blue Water Day was a great demonstration of our community commitment coming to life, as 25,000 employees in 26 countries rolled up their sleeves and completed 850 community makeovers, cleaning up shorelines, parks and streets.

Thank you

I'd like to personally thank all of our clients who continue to trust us with their business. I also want to thank all of our employees, whose commitment and hard work helps clients thrive and contributes to our vision of being among the world's most trusted and successful financial institutions. And to you, our fellow shareholders, I would like to reiterate our commitment to continuing to deliver high-quality, sustainable earnings growth.

David McKay
President and Chief Executive Officer

Message from Katie Taylor

KATIE TAYLOR
Chair of the Board

Dear fellow shareholders,

This year your Board of Directors maintained its focus on delivering long-term shareholder value and positioning RBC for future growth. Record earnings, increased dividends and strategic expansion of our already strong U.S. presence are among the hallmarks of 2015.

RBC has the right strategy to drive growth and create value

Central to our role as directors is our responsibility to ensure that RBC has the right strategy, talent and risk management to succeed and deliver long-term value. Your Board actively engages with our outstanding management team to develop the strategic plans aimed at achieving our shared vision: to be among the world's most trusted and successful financial institutions. Aspects of enterprise and business segment strategy are discussed at every board meeting and we participate in an annual session focused on longer-term growth plans. We work closely with management on how best to enhance the Bank's strong capital position and create value by investing in organic growth and strategic acquisitions. This year the Board contributed to management's planning and deliberations in the acquisition of City National Corporation, a premier U.S. private and commercial bank, to serve as a powerful expansion platform for long-term growth in the U.S.

Ensuring RBC has the depth of talent to implement strategy and top performers who will exhibit excellence in its execution is another priority of the Board. We actively assess management's bench strength, reviewing development plans for senior executives who possess the strengths most valuable to RBC.

In today's challenging market conditions and competitive technological environment, promoting strong risk conduct and embedding a risk management culture throughout RBC are key priorities. The Board carefully assesses whether management's plans appropriately balance strategic opportunities with risk discipline. We oversee the frameworks and processes designed to identify the principal risks to the businesses and the systems implemented to manage those risks. The Board is involved in determining the amount and type of risk that RBC will accept in the pursuit of business objectives, approving the Bank's risk appetite and monitoring risk profile to ensure plans and activities are prudently focused on generating long-term shareholder value.

The Board fosters a culture of integrity and good governance

We regard good governance as a business imperative, positively impacting corporate performance by establishing the structures and processes that drive RBC to meet strategic objectives and achieve long-term sustainability. To maximize our contribution, your Board and its committees are committed to adapting best governance practices to the needs of the organization. This year we won *Best Overall Corporate Governance* in the Excellence in Governance Awards in recognition of the integration of high governance standards throughout RBC.

Your Board is also proud of RBC's contributions to the communities it serves. We understand that a good company is simultaneously purpose-driven, principles-led and performance-focused. The strong reputation and brand of RBC are founded on a business approach in which we work to make a positive impact on society, the environment and the economy. In setting the tone at the top, the Board nurtures the strong corporate values that are entrenched in the culture of RBC, and reinforces the ethical principles on which our reputation and success are founded.

The Board is committed to the ongoing success of RBC and creating long-term value for our shareholders and other stakeholders

The Board places strong emphasis upon selection of director candidates, assessing the Board's existing strengths against the evolving needs of the Bank. An important element of this is ensuring that a diversity of viewpoints, backgrounds and experience are present at the Board. In addition to Toos Daruvala, a Director and Senior Partner with McKinsey & Company who joined the Board earlier in 2015, we were pleased this year to welcome Thierry Vandal, the recently retired President and Chief Executive Officer of Hydro-Québec, who brings to the Board extensive experience in the energy industry, regulatory affairs and cybersecurity.

The Board of Directors is confident that RBC has the right people in place to build on its success. The Board extends its thanks to Dave McKay and his leadership team for their collective focus on delivering an exceptional client experience, and on helping our clients thrive and communities prosper. And as always, a special thank you to all of RBC's employees, whose passion and commitment to our clients continues to drive our success.

Kathleen Taylor
Chair of the Board

For more information on our governance policies, please visit: **rbc.com/governance/index.html**

Management's Discussion and Analysis

Management's Discussion and Analysis (MD&A) is provided to enable a reader to assess our results of operations and financial condition for the fiscal year ended October 31, 2015, compared to the preceding two fiscal years. This MD&A should be read in conjunction with our 2015 Annual Consolidated Financial Statements and related notes and is dated December 1, 2015. All amounts are in Canadian dollars, unless otherwise specified, and are based on financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), unless otherwise noted.

Additional information about us, including our 2015 Annual Information Form, is available free of charge on our website at rbc.com/investorrelations, on the Canadian Securities Administrators' website at sedar.com and on the EDGAR section of the United States (U.S.) Securities and Exchange Commission's (SEC) website at sec.gov.

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See our Glossary for definitions of terms used throughout this document

Caution regarding forward-looking statements

From time to time, we make written or oral forward-looking statements within the meaning of certain securities laws, including the "safe harbour" provisions of the *United States Private Securities Litigation Reform Act of 1995* and any applicable Canadian securities legislation. We may make forward-looking statements in this 2015 Annual Report, in other filings with Canadian regulators or the SEC, in other reports to shareholders and in other communications. Forward-looking statements in this document include, but are not limited to, statements relating to our financial performance objectives, vision and strategic goals, the economic and market review and outlook for Canadian, U.S., European and global economies, the regulatory environment in which we operate, the outlook and priorities for each of our business segments, and the risk environment including our liquidity and funding risk. The forward-looking information contained in this document is presented for the purpose of assisting the holders of our securities and financial analysts in understanding our financial position and results of operations as at and for the periods ended on the dates presented and our financial performance objectives, vision and strategic goals, and may not be appropriate for other purposes. Forward-looking statements are typically identified by words such as "believe", "expect", "foresee", "forecast", "anticipate", "intend", "estimate", "goal", "plan" and "project" and similar expressions of future or conditional verbs such as "will", "may", "should", "could" or "would".

By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, which give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct and that our financial performance objectives, vision and strategic goals will not be achieved. We caution readers not to place undue reliance on these statements as a number of risk factors could cause our actual results to differ materially from the expectations expressed in such forward-looking statements. These factors – many of which are beyond our control and the effects of which can be difficult to predict – include: credit, market, liquidity and funding, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive and systemic risks and other risks discussed in the Risk management and Overview of other risks sections; weak oil and gas prices; the high levels of Canadian household debt; exposure to more volatile sectors; cybersecurity; anti-money laundering; the business and economic conditions in Canada, the U.S. and certain other countries in which we operate; the effects of changes in government fiscal, monetary and other policies; tax risk and transparency; and environmental risk.

We caution that the foregoing list of risk factors is not exhaustive and other factors could also adversely affect our results. When relying on our forward-looking statements to make decisions with respect to us, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Material economic assumptions underlying the forward-looking statements contained in this 2015 Annual Report are set out in the Overview and outlook section and for each business segment under the heading Outlook and priorities. Except as required by law, we do not undertake to update any forward-looking statement, whether written or oral, that may be made from time to time by us or on our behalf.

Additional information about these and other factors can be found in the Risk management and Overview of other risks sections.

Information contained in or otherwise accessible through the websites mentioned does not form part of this report. All references in this report to websites are inactive textual references and are for your information only.

Selected financial and other highlights

Table 1

(Millions of Canadian dollars, except per share, number of and percentage amounts)	2015	2014	2013	2015 vs. 2014 Increase (decrease)	
Total revenue	$ 35,321	$ 34,108	$ 30,682	$ 1,213	3.6%
Provision for credit losses (PCL)	1,097	1,164	1,237	(67)	(5.8)%
Insurance policyholder benefits, claims and acquisition expense (PBCAE)	2,963	3,573	2,784	(610)	(17.1)%
Non-interest expense	18,638	17,661	16,214	977	5.5%
Net income before income taxes	12,623	11,710	10,447	913	7.8%
Net income	$ 10,026	$ 9,004	$ 8,342	$ 1,022	11.4%
Segments – net income					
Personal & Commercial Banking	$ 5,006	$ 4,475	$ 4,380	$ 531	11.9%
Wealth Management	1,041	1,083	886	(42)	(3.9)%
Insurance	706	781	595	(75)	(9.6)%
Investor & Treasury Services	556	441	339	115	26.1%
Capital Markets	2,319	2,055	1,700	264	12.8%
Corporate Support	398	169	442	229	135.5%
Net income	$ 10,026	$ 9,004	$ 8,342	$ 1,022	11.4%
Selected information					
Earnings per share (EPS) – basic	$ 6.75	$ 6.03	$ 5.53	$ 0.72	11.9%
– diluted	6.73	6.00	5.49	0.73	12.2%
Return on common equity (ROE) (1), (2)	18.6%	19.0%	19.7%	n.m.	(40) bps
PCL on impaired loans as a % of average net loans and acceptances	0.24%	0.27%	0.31%	n.m.	(3) bps
Gross impaired loans (GIL) as a % of loans and acceptances	0.47%	0.44%	0.52%	n.m.	3 bps
Liquidity coverage ratio (3)	127%	n.a.	n.a.	n.a.	n.a.
Capital ratios, Leverage ratio and multiples (4)					
Common Equity Tier 1 (CET1) ratio (4)	10.6%	9.9%	9.6%	n.m.	70 bps
Tier 1 capital ratio (4)	12.2%	11.4%	11.7%	n.m.	80 bps
Total capital ratio (4)	14.0%	13.4%	14.0%	n.m.	60 bps
Assets-to-capital multiple (4)	n.a.	17.0X	16.6X	n.a.	n.a.
Leverage ratio (4)	4.3%	n.a.	n.a.	n.a.	n.a.
Selected balance sheet and other information					
Total assets	$ 1,074,208	$ 940,550	$ 859,745	$ 133,658	14.2%
Securities	215,508	199,148	182,710	16,360	8.2%
Loans (net of allowance for loan losses)	472,223	435,229	408,850	36,994	8.5%
Derivative related assets	105,626	87,402	74,822	18,224	20.9%
Deposits	697,227	614,100	563,079	83,127	13.5%
Common equity	57,048	48,615	43,064	8,433	17.3%
Average common equity (1)	52,300	45,700	40,600	6,600	14.4%
Total capital risk-weighted assets	413,957	372,050	318,981	41,907	11.3%
Assets under management (AUM) (5)	498,400	457,000	391,100	41,400	9.1%
Assets under administration (AUA) (5), (6)	4,609,100	4,647,000	4,050,900	(37,900)	(0.8)%
Common share information					
Shares outstanding (000s) – average basic	1,442,935	1,442,553	1,443,735	382	0.0%
– average diluted	1,449,509	1,452,003	1,466,529	(2,494)	(0.2)%
– end of period	1,443,423	1,442,233	1,441,056	1,190	0.1%
Dividends declared per common share	$ 3.08	$ 2.84	$ 2.53	$ 0.24	8.5%
Dividend yield (7)	4.1%	3.8%	4.0%	n.m.	30 bps
Common share price (RY on TSX) (8)	$ 74.77	$ 80.01	$ 70.02	$ (5.24)	(6.5)%
Market capitalization (TSX) (8)	107,925	115,393	100,903	(7,468)	(6.5)%
Business information (number of)					
Employees (full-time equivalent) (FTE)	72,839	73,498	74,247	(659)	(0.9)%
Bank branches	1,355	1,366	1,372	(11)	(0.8)%
Automated teller machines (ATMs)	4,816	4,929	4,973	(113)	(2.3)%
Period average US$ equivalent of C$1.00 (9)	$ 0.797	$ 0.914	$ 0.977	$ (0.117)	(12.8)%
Period-end US$ equivalent of C$1.00	$ 0.765	$ 0.887	$ 0.959	$ (0.122)	(13.8)%

(1) Average amounts are calculated using methods intended to approximate the average of the daily balances for the period. This includes ROE and Average common equity. For further details, refer to the Key performance and non-GAAP measures section.
(2) These measures may not have a standardized meaning under generally accepted accounting principles (GAAP) and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the Key performance and non-GAAP measures section.
(3) Liquidity coverage ratio (LCR) is a new regulatory measure under the Basel III Framework, and is calculated using the Liquidity Adequacy Requirements (LAR) guideline. Effective in the second quarter of 2015, LCR was adopted prospectively, and is not applicable (n.a.) for prior periods. For further details, refer to the Liquidity and funding risk section.
(4) Capital and Leverage ratios presented above are on an "all-in" basis. The Leverage ratio is a regulatory measure under the Basel III framework effective the first quarter of 2015. The Leverage ratio has replaced the Assets-to-capital multiple (ACM), and is n.a. for prior periods. The ACM is presented on a transitional basis for prior periods. For further details, refer to the Capital management section.
(5) Represents period-end spot balances.
(6) AUA includes $21.0 billion and $8.0 billion (2014 – $23.2 billion and $8.0 billion; 2013 – $25.4 billion and $7.2 billion) of securitized residential mortgages and credit card loans, respectively.
(7) Defined as dividends per common share divided by the average of the high and low share price in the relevant period.
(8) Based on TSX closing market price at period-end.
(9) Average amounts are calculated using month-end spot rates for the period.
n.m. not meaningful

About Royal Bank of Canada

Royal Bank of Canada (RY on TSX and NYSE) is Canada's largest bank, and one of the largest banks in the world, based on market capitalization. We are one of North America's leading diversified financial services companies, and provide personal and commercial banking, wealth management services, insurance, investor services and capital markets products and services on a global basis. We employ approximately 78,000 full- and part-time employees who serve more than 16 million personal, business, public sector and institutional clients through offices in Canada, the U.S. and 37 other countries. For more information, please visit rbc.com.

Our business segments are described below.

Personal & Commercial Banking operates in Canada, the Caribbean and the U.S., and comprises our personal and business banking operations, as well as our auto financing and retail investment businesses.

Wealth Management serves affluent, high net worth and ultra-high net worth clients from our offices in key financial centres mainly in Canada, the U.S., the U.K., Channel Islands, and Asia with a comprehensive suite of investment, trust, banking, credit and other wealth management solutions. We also provide asset management products and services directly to institutional and individual clients through our distribution channels and third-party distributors.

Insurance provides a wide range of life, health, home, auto, travel, wealth, group and reinsurance products and solutions. In Canada, we offer insurance products and services through our proprietary distribution channels, comprised of the field sales force which includes retail insurance branches, our field sales representatives, advice centres and online, as well as through independent insurance advisors and affinity relationships. Outside Canada, we operate in reinsurance markets globally offering life, accident and annuity reinsurance products.

Investor & Treasury Services serves the needs of institutional investing clients by providing asset servicing, custodial, advisory, financing and other services to safeguard assets, maximize liquidity and manage risk in multiple jurisdictions around the world. We also provide short-term funding and liquidity management for RBC.

Capital Markets provides public and private companies, institutional investors, governments and central banks with a wide range of products and services. In North America, we offer a full suite of products and services which include corporate and investment banking, equity and debt origination and distribution, and structuring and trading. Outside North America, we offer a diversified set of capabilities in our key sectors of expertise such as energy, mining and infrastructure, and we have expanded into industrial, consumer and health care in Europe.

Our business segments are supported by Corporate Support, which consists of Technology & Operations and Functions. Technology & Operations provides the technological and operational foundation required to effectively deliver products and services to our clients, while Functions includes our finance, human resources, risk management, internal audit and other functional groups.

The following chart presents our business segments and respective lines of business:

ROYAL BANK OF CANADA

Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets
○ Canadian Banking ○ Caribbean & U.S. Banking	○ Canadian Wealth Management ○ U.S. & International Wealth Management ○ Global Asset Management	○ Canadian Insurance ○ International Insurance		○ Corporate and Investment Banking ○ Global Markets ○ Other

Corporate Support

○ Technology & Operations ○ Functions

Vision and strategic goals

Our business strategies and actions are guided by our vision, **"To be among the world's most trusted and successful financial institutions."** Our three strategic goals are:

- In Canada, to be the undisputed leader in financial services;
- In the U.S., to be the preferred partner to corporate, institutional and high net worth clients and their businesses; and
- In select global financial centres, to be a leading financial services partner valued for our expertise.

For our progress in 2015 against our business strategies and strategic goals, refer to the Business segment results section.

Economic and market review and outlook – data as at December 1, 2015

The predictions and forecasts in this section are based on information and assumptions from sources we consider reliable. If this information or these assumptions are not accurate, actual economic outcomes may differ materially from the outlook presented in this section. For details on risk factors from general business and economic conditions that may affect our business and financial results, refer to the Overview of other risks section.

Canada

The Canadian economy is expected to grow at an estimated rate of 1.2% during calendar 2015, which is below our estimate of 2.7% as at December 2, 2014 and slightly above our estimate of 1.0% as at August 25, 2015. The first half of the calendar year was impacted by weak investment by the energy sector and slow export activity. Energy production started to recover in the second half of the calendar year, while an increase in manufacturing output combined with stronger U.S. economic growth and a weak Canadian dollar drove exports higher. Housing market activity remained solid through most of calendar 2015, despite a slowdown in oil industry-sensitive markets. Labour markets remained

strong during most of the calendar year, although the unemployment rate rose slightly to 7.0% in October 2015 as growth in the labour force outpaced the increase in employment. The Canadian dollar declined in value against the U.S. dollar for most of the calendar year, and reached an 11-year low in September 2015, mostly due to market expectations of a further divergence in monetary policy between the two countries and given the sustained downturn in oil prices. The Bank of Canada (BoC) reduced its overnight rate twice during the calendar year, by 25 bps each time in January 2015 and July 2015, to 0.50%, as lower growth than expected resulted in an increase in excess capacity and created downward risks to the inflation outlook.

In calendar 2016, we expect the Canadian economy to grow at an estimated rate of 2.2%, driven by firm consumer spending and solid net exports. We expect housing market activity to soften slightly in calendar 2016, as increased pressure on affordability in some key markets softens demand. As the pace of economic growth picks up, we expect the core inflation rate to hold above the BoC's target of 2.0%, leading the BoC to reverse the interest rate cuts made in 2015 beginning in the fourth calendar quarter of 2016.

U.S.

The U.S. economy is expected to grow at an estimated rate of 2.5% in calendar 2015, which is below our estimate of 3.3% as at December 2, 2014, and slightly above our estimate of 2.4% as at August 25, 2015. Strong consumer spending, solid housing market activity and modest business investment during the calendar year more than offset the dampening impact of poor weather conditions and a ports strike in the first calendar quarter. Labour markets generally improved during the year, with the unemployment rate at 5.0% in October 2015, which is within the range considered full employment by the Federal Reserve (Fed). Despite this improvement in the labour markets and solid consumer spending, the Fed cited concerns about global developments as well as the low level of inflation at its September 2015 meeting, and maintained its cautious policy stance by holding its funds target range at historically low levels.

In calendar 2016, we expect the U.S. economy to grow at an estimated rate of 2.8%, reflecting continuing firm consumer spending and housing market activity, as well as stronger business investment. Given that global financial markets displayed greater stability in the beginning of the fourth calendar quarter of 2015 compared to the previous calendar quarter, and the U.S. labour market continued to firm, we expect the Fed to begin to raise its key interest rate from the current funds target range of 0.0% to 0.25%, in December 2015.

Europe

The Euro area economy is expected to grow at an estimated rate of 1.5% in calendar 2015, which is above both our estimates of 1.0% as at December 2, 2014 and 1.4% as at August 25, 2015, largely due to the effects of the stimulative monetary policy adopted by the European Central Bank (ECB), and lower oil prices leading to higher consumer spending. The unemployment rate improved to its lowest level since January 2012 and was 10.8% in September 2015 compared to 11.1% in June 2015. The Euro area inflation rate remained below the ECB's target levels for most of the calendar year, and was 0.0% in October 2015, as the decline in energy prices offset increases in price levels in other sectors. The ECB launched its monthly asset purchase program, the Public Sector Purchase Program (PSPP), in March 2015 and committed to monthly purchases of €60 billion of a combination of euro-denominated public sector securities, asset-backed securities, and covered bonds.

In calendar 2016, we expect the Euro area economy to grow at an estimated rate of 1.7%, as the economy benefits from the stimulus undertaken by the ECB, a weaker Euro, and lower oil prices. As a result of increased concerns about headwinds from the global economy and to negate a modest tightening in financial conditions, we expect the ECB to further reduce its deposit rate to (0.4)% from (0.2)%, and to extend the PSPP past its initial September 2016 commitment.

Financial markets

Equity markets in Canada and the U.S. remained volatile throughout our fiscal year, largely related to the effect of low global oil prices, diverging monetary policies amongst global central banks, and a decline in Chinese equity markets. Yields on both Canadian and U.S. long-term government bonds fluctuated during the fiscal year. Credit spreads on corporate bonds in North America generally widened through the fiscal year, before tightening slightly at the end of October 2015. Crude oil prices generally remained low throughout the fiscal year, and reached a 10-year low in August 2015. Prices for non-precious metals declined for most of the fiscal year due to a combination of strong supply and weak demand from emerging economies including China.

Regulatory environment

We continue to monitor and prepare for regulatory developments in a manner that seeks to ensure compliance with new requirements while mitigating any adverse business or economic impacts. Such impacts could result from new or amended regulations and the expectations of those who enforce them. Significant developments include continuing changes to global and domestic standards for capital and liquidity, over-the-counter (OTC) derivatives reform, initiatives to enhance requirements for institutions deemed systemically important to the financial sector, and changes to resolution regimes addressing government bail-in and total loss-absorbing capacity. We also continue to implement reforms enacted under the U.S. *Dodd-Frank Wall Street Reform and Consumer Protection Act* including those related to the Volcker Rule and the Fed's enhanced prudential standards for Bank Holding Companies and Foreign Banking Organizations.

For a discussion on risk factors resulting from these and other regulatory developments which may affect our business and financial results, refer to the Risk management – Top and emerging risks section. For further details on our framework and activities to manage risks, refer to the Risk management and Capital management sections.

Defining and measuring success through Total Shareholder Returns

Our focus is to maximize total shareholder returns (TSR) through the achievement of top half performance compared to our global peer group over the medium term (3-5 years), which we believe reflects a longer-term view of strong and consistent financial performance.

Maximizing TSR is aligned with our three strategic goals discussed earlier and we believe represents the most appropriate measure of shareholder value creation. TSR is a concept used to compare the performance of our common shares over a period of time, reflecting share price appreciation and dividends paid to common shareholders. The absolute size of the TSR will vary depending on market conditions, and the relative position reflects the market's perception of our overall performance relative to our peers over a period of time.

Financial performance objectives are used to measure progress against our medium-term TSR objectives. We review and revise these financial performance objectives as economic, market and regulatory environments change. By focusing on our medium-term objectives in our decision-making, we believe we will be well positioned to provide sustainable earnings growth and solid returns to our common shareholders.

We achieved all our performance objectives in 2015. The following table provides a summary of our performance against our financial performance objectives in 2015:

2015 Financial performance compared to our medium-term objectives — **Table 2**

	2015 results	Achieved
Diluted EPS growth of 7% +	12.2%	✓
ROE of 18% +	18.6%	✓
Strong capital ratios (CET1) (1)	10.6%	✓
Dividend payout ratio 40% – 50%	46%	✓

(1) For further details on the CET1 ratio, refer to the Capital management section.

For 2016, our medium-term financial performance objectives will remain unchanged.

We compare our TSR to that of a global peer group approved by our Board of Directors. The global peer group remains unchanged from last year and consists of the following 10 financial institutions:

- Canadian financial institutions: Bank of Montreal, Canadian Imperial Bank of Commerce, Manulife Financial Corporation, National Bank of Canada, Power Financial Corporation, The Bank of Nova Scotia, and the Toronto-Dominion Bank.
- U.S. banks: JPMorgan Chase & Co. and Wells Fargo & Company.
- International banks: Westpac Banking Corporation.

Medium-term objectives – three and five year TSR vs. peer group average — **Table 3**

	Three year TSR (1)	Five year TSR (1)
Royal Bank of Canada	14%	11%
	Top half	Mid-point
Peer group average (excluding RBC)	15%	12%

(1) The three and the five year average annual TSR are calculated based on our common share price appreciation as per the TSX closing market price plus reinvested dividends for the period October 31, 2012 to October 31, 2015 and October 31, 2010 to October 31, 2015 respectively.

Common share and dividend information — **Table 4**

For the year ended October 31	2015	2014	2013	2012	2011
Common share price (RY on TSX) – close, end of period	$ 74.77	$ 80.01	$ 70.02	$ 56.94	$ 48.62
Dividends paid per share	3.04	2.76	2.46	2.22	2.04
Increase (decrease) in share price	(6.5)%	14.3%	23.0%	17.1%	(10.6)%
Total shareholder return	(3.0)%	19.0%	28.0%	22.0%	(6.7)%

Key corporate events of 2015

City National Corporation

On November 2, 2015, we completed the acquisition of City National Corporation (City National), the holding company of City National Bank. Total consideration of US$5.5 billion was paid with US$2.6 billion in cash and 41.6 million RBC common shares. In addition, we issued RBC first preferred shares with a par value of US$275 million in exchange for all outstanding shares of City National preferred stock. For further details, refer to Notes 11 and 36 of our 2015 Annual Consolidated Financial Statements.

Royal Bank of Canada (Suisse) SA

On August 28, 2015, we completed the sale of Royal Bank of Canada (Suisse) SA, (RBC Suisse), to SYZ Group. As a result of the transaction, we recorded a loss on disposal of $7 million (before- and after-tax), including deal and transaction costs, in Non-interest expense – Other. For further details, refer to Note 11 of our 2015 Annual Consolidated Financial Statements.

RBC Royal Bank (Suriname) N.V.

On July 31, 2015, we completed the sale of RBC Royal Bank (Suriname) N.V. (RBC Suriname). As a result of the transaction, we recorded a total loss on disposal of $19 million (before- and after-tax), including a loss of $23 million in the second quarter in Non-interest expense – Other, and a gain of $4 million in the third quarter including foreign currency translation gains reclassified from Other components of equity. For further details, refer to Note 11 of our 2015 Annual Consolidated Financial Statements.

Certain Caribbean Wealth Management businesses

Subsequent to the end of our fiscal year, we have entered into a purchase and sale agreement on November 4, 2015, to sell our trust, custody and fund administration businesses in the Caribbean to SMP Partners Group, subject to customary closing conditions and regulatory approvals. The transaction is expected to close in early 2016. For further details, refer to Note 36 of our 2015 Annual Consolidated Financial Statements.

Financial performance

Overview

2015 vs. 2014

Net income of $10,026 million was up $1,022 million or 11% from a year ago. Diluted earnings per share (EPS) of $6.73 was up $0.73 and return on common equity (ROE) of 18.6% was down 40 bps from 19.0% last year. Our Common Equity Tier 1 (CET1) ratio was 10.6%.

Our results were driven by higher earnings in Personal & Commercial Banking, Capital Markets and Investor & Treasury Services, partially offset by lower earnings in Insurance and Wealth Management. Our results were also favourably impacted by a lower effective tax rate reflecting favourable income tax adjustments, the positive impact of foreign exchange translation, and a gain of $108 million (before- and after-tax) from the wind-up of a U.S.-based funding subsidiary that resulted in the release of foreign currency translation adjustment (CTA) which was recorded in Corporate Support. Prior year results included a loss of $100 million (before- and after-tax) related to the sale of RBC Jamaica and a provision of $40 million ($32 million after-tax) related to post-employment benefits and restructuring charges in the Caribbean.

Personal & Commercial Banking earnings mainly reflected solid volume growth across most businesses in Canada, strong fee-based revenue growth, and higher earnings in the Caribbean, partially offset by higher costs to support business growth and lower spreads. Capital Markets earnings were driven by growth in our global markets businesses mainly reflecting increased client activity, continued solid performance in our corporate and investment banking businesses, and the positive impact of foreign exchange translation, partially offset by lower results in certain legacy portfolios. Investor & Treasury Services earnings mainly reflected higher earnings due to increased client activity in our foreign exchange forwards business and higher foreign exchange transaction volumes, an additional month of earnings in Investor Services of $42 million ($28 million after-tax), increased custodial fees, and higher earnings from growth in client deposits. These factors were partially offset by lower funding and liquidity results. Wealth Management earnings decreased primarily reflecting higher costs in support of business growth in our Global Asset Management and Canadian Wealth Management businesses, restructuring costs of $122 million ($90 million after-tax) largely related to our U.S. & International Wealth Management business, lower transaction volumes, and higher provision for credit losses (PCL), partly offset by higher earnings from growth in average fee-based client assets. Insurance results decreased mainly due to a change in Canadian tax legislation impacting certain foreign affiliates which became effective November 1, 2014, a lower level of favourable actuarial adjustments, and higher net claims costs, which were partially offset by higher earnings from new U.K. annuity contracts, and a favourable impact of investment-related activities on the Canadian life business.

For further details on our business segment results and CET1 ratio, refer to the Business segment results and Capital management sections, respectively.

2014 vs. 2013

In 2014, net income of $9,004 million was up $662 million or 8% from 2013. Diluted EPS of $6.00 was up $0.51 and ROE of 19.0% was down 70 bps. Our CET1 ratio was 9.9%.

Our results were driven by higher earnings in all business segments, including the positive impact of foreign exchange translation. In addition, our results in 2013 included net favourable income tax adjustments in Corporate Support.

Capital Markets earnings reflected strong equity markets, our continued focus on origination and lending, and increased activity from client-focused strategies, partially offset by higher litigation provisions and related legal costs. Wealth Management results reflected growth in average fee-based client assets, partially offset by higher costs in support of business growth. Our insurance results reflected lower net claims costs, business growth in our European life and U.K. annuity products and favourable actuarial adjustments, partly offset by higher costs in support of business growth. Insurance results in 2013 included a charge of $160 million ($118 million after-tax) as a result of new tax legislation in Canada, which affects the policyholders' tax treatment of certain individual life insurance policies. Personal & Commercial Banking earnings reflected solid volume growth across most of our Canadian Banking businesses, partially offset by higher costs in support of business growth, and a loss of $100 million (before- and after-tax) related to the sale of RBC Royal Bank (Jamaica) Limited and RBTT Securities Jamaica Limited (collectively, RBC Jamaica).

Impact of foreign currency translation

Our foreign currency-denominated results are impacted by exchange rate fluctuations. Revenue, PCL, insurance policyholder benefits, claims and acquisition expense (PBCAE), non-interest expense and net income denominated in foreign currency are translated at the average rate of exchange for the period.

The following table reflects the estimated impact of foreign exchange translation on key income statement items:

Table 5

(Millions of Canadian dollars, except per share amounts)	2015 vs. 2014	2014 vs. 2013
Increase (decrease):		
Total revenue	$ 1,012	$ 818
PCL	11	9
PBCAE	75	75
Non-interest expense	652	510
Income taxes	113	103
Net income	161	121
Impact on EPS:		
Basic	$ 0.11	$ 0.08
Diluted	0.11	0.08

The relevant average exchange rates that impact our business are shown in the following table:

Table 6

(Average foreign currency equivalent of C$1.00) (1)	2015	2014	2013
U.S. dollar	**0.797**	0.914	0.977
British pound	**0.519**	0.551	0.626
Euro	**0.707**	0.680	0.740

(1) Average amounts are calculated using month-end spot rates for the period.

Total revenue

Table 7

(Millions of Canadian dollars, except percentage amounts)	2015	2014	2013
Interest income	**$ 22,729**	$ 22,019	$ 21,148
Interest expense	**7,958**	7,903	7,899
Net interest income	**$ 14,771**	$ 14,116	$ 13,249
Net interest margin (on average earning assets) (1)	**1.71%**	1.86%	1.88%
Investments (2)	**$ 8,095**	$ 7,355	$ 6,408
Insurance (3)	**4,436**	4,957	3,911
Trading (see additional trading information section)	**552**	742	867
Banking (4)	**4,388**	4,090	3,909
Underwriting and other advisory	**1,885**	1,809	1,569
Other (5)	**1,194**	1,039	769
Non-interest income	**$ 20,550**	$ 19,992	$ 17,433
Total revenue	**$ 35,321**	$ 34,108	$ 30,682

(1) Net interest margin (on average earning assets) is calculated as net interest income divided by average earning assets.
(2) Includes securities brokerage commissions, investment management and custodial fees, and mutual fund revenue.
(3) Includes premiums and investment and fee income. Investment income includes the change in fair value of investments backing policyholder liabilities and is largely offset in PBCAE.
(4) Includes service charges, foreign exchange revenue other than trading, card service revenue and credit fees.
(5) Includes other non-interest income, net gain (loss) on available-for-sale (AFS) securities and share of profit in associates.

2015 vs. 2014

Total revenue increased $1,213 million or 4% from last year, which included the positive impact of foreign exchange translation of $1,012 million. The negative change in fair value of investments backing our policyholders liabilities, which was largely offset in PBCAE, decreased total revenue by $463 million.

Net interest income increased $655 million or 5%, mainly due to solid volume growth across most businesses in Canadian Banking, and higher trading-related net interest income and solid lending growth in Capital Markets. The positive impact of foreign exchange translation also contributed to the increase. These factors were partially offset by lower spreads.

Net interest margin was down 15 bps compared to last year, largely due to the low interest rate environment, and competitive pressures.

Investments revenue increased $740 million or 10%, mainly due to growth in average fee-based client assets resulting from capital appreciation and net sales, and the positive impact of foreign exchange translation. Higher securities brokerage commissions in Capital Markets, and higher fee-based revenue primarily attributable to strong mutual funds asset growth resulting in higher mutual fund distribution fees in Canadian Banking also contributed to the increase. These factors were partly offset by lower transaction volumes in Wealth Management.

Insurance revenue decreased $521 million or 11%, mainly due to the change in fair value of investments backing our policyholder liabilities resulting from an increase in long-term interest rates, and a reduction of revenue related to our retrocession contracts, both of which were largely offset in PBCAE. These factors were partially offset by business growth in Canadian and International insurance, and the positive impact of foreign exchange translation.

Banking revenue increased $298 million or 7%, mainly due to higher credit card balances and transaction volumes, and improved spreads. Higher service fee revenue also contributed to the increase.

Underwriting and other advisory revenue increased $76 million or 4%, primarily due to higher debt origination reflecting increased client issuance activity, and strong growth in M&A activity reflecting increased mandates in the U.S. and Europe. These factors were partially offset by lower equity origination reflecting decreased client activity as compared to the strong levels last year.

Other revenue increased $155 million or 15%, mainly due to a gain of $108 million (before- and after-tax) from the wind-up of a U.S.-based funding subsidiary that resulted in the release of CTA, which was recorded in Corporate Support.

2014 vs. 2013

Total revenue increased $3,426 million or 11% as compared to 2013, primarily due to the positive change in fair value of investments backing our policyholder liabilities of $930 million resulting from a decrease in long-term interest rates, largely offset in PBCAE, the positive impact of foreign exchange translation, higher revenue from growth in average fee-based client assets in Wealth Management resulting from capital appreciation and strong net sales, solid volume growth of 5% across most of our businesses in Canadian Banking, and higher trading-related net interest income in Capital Markets. Strong growth in equity origination reflecting increased issuance activity, higher equity trading revenue due to strong market conditions, and higher lending activity in Capital Markets also contributed to the increase. These factors were partially offset by the unfavourable impact of the implementation of funding valuation adjustments.

Additional trading information

Table 8

(Millions of Canadian dollars)	2015	2014	2013
Total trading revenue (1)			
Net interest income	**$ 2,398**	$ 2,029	$ 1,661
Non-interest income	**552**	742	867
Total trading revenue	**$ 2,950**	$ 2,771	$ 2,528
Total trading revenue by product			
Interest rate and credit	**$ 1,400**	$ 1,560	$ 1,611
Equities	**1,045**	814	594
Foreign exchange and commodities	**505**	397	323
Total trading revenue	**$ 2,950**	$ 2,771	$ 2,528
Trading revenue (teb) by product			
Interest rate and credit	**$ 1,400**	$ 1,560	$ 1,611
Equities	**1,614**	1,305	972
Foreign exchange and commodities	**504**	397	323
Total trading revenue (teb)	**$ 3,518**	$ 3,262	$ 2,906
Trading revenue (teb) by product – Capital Markets			
Interest rate and credit	**$ 1,238**	$ 1,293	$ 1,350
Equities	**1,590**	1,244	942
Foreign exchange and commodities	**376**	333	286
Total Capital Markets trading revenue (teb)	**$ 3,204**	$ 2,870	$ 2,578

(1) Includes a gain of $40 million (2014 – $105 million loss; 2013 – nil) related to a funding valuation adjustment on uncollateralized OTC derivatives.

2015 vs. 2014
Total trading revenue of $2,950 million, which comprises trading-related revenue recorded in Net interest income and Non-interest income, was up $179 million, or 6% including the positive impact of foreign exchange translation, mainly due to higher equities trading revenue reflecting increased client activity primarily in the first half of the year. This factor was partially offset by lower revenue in certain legacy portfolios including the exit from certain proprietary trading strategies last year to comply with the Volcker Rule, and lower fixed income trading revenue reflecting challenging market conditions in the second half of the year. In addition, trading revenue in the prior year was unfavourably impacted by the implementation of funding valuation adjustments.

2014 vs. 2013
Total trading revenue of $2,771 million, which comprises trading-related revenue recorded in Net interest income and Non-interest income, was up $243 million, or 10% as compared to 2013, mainly due to higher equity trading revenue reflecting strong market conditions and higher commodities trading revenue. These factors were partially offset by lower fixed income trading revenue largely driven by the unfavourable impact of the implementation of funding valuation adjustments, and the exit from certain proprietary trading strategies to comply with the Volcker Rule.

Provision for credit losses

2015 vs. 2014
Total PCL decreased $67 million or 6% from a year ago, mainly due to lower PCL in Personal & Commercial Banking, partially offset by higher PCL in Capital Markets and Wealth Management.

2014 vs. 2013
Total PCL decreased $73 million or 6% as compared to 2013, mainly due to lower provisions in Capital Markets and Wealth Management, partially offset by higher provisions in Personal & Commercial Banking, primarily in Caribbean Banking.

For further details on PCL, refer to the Credit quality performance section.

Insurance policyholder benefits, claims and acquisition expense

2015 vs. 2014
PBCAE decreased $610 million or 17% from a year ago, mainly due to a reduction of PBCAE related to our retrocession contracts, and the change in fair value of investments backing our policyholder liabilities resulting from the change in long-term interest rates, both of which were largely offset in revenue. These factors were partially offset by business growth in Canadian and International insurance, a lower level of favourable actuarial adjustments in the current year reflecting management actions and assumption changes, and an increase due to the impact of foreign exchange translation.

2014 vs. 2013
PBCAE increased $789 million or 28% from the prior year, mainly due to the change in fair value of investments backing our policyholder liabilities, which was largely offset in revenue, and the impact of foreign exchange translation. These factors were partially offset by lower net claims costs. In addition, our PBCAE in 2013 included the unfavourable impact of the charge of $160 million related to new tax legislation in Canada, which affects the policyholders' tax treatment of certain individual life insurance policies, and a favourable impact from interest and asset-related activities on the Canadian life business.

Non-interest expense

Table 9

(Millions of Canadian dollars, except percentage amounts)	2015	2014	2013
Salaries	$ 5,197	$ 4,834	$ 4,604
Variable compensation	4,533	4,388	3,924
Benefits and retention compensation	1,607	1,561	1,464
Share-based compensation	246	248	256
Human resources	$ 11,583	$ 11,031	$ 10,248
Equipment	1,277	1,147	1,081
Occupancy	1,410	1,330	1,235
Communications (1)	888	847	796
Professional fees	932	763	753
Amortization of other intangibles	712	666	566
Other (1)	1,836	1,877	1,535
Non-interest expense	$ 18,638	$ 17,661	$ 16,214
Efficiency ratio (2)	52.8%	51.8%	52.8%

(1) Amounts have been revised from those previously presented.
(2) Efficiency ratio is calculated as non-interest expense divided by total revenue.

2015 vs. 2014

Non-interest expense increased $977 million or 6% mainly reflecting an increase due to the impact of foreign exchange translation of $652 million and higher costs in support of business growth. Restructuring costs of $122 million ($90 million after-tax) largely related to our U.S. & International Wealth Management business also contributed to the increase. These factors were partially offset by lower litigation provisions and related legal costs in Capital Markets, and continuing benefits from our efficiency management activities. The prior year included the loss of $100 million related to the sale of RBC Jamaica and a provision of $40 million related to post-employment benefits and restructuring charges in the Caribbean.

Our efficiency ratio of 52.8% increased 100 bps from 51.8% last year mainly due to the change in fair value of investments backing our policyholder liabilities, and higher costs in support of business growth, partially offset by continuing benefits from our efficiency management activities.

2014 vs. 2013

Non-interest expense increased $1,447 million or 9%, primarily due to the impact of foreign exchange translation of $510 million, higher costs in support of business growth, and higher variable compensation driven by higher revenue in Wealth Management and higher results in Capital Markets. Increased litigation provisions and related legal costs in Capital Markets, and the loss of $100 million related to the sale of RBC Jamaica also contributed to the increase. These factors were partly offset by continuing benefits from our efficiency management activities.

Our efficiency ratio of 51.8% decreased 100 bps from 52.8% in 2013, mainly due to continuing benefits from our efficiency management activities.

Income and other taxes

Table 10

(Millions of Canadian dollars, except percentage amounts)	2015	2014	2013
Income taxes	$ 2,597	$ 2,706	$ 2,105
Other taxes			
Goods and services sales taxes	$ 426	$ 395	$ 370
Payroll taxes	577	529	497
Capital taxes	100	86	85
Property taxes	121	106	119
Insurance premium taxes	50	51	50
Business taxes	59	8	25
	$ 1,333	$ 1,175	$ 1,146
Total income and other taxes	$ 3,930	$ 3,881	$ 3,251
Net income before income taxes	$ 12,623	$ 11,710	$ 10,447
Canadian statutory income tax rate (1)	26.3%	26.3%	26.2%
Lower average tax rate applicable to subsidiaries	(0.9)%	(2.3)%	(1.8)%
Tax-exempt income from securities	(3.6)%	(3.3)%	(2.8)%
Tax rate change	0.3%	0.0%	0.0%
Effect of previously unrecognized tax loss, tax credit or temporary differences	(0.1)%	(0.1)%	(0.5)%
Other	(1.4)%	2.5%	(1.0)%
Effective income tax rate	20.6%	23.1%	20.1%
Effective total tax rate (2)	28.2%	30.1%	28.0%

(1) Blended Federal and Provincial statutory income tax rate.
(2) Total income and other taxes as a percentage of net income before income taxes and other taxes.

2015 vs. 2014
Income tax expense decreased $109 million or 4% and the effective income tax rate of 20.6% decreased 250 bps from last year mainly due to net favourable tax adjustments in the current year, partially offset by higher earnings before income taxes.

Other taxes increased $158 million or 13%, mainly due to higher business and payroll taxes, as well as higher goods and services sales taxes. In addition to the income and other taxes reported in our Consolidated Statements of Income, we recorded income tax recoveries of $878 million (2014 – $643 million) in shareholders' equity, primarily reflecting foreign currency translation losses from hedging activities.

2014 vs. 2013
Income tax expense increased $601 million or 29% from 2013, mainly due to higher earnings before income taxes. The effective income tax rate of 23.1% increased 300 bps from 20.1% in 2013, mainly due to favourable income tax adjustments in 2013 related to prior years.

Other taxes increased $29 million or 3% from 2013, mainly due to higher payroll taxes and sales taxes which were partially offset by lower business taxes.

Client assets

Assets under administration
Assets under administration (AUA) are assets administered by us which are beneficially owned by our clients. We provide services that are administrative in nature, including safekeeping, collecting investment income, settling purchase and sale transactions, and record keeping. Underlying investment strategies within AUA are determined by our clients and generally do not impact the administrative fees that we receive. Administrative fees can be impacted by factors such as asset valuation level changes from market movements, types of services administered, transaction volumes, geography and client relationship pricing based on volumes or multiple services.

Our Investor & Treasury Services business is the primary business segment that has AUA with approximately 79% of total AUA, as at October 31, 2015, followed by our Wealth Management business with approximately 16% of total AUA.

2015 vs. 2014
AUA decreased $37.9 billion or 1% compared to last year, mainly reflecting changes in client asset mix and unfavourable market conditions, partially offset by the impact of foreign exchange translation, net sales and capital appreciation.

The following table summarizes AUA by geography and asset class:

AUA by geographic mix and asset class — **Table 11**

(Millions of Canadian dollars)	2015	2014
Canada (1)		
Money Market	$ 31,500	$ 31,100
Fixed Income	685,600	736,200
Equity	669,900	711,500
Multi-asset and other	642,400	618,700
Total Canada	$ 2,029,400	$ 2,097,500
U.S. (1)		
Money Market	$ 33,100	$ 28,700
Fixed Income	90,800	82,500
Equity	152,700	138,200
Multi-asset and other	21,800	16,200
Total U.S.	$ 298,400	$ 265,600
Other International (1)		
Money Market	$ 47,500	$ 54,400
Fixed Income	375,400	405,600
Equity	804,000	867,200
Multi-asset and other	1,054,400	956,700
Total International	$ 2,281,300	$ 2,283,900
Total AUA	$ 4,609,100	$ 4,647,000

(1) Geographic information is based on the location from where our clients are serviced.

Assets under management
Assets under management (AUM) are assets managed by us which are beneficially owned by our clients. Management fees are paid by the investment funds for the investment capabilities of an investment manager and can also include administrative services. Management fees may be calculated daily, monthly or quarterly as a percentage of the AUM, depending on the distribution channel, underlying products and investment strategies. In general, equity strategies carry a higher fee rate than fixed income or money market strategies. Fees are also impacted by asset mix and relationship pricing for clients using multiple services. Higher risk assets generally produce higher fees, while clients using multiple services can take advantage of synergies which reduce the fees they are charged. Certain funds may also include performance fee arrangements, which are recorded when certain benchmarks or performance targets are achieved. These factors could lead to differences on fees earned by products and therefore net return by asset class may vary despite similar average AUM. Our Wealth Management segment is the primary business segment that has AUM.

2015 vs. 2014
AUM increased $41.4 billion or 9% compared to last year, primarily reflecting the impact of foreign exchange translation, as well as net sales and capital appreciation.

The following table presents changes in AUM for the years ended October 31, 2015 and October 31, 2014:

Client assets – AUM — **Table 12**

(Millions of Canadian dollars)	2015	2014
AUM, beginning balance	$ 457,000	$ 391,100
Net asset flows:		
Money market	(4,900)	(5,600)
Fixed income	8,800	14,300
Equity	900	4,100
Multi-asset and other	13,400	17,000
Market impact and other	23,200	36,100
AUM, balance at end of year	**$ 498,400**	$ 457,000

Business segment results

Results by business segment

The following table summarizes our results by business segment:

Table 13

(Millions of Canadian dollars, except percentage amounts)	2015 Personal & Commercial Banking	2015 Wealth Management	2015 Insurance	2015 Investor & Treasury Services	2015 Capital Markets (1)	2015 Corporate Support (1)	2015 Total	2014 Total	2013 Total
Net interest income	$ 10,004	$ 493	$ –	$ 818	$ 3,970	$ (514)	$ 14,771	$ 14,116	$ 13,249
Non-interest income	4,309	6,282	4,436	1,220	4,093	210	20,550	19,992	17,433
Total revenue	$ 14,313	$ 6,775	$ 4,436	$ 2,038	$ 8,063	$ (304)	$ 35,321	$ 34,108	$ 30,682
PCL	984	46	–	(1)	71	(3)	1,097	1,164	1,237
PBCAE	–	–	2,963	–	–	–	2,963	3,573	2,784
Non-interest expense	6,611	5,292	613	1,301	4,696	125	18,638	17,661	16,214
Net income before income taxes	$ 6,718	$ 1,437	$ 860	$ 738	$ 3,296	$ (426)	$ 12,623	$ 11,710	$ 10,447
Income tax	1,712	396	154	182	977	(824)	2,597	2,706	2,105
Net income	$ 5,006	$ 1,041	$ 706	$ 556	$ 2,319	$ 398	$ 10,026	$ 9,004	$ 8,342
ROE (2)	30.0%	17.4%	44.3%	20.3%	13.6%	n.m.	18.6%	19.0%	19.7%
Average assets	$ 386,100	$ 29,100	$ 13,700	$ 125,300	$ 477,300	$ 21,300	$ 1,052,800	$ 906,500	$852,000

(1) Net interest income, total revenue and net income before income taxes are presented in Capital Markets on a taxable equivalent basis (teb). The teb adjustment is eliminated in the Corporate Support segment. For a further discussion, refer to the How we measure and report our business segments section.

(2) These measures may not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions. For further details, refer to the Key performance and non-GAAP measures section.

How we measure and report our business segments

Our management reporting framework is intended to measure the performance of each business segment as if it were a stand-alone business and reflects the way that the business segment is managed. This approach is intended to ensure that our business segments' results include all applicable revenue and expenses associated with the conduct of their business and depicts how management views those results. The following highlights the key aspects of how our business segments are managed and reported:

- Personal & Commercial Banking reported results include securitized Canadian residential mortgage and credit card loans and related amounts for income and provisions for credit losses on impaired loans.
- Wealth Management reported results also include disclosure in U.S. dollars as we review and manage the results of certain businesses largely in this currency.
- Capital Markets results are reported on a taxable equivalent basis (teb), which grosses up net interest income from certain tax-advantaged sources (Canadian taxable corporate dividends) to their effective taxable equivalent value with a corresponding offset recorded in the provision for income taxes. We record the elimination of the teb adjustments in Corporate Support. We believe these adjustments are useful and reflect how Capital Markets manages its business, since it enhances the comparability of revenue and related ratios across taxable revenue and our principal tax-advantaged source of revenue. The use of teb adjustments and measures may not be comparable to similar generally accepted accounting principles (GAAP) measures or similarly adjusted amounts disclosed by other financial institutions.
- Corporate Support results include all enterprise-level activities that are undertaken for the benefit of the organization that are not allocated to our five business segments, including residual asset/liability management results, impact from income tax adjustments, net charges associated with unattributed capital and PCL on loans not yet identified as impaired.

Key methodologies
The following outlines the key methodologies and assumptions used in our management reporting framework. These are periodically reviewed by management to ensure they remain valid.

Expense allocation
To ensure that our business segments' results include expenses associated with the conduct of their business, we allocate costs incurred or services provided by Technology & Operations and Functions, which are directly undertaken or provided on the business segments' behalf. For other costs not directly attributable to our business segments, including overhead costs and other indirect expenses, we use our management reporting framework for allocating these costs to each business segment in a manner that is intended to reflect the underlying benefits.

Capital attribution
Our framework also determines the attribution of capital to our business segments in a manner that is intended to consistently measure and align economic costs with the underlying benefits and risks associated with the activities of each business segment. The amount of capital assigned to each business segment is referred to as attributed capital. Unattributed capital and associated net charges are reported in Corporate Support. For further information, refer to the Capital management section.

Funds transfer pricing
Funds transfer pricing refers to the pricing of intra-company borrowing or lending. We employ a funds transfer pricing process that motivates economically sound business decisions by providing risk-adjusted pricing and profitability guidance after taking into consideration interest rate and liquidity risk as well as applicable regulatory requirements. Funds transfer pricing also provides the basis for risk-adjusted profitability measurement for our products and measures.

Provisions for credit losses
PCL are recorded to recognize estimated losses on impaired loans, as well as losses that have been incurred but are not yet identified in our loans portfolio. This portfolio includes on-balance sheet exposures, such as loans and acceptances, and off-balance sheet items such as letters of credit, guarantees and unfunded commitments. PCL on impaired loans are included in the results of each business segment to fully reflect the appropriate expenses related to the conduct of each business segment. PCL on loans not yet identified as impaired are included in Corporate Support, as Group Risk Management (GRM) effectively controls this through its monitoring and oversight of various lending portfolios throughout the enterprise. For details on our accounting policy on Allowance for credit losses, refer to Note 2 of our 2015 Annual Consolidated Financial Statements.

Key performance and non-GAAP measures

Performance measures
Return on common equity
We measure and evaluate the performance of our consolidated operations and each business segment using a number of financial metrics, such as net income and ROE. We use ROE, at both the consolidated and business segment levels, as a measure of return on total capital invested in our business. Management views the business segment ROE measure as a useful measure for supporting investment and resource allocation decisions because it adjusts for certain items that may affect comparability between business segments and certain competitors.

Our consolidated ROE calculation is based on net income available to common shareholders divided by total average common equity for the period. Business segment ROE calculations are based on net income available to common shareholders divided by average attributed capital for the period. For each segment, average attributed capital includes the capital required to underpin various risks as described in the Capital Management section and amounts invested in goodwill and intangibles.

The attribution of capital and risk capital involves the use of assumptions, judgments and methodologies that are regularly reviewed and revised by management as deemed necessary. Changes to such assumptions, judgments and methodologies can have a material effect on the segment ROE information that we report. Other companies that disclose information on similar attributions and related return measures may use different assumptions, judgments and methodologies.

The following table provides a summary of our ROE calculations:

Calculation of ROE — **Table 14**

	2015							2014	2013
(Millions of Canadian dollars, except percentage amounts)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total	Total
Net income available to common shareholders	$ 4,937	$ 1,021	$ 701	$ 545	$ 2,259	$ 271	$ 9,734	$ 8,697	$ 7,991
Average common equity (1), (2)	16,500	5,900	1,600	2,700	16,550	9,050	52,300	45,700	40,600
ROE (3)	30.0%	17.4%	44.3%	20.3%	13.6%	n.m.	18.6%	19.0%	19.7%

(1) Average common equity represents rounded figures.
(2) The amounts for the segments are referred to as attributed capital.
(3) ROE is based on actual balances of average common equity before rounding.

Embedded value for Insurance operations
Embedded value is a measure of shareholder value embedded in the balance sheet of our Insurance segment, excluding any value from future new sales. We use the change in embedded value between reporting periods as a measure of the value created by the insurance operations during the period.

We define embedded value as the value of equity held in our Insurance segment and the value of in-force business (existing policies). The value of in-force business is calculated as the present value of future expected earnings on in-force business less the cost of capital required to support in-force business. We use discount rates equal to long-term risk free rates plus a spread. Required capital uses the capital frameworks in the jurisdictions in which we operate.

Key drivers affecting the change in embedded value from period to period are new sales, investment performance, claims and policyholder experience, change in actuarial assumptions, changes in foreign exchange rates and changes in shareholder equity arising from transfers in capital.

Embedded value does not have a standardized meaning under GAAP and may not be directly comparable to similar measures disclosed by other companies. Given that this measure is specifically used for our Insurance segment and involves the use of discount rates to present value the future expected earnings and capital required for the in-force business, reconciliation to financial statements information is not applicable.

Non-GAAP measures

We believe that certain non-GAAP measures described below are more reflective of our ongoing operating results, and provide readers with a better understanding of management's perspective on our performance. These measures enhance the comparability of our financial performance for the year ended October 31, 2015 with results from last year as well as, in the case of economic profit, measure relative contribution to shareholder value. Non-GAAP measures do not have a standardized meaning under GAAP and may not be comparable to similar measures disclosed by other financial institutions.

The following discussion describes the non-GAAP measures we use in evaluating our operating results.

Economic profit

Economic profit is net income excluding the after-tax effect of amortization of other intangibles less a capital charge for use of attributed capital. It measures the return generated by our businesses in excess of our cost of capital, thus enabling users to identify relative contributions to shareholder value.

The capital charge includes a charge for common equity and preferred shares. For 2015, our cost of capital was 9.0%.

The following table provides a summary of our Economic profit:

Economic profit — **Table 15**

	2015						
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total
Net income	$ 5,006	$ 1,041	$ 706	$ 556	$ 2,319	$ 398	$ 10,026
add: Non-controlling interests	(8)	2	–	(1)	–	(94)	(101)
After-tax effect of amortization of other intangibles	22	69	–	21	–	1	113
Goodwill and intangibles writedown	–	4	–	–	–	–	4
Adjusted net income (loss)	$ 5,020	$ 1,116	$ 706	$ 576	$ 2,319	$ 305	$ 10,042
less: Capital charge	1,544	551	148	251	1,550	852	4,896
Economic profit (loss)	$ 3,476	$ 565	$ 558	$ 325	$ 769	$ (547)	$ 5,146

	2014							2013
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Corporate Support	Total	Total
Net income	$ 4,475	$ 1,083	$ 781	$ 441	$ 2,055	$ 169	$ 9,004	$ 8,342
add: Non-controlling interests	1	(1)	–	(1)	–	(93)	(94)	(98)
After-tax effect of amortization of other intangibles	27	73	–	21	1	1	123	117
Goodwill and intangibles writedown	–	6	–	–	2	–	8	–
Adjusted net income (loss)	$ 4,503	$ 1,161	$ 781	$ 461	$ 2,058	$ 77	$ 9,041	$ 8,361
less: Capital charge	1,439	521	147	205	1,333	696	4,341	3,702
Economic profit (loss)	$ 3,064	$ 640	$ 634	$ 256	$ 725	$ (619)	$ 4,700	$ 4,659

Results excluding specified items

Our results were impacted by the following specified items:

- For the year ended October 31, 2015, a gain of $108 million (before- and after-tax) from the wind-up of a U.S.-based funding subsidiary that resulted in the release of CTA that was previously booked in other components of equity (OCE), which was recorded in Corporate Support.
- For the year ended October 31, 2014, in our Personal & Commercial Banking segment:
  - A total loss of $100 million (before- and after-tax) related to the sale of RBC Jamaica, comprised of a loss of $60 million (before- and after-tax) in the first quarter of 2014, and a further loss of $40 million (before- and after-tax) in the third quarter of 2014 which includes foreign currency translation related to the closing of the sale of RBC Jamaica; and
  - A provision of $40 million ($32 million after-tax) related to post-employment benefits and restructuring charges in the Caribbean.

The following table provides calculations of our business segment results and measures excluding this specified item for the year ended October 31, 2014:

Personal & Commercial Banking — **Table 16**

	2014			
		Items excluded		
(Millions of Canadian dollars, except percentage amounts)	As reported	Loss related to the sale of RBC Jamaica	Provision for post-employment benefits and restructuring charges	Adjusted
Total revenue	$ 13,730	$ –	$ –	$ 13,730
PCL	1,103	–	–	1,103
Non-interest expense	6,563	(100)	(40)	6,423
Net income before taxes	6,064	100	40	6,204
Net income	$ 4,475	$ 100	$ 32	$ 4,607
Selected balances and other information				
Non-interest expense	$ 6,563	$ (100)	$ (40)	$ 6,423
Total revenue	13,730			13,730
Efficiency ratio	47.8%			46.8%
Revenue growth rate	5.5%			5.5%
Non-interest expense growth rate	6.4%			4.2%
Operating leverage	(0.9%)			1.3%

Personal & Commercial Banking

Personal & Commercial Banking is comprised of our personal and business banking operations, and our auto financing and retail investment businesses, including our online discount brokerage channel, and operates through two businesses: Canadian Banking and Caribbean & U.S. Banking. We provide services to more than 13.5 million individual, business and institutional clients across Canada, the Caribbean and the U.S. In Canada, we provide a broad suite of financial products and services through our extensive branch, automated teller machine (ATM), online, mobile and telephone banking networks, as well as through a large number of proprietary sales professionals. In the Caribbean, we offer a broad range of financial products and services to individuals and business clients, and public institutions in targeted markets. In the U.S., we serve the cross-border banking needs of Canadian clients within the U.S. through online channels.

In Canada, we compete with other Schedule I banks, independent trust companies, foreign banks, credit unions, caisses populaires, and auto financing companies. We maintain top (#1 or #2) rankings in market share in this competitive environment for all key retail and business financial product categories, and have the largest branch network, the most ATMs and the largest mobile sales network across Canada. In the Caribbean, our competition includes banks, trust companies and investment management companies serving retail and corporate customers and public institutions. We continue to be the second-largest bank as measured by assets in the English Caribbean, with 79 branches in 17 countries and territories. In the U.S., we compete primarily with other Canadian banking institutions with operations in the U.S.

Economic and market review

We continued to see solid volume growth across most of our Canadian banking businesses, despite slowing economic conditions in Canada particularly in the first half of fiscal 2015. The continuing low interest rate environment has driven solid, although slower industry growth compared to last year. Historically low credit loss rates in our business and consumer products reflected a strong labour market in Canada during most of the calendar year. Our businesses continued to be impacted by competitive pressures. In the Caribbean, unfavourable economic conditions continued to negatively impact our results through lower loan volumes, and spread compression.

Highlights

In Canada:

- We achieved solid volume growth across all products, with particular strength in:
  - Home equity supported by the RBC Newcomer Advantage and our Employee Pricing campaigns; and
  - Credit cards through strong account and balance growth in our industry leading Avion® card.
- We achieved improved volume in Business Financial Services as we have focused our attention in certain business segments to strengthen our market share and we have expanded our sales force in the upper end of the market.
- We have continued to invest in digitizing our client experience with a focus on speed of service and simplifying the end-to-end processes:
  - Launched Cheque-Pro™, allowing high cheque volume clients connecting to our online banking channels using an in-office scanner to make deposits;
  - Continued to evolve the branch network for basic service transactions while investing in our digital and mobile platforms. We currently have nearly 5 million active clients on our digital and mobile platforms, with particularly strong growth of 23% in the number of active clients using our mobile platform;
  - Rolled out Host Card Emulation technology allowing RBC clients with Android devices to use RBC Wallet anywhere in the world with any mobile network.

- As a result of our successes, we received external recognition as an industry leader and were named:
  - Best Global Retail Bank (*Retail Banker International*) for the second consecutive year;
  - Best Trade Finance Bank in Canada (*Global Finance Magazine*) for the third consecutive year;
  - Best Private Banking Services Overall in Canada 2015 (*Euromoney*) for the eighth consecutive year;
  - Bank of the Year in Canada (*The Banker*).

In the Caribbean:
- We continued to focus on quality asset growth while reducing our structural costs to minimize the impact of challenging market conditions.
- We launched a new mobile payment solution, RBC EZPay, allowing merchants to capture payment transactions by inserting card reader plugs into a smartphone.
- Completed the sale of RBC Suriname to Republic Bank Ltd. in July 2015.
- As a result of our successes, we were named #1 Bank in the Caribbean and in Trinidad and Tobago (*The Banker*).

Outlook and priorities

Financial conditions in Canada are expected to improve, driven by the continued low interest rate environment, strong labour markets, and higher net exports. We expect continued solid volume growth across most of our products, but anticipate increasing pricing and competitive pressures resulting from slowing banking industry growth and the low interest rate environment.

In the Caribbean, challenging market conditions and slow economic growth continue to temper our outlook. We expect net interest margins to remain challenged due to low interest rates and competitive pressures. However, we expect to strengthen our business performance through efficiency management, increases in fee revenue, and quality asset growth.

For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2016

In Canada, our priorities are to:
- Transform how we serve clients by enabling digital access and providing our clients with advice and solutions, personalized offers and client loyalty rewards.
- Accelerate growth in key segments and increase our presence in underpenetrated areas to achieve industry-leading volume growth.
- Rapidly deliver secure, enhanced payment and mobile solutions to our clients.
- Achieve greater agility and efficiency by simplifying, digitizing and automating processes and the end-to-end client experience.

In the Caribbean, we are focused on targeting markets where we can compete and drive sustainable profitability, with a strategic focus on corporate, business, professional and business owner clientele. In the U.S., we are focused on meeting the banking and borrowing needs of our cross-border clients through an innovative direct banking approach by providing seamless access to their entire RBC relationship.

Personal & Commercial Banking			Table 17
(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	**2015**	2014	2013
Net interest income	**$ 10,004**	$ 9,743	$ 9,434
Non-interest income	**4,309**	3,987	3,585
Total revenue	**14,313**	13,730	13,019
PCL	**984**	1,103	995
Non-interest expense	**6,611**	6,563	6,168
Net income before income taxes	**6,718**	6,064	5,856
Net income	**$ 5,006**	$ 4,475	$ 4,380
Revenue by business			
Canadian Banking	**$ 13,379**	$ 12,869	$ 12,220
Caribbean & U.S. Banking	**934**	861	799
Key ratios			
ROE	**30.0%**	29.0%	30.5%
NIM (1)	**2.71%**	2.77%	2.78%
Efficiency ratio (2)	**46.2%**	47.8%	47.4%
Efficiency ratio adjusted (2), (3)	**n.a.**	46.8%	n.a.
Operating leverage	**3.5%**	(0.9)%	(1.3)%
Operating leverage adjusted (3)	**1.3%**	1.3%	n.a.
Selected average balance sheet information			
Total assets (4)	**$ 386,100**	$ 367,900	$ 354,300
Total earning assets (5)	**369,000**	351,300	338,700
Loans and acceptances (4), (5)	**367,500**	350,700	336,800
Deposits	**298,600**	278,800	262,200
Other information			
AUA (6)	**$ 223,500**	$ 214,200	$ 192,200
AUM	**4,800**	4,000	3,400
Number of employees (FTE) (4)	**35,007**	36,113	37,951
Effective income tax rate	**25.5%**	26.2%	25.2%
Credit information			
Gross impaired loans as a % of average net loans and acceptances (4)	**0.49%**	0.55%	0.55%
PCL on impaired loans as a % of average net loans and acceptances	**0.27%**	0.31%	0.30%

Estimated impact of U.S. dollar and Trinidad & Tobago dollar (TTD) translation on key income statement items

(Millions of Canadian dollars, except percentage amounts)	2015 vs. 2014
Increase (decrease):	
Total revenue	$ 72
Non-interest expense	43
Net income	19
Percentage change in average US$ equivalent of C$1.00	(13)%
Percentage change in average TTD$ equivalent of C$1.00	(14)%

(1) NIM is calculated as Net interest income divided by Average total earning assets.
(2) Efficiency ratio is calculated as Non-interest expense divided by Total revenue.
(3) Measures have been adjusted by excluding the Q3 2014 loss of $40 million related to the closing of RBC Jamaica, and the Q1 2014 loss of $60 million related to the sale of RBC Jamaica and the provision of $40 million related to post-employment benefits and restructuring charges in the Caribbean. These are non-GAAP measures. For further details, refer to the Key performance and non-GAAP measures section.
(4) Amounts have been revised from those previously presented.
(5) Average total earning assets and average loans and acceptances include average securitized residential mortgages and credit card loans for the year ended October 31, 2015 of $56.7 billion and $7.8 billion, respectively (2014 – $52.4 billion and $8.0 billion; 2013 – $48.4 billion and $7.2 billion).
(6) AUA represents period-end spot balances and includes securitized residential mortgages and credit card loans as at October 31, 2015 of $21.0 billion and $8.0 billion, respectively (October 31, 2014 – $23.2 billion and $8.0 billion; October 31, 2013 – $25.4 billion and $7.2 billion).

2015 vs. 2014

Net income increased $531 million or 12%. Excluding the loss last year of $100 million (before- and after-tax) related to the sale of RBC Jamaica and a provision of $40 million ($32 million after-tax) related to post-employment benefits and restructuring charges in the Caribbean, net income increased $399 million or 9%, largely reflecting solid volume growth across most businesses in Canada and strong fee-based revenue growth, and higher earnings in the Caribbean. These factors were partially offset by higher costs to support business growth and lower spreads.

Total revenue increased $583 million or 4% reflecting solid volume growth across most businesses in Canada, higher fee-based revenue primarily attributable to strong mutual funds asset growth resulting in higher mutual fund distribution fees, as well as higher balances and higher credit card transaction volumes driving higher card service revenue, and the positive impact of foreign exchange translation. These factors were partially offset by lower spreads.

Net interest margin decreased 6 bps mainly due to the low interest rate environment and competitive pressures.

PCL decreased $119 million, with the PCL ratio improving 4 bps, largely due to lower provisions in our Caribbean portfolios primarily due to provisions of $50 million on our Caribbean impaired residential mortgage portfolio included in the prior year. Lower provisions in the current year in our Canadian commercial lending portfolio also contributed to the decrease. These factors were partially offset by higher write-offs in our Canadian credit card portfolio.

Non-interest expense increased $48 million. Excluding the prior year specified items noted above, non-interest expense increased $188 million or 3%, mainly reflecting an increase due to the impact of foreign exchange translation, and higher technology and staff costs to support business growth, partially offset by continuing benefits from our efficiency management activities.

Average loans and acceptances increased $17 billion or 5%, largely due to strong growth in Canadian residential mortgages and business loans. Average deposits increased $20 billion or 7%, as a result of solid growth in both business and personal deposits.

2014 vs. 2013

Net income was up $95 million or 2% from 2013. Excluding the loss of $100 million (before- and after-tax) related to the sale of RBC Jamaica, and a provision of $40 million ($32 million after-tax) related to post-employment benefits and restructuring charges in the Caribbean in 2014, net income of $4,607 million was up $227 million or 5%, largely reflecting solid volume growth across most of our Canadian businesses, strong fee-based revenue growth primarily attributable to higher mutual fund distribution fees and card service revenue, and results from the full integration of Ally Canada. These factors were partially offset by higher PCL largely in the Caribbean.

Average loans and acceptances increased $14 billion or 4% from 2013, mainly due to growth in Canadian residential mortgages, business loans and personal loans. Average deposits increased $17 billion or 6% from 2013, reflecting solid growth in both personal and business deposits.

Results excluding the specified items noted above are non-GAAP measures. For further details, including a reconciliation, refer to the Key performance and non-GAAP measures section.

In Canada, we operate through three business lines: Personal Financial Services, Business Financial Services and Cards and Payments Solutions. The following provides a discussion of our consolidated Canadian Banking results.

Canadian Banking financial highlights — **Table 18**

(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	2015	2014	2013
Net interest income	$ 9,377	$ 9,168	$ 8,875
Non-interest income	4,002	3,701	3,345
Total revenue	13,379	12,869	12,220
PCL	912	928	908
Non-interest expense	5,891	5,687	5,464
Net income before income taxes	6,576	6,254	5,848
Net income	$ 4,877	$ 4,642	$ 4,352
Revenue by business			
Personal Financial Services	$ 7,634	$ 7,285	$ 6,948
Business Financial Services	3,091	3,135	2,990
Cards and Payment Solutions	2,654	2,449	2,282
Key ratios			
ROE	36.4%	37.0%	37.5%
NIM (1)	2.66%	2.71%	2.72%
Efficiency ratio (2)	44.0%	44.2%	44.7%
Operating leverage	0.4%	1.2%	(0.6)%
Selected average balance sheet information			
Total assets (3)	$ 364,900	$ 349,500	$ 337,000
Total earning assets (4)	352,800	337,900	326,400
Loans and acceptances (3), (4)	358,500	343,100	329,400
Deposits	281,200	263,600	248,100
Other information			
AUA (5)	213,700	205,200	183,600
Number of employees (FTE) (3)	30,853	31,381	31,910
Effective income tax rate	25.8%	25.8%	25.6%
Credit information			
Gross impaired loans as a % of average net loans and acceptances	0.30%	0.33%	0.36%
PCL on impaired loans as a % of average net loans and acceptances (3)	0.25%	0.27%	0.28%

(1) NIM is calculated as Net interest income divided by Average total earning assets.
(2) Efficiency ratio is calculated as Non-interest expense divided by Total revenue.
(3) Amounts have been revised from those previously presented.
(4) Average total earning assets and average loans and acceptances include average securitized residential mortgages and credit card loans for the year ended October 31, 2015 of $56.7 billion and $7.8 billion, respectively (2014 – $52.4 billion and $8.0 billion; 2013 – $48.4 billion and $7.2 billion).
(5) AUA represents period-end spot balances and includes securitized residential mortgages and credit card loans as at October 31, 2015 of $21.0 billion and $8.0 billion respectively (October 31, 2014 – $23.2 billion and $8.0 billion; October 31, 2013 – $25.4 billion and $7.2 billion).

2015 vs. 2014

Net income increased $235 million or 5% due to solid volume growth across most businesses and strong fee-based revenue growth, partially offset by higher costs to support business growth, and lower spreads.

Total revenue increased $510 million or 4%, reflecting solid volume growth across most businesses and higher fee-based revenue primarily attributable to strong mutual fund asset growth resulting in higher mutual fund distribution fees, as well as higher credit card balances and transaction volumes driving higher card service revenue. These factors were partially offset by lower spreads.

Net interest margin decreased 5 bps compared to last year mainly due to the low interest rate environment, and competitive pressures.

PCL decreased $16 million, with the PCL ratio improving 2 bps, mostly due to lower provisions in our commercial lending portfolio, partially offset by higher write-offs in our credit card portfolio.

Non-interest expense increased $204 million or 4% mainly due to higher technology and staff costs to support business growth, partially offset by continuing benefits from our efficiency management activities.

Average loans and acceptances increased $15 billion or 4%, mainly due to strong growth in both residential mortgages and business loans. Average deposits increased $18 billion or 7%, primarily reflecting solid growth in both business and personal deposits.

2014 vs. 2013

Net income increased $290 million or 7% from 2013, reflecting solid volume growth of 5% across most businesses, strong fee-based revenue growth primarily attributable to mutual fund asset growth resulting in higher mutual fund distribution fees, as well as higher credit card balances and transaction volumes driving higher card service revenue, and results from the full integration of Ally Canada.

Personal Financial Services

Personal Financial Services focuses on meeting the needs of our individual Canadian clients at every stage of their lives through a wide range of financing and investment products and services, including home equity financing, personal lending, deposit accounts, Canadian private banking, indirect lending (including auto financing), mutual funds and self-directed brokerage accounts, and Guaranteed Investment Certificates (GICs). We rank #1 or #2 in market share for all key personal banking products in Canada and our retail banking network is the largest in Canada with 1,275 branches and over 4,500 ATMs.

Financial performance

Total revenue increased $349 million or 5% compared to last year, reflecting solid volume growth across most businesses, and increased fee-based revenue primarily attributable to strong mutual fund asset growth driving higher mutual fund distribution fees.

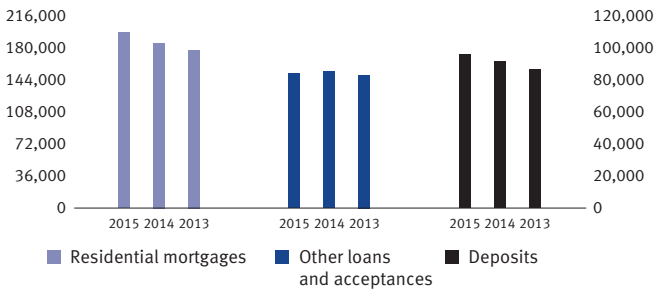
Average residential mortgages increased 6% compared to 2014, resulting from solid housing market activity supported by the continuing low interest rate environment and our targeted marketing strategy. Average other loans and acceptances decreased 2% from last year largely due to lower indirect lending volumes. Average deposits increased 5% from last year as a result of deepening our relationships with existing clients as well as strong new client acquisition.

Selected highlights — Table 19

(Millions of Canadian dollars, except number of)	2015	2014	2013
Total revenue	$ 7,634	$ 7,285	$ 6,948
Other information (average)			
Residential mortgages (1)	197,300	186,000	177,900
Other loans and acceptances (1)	84,100	85,400	83,500
Deposits (1), (2)	173,000	165,100	156,900
Branch mutual fund balances (3)	122,000	111,600	95,300
AUA – Self-directed brokerage (3)	61,400	60,500	53,300
Number of:			
New deposit accounts opened (thousands)	1,420	1,514	1,285
Branches	1,275	1,272	1,255
ATM	4,542	4,620	4,622

(1) Amounts have been revised from those previously presented.
(2) Includes GIC balances.
(3) Represents year-end spot balances.

Average residential mortgages, personal loans and deposits
(Millions of Canadian dollars)



Business Financial Services

Business Financial Services offers a wide range of lending, leasing, deposit, investment, foreign exchange, cash management, auto dealer financing (floor plan), trade products and services to small, medium-sized commercial businesses, as well as agriculture and agribusiness clients across Canada. Our business banking network has the largest team of relationship managers and specialists in the industry. Our strong commitment to our clients has resulted in our leading market share in business loans and deposits.

Financial performance

Total revenue decreased $44 million or 1% compared to last year as strong volume growth was more than offset by spread compression reflecting competitive pressures and the impact of continuing low interest rate environment. The prior year included a favourable cumulative accounting adjustment related to deferred loan fees in our business lending portfolio.

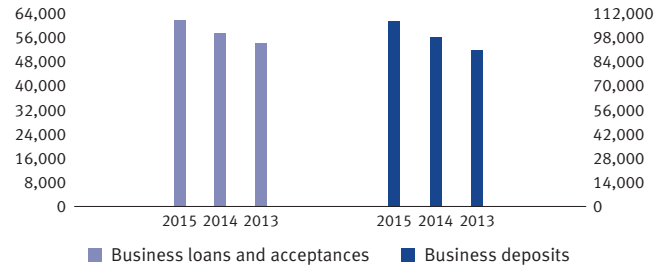
Average loans and acceptances increased 8% and average deposits were up 10%, despite a very competitive environment, due to increased activity from existing and new clients.

Selected highlights — Table 20

(Millions of Canadian dollars)	2015	2014	2013
Total revenue	$ 3,091	$ 3,135	$ 2,990
Other information (average)			
Loans and acceptances (1)	62,000	57,600	54,400
Deposits (1), (2)	108,200	98,500	91,200

(1) Amounts have been revised from those previously presented.
(2) Includes GIC balances.

Average business loans and acceptances and business deposits
(Millions of Canadian dollars)



Cards and Payment Solutions

Cards and Payment Solutions provides a wide array of credit cards with loyalty and reward benefits, and payment products and solutions within Canada. We have over 7 million credit card accounts and have approximately 23% market share of Canada's credit card purchase volume.

In addition, this business line includes our 50% interest in Moneris Solutions, Inc., our merchant card processing joint venture with the Bank of Montreal. Moneris processes approximately $215 billion in annual credit and debit card transaction volumes.

Financial performance

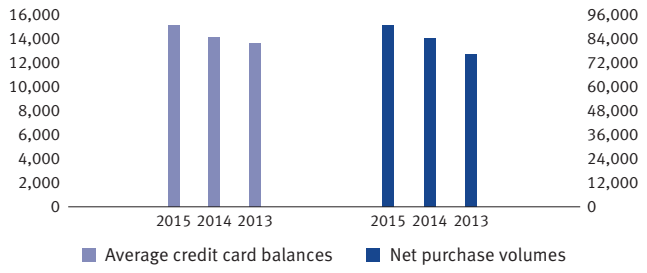
Total revenue increased $205 million or 8%, compared to last year, driven by higher balances and higher credit card transaction volumes, and improved spreads.

Average credit card balances increased 7% and net purchase volumes increased 8% due to higher active accounts driven by strength in new account acquisitions.

Selected highlights — Table 21

(Millions of Canadian dollars)	2015	2014	2013
Total revenue	$ 2,654	$ 2,449	$ 2,282
Other information			
Average credit card balances	15,100	14,100	13,600
Net purchase volumes	90,800	84,200	76,200

Average credit card balances and net purchase volumes (Millions of Canadian dollars)



Caribbean & U.S. Banking

Our Caribbean banking business offers a comprehensive suite of banking products and services, as well as international financing and trade promotion services through extensive branch, ATM, online and mobile banking networks.

Our U.S. cross-border banking business serves the needs of our Canadian clients within the U.S. through online and mobile channels, and offers a broad range of financial products and services to individual and business clients across all 50 states. As well, we serve the banking product needs of our U.S. wealth management clients.

Financial performance

Total revenue was up $73 million or 8% from last year, primarily due to the positive impact of foreign exchange translation and the full-year impact of implementation of full service pricing in the Caribbean. These factors were partially offset by lower spreads.

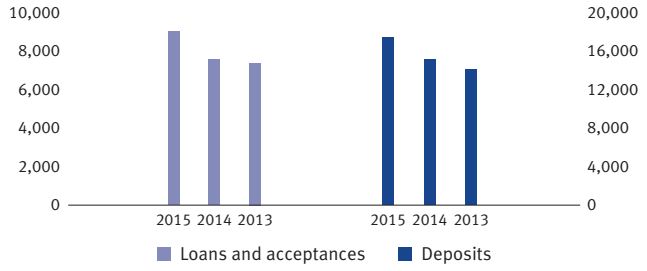
Average loans and acceptances increased 18%, primarily due to the positive impact of foreign exchange translation and modest volume growth. Average deposits increased 14%, mostly due to the positive impact of foreign exchange translation.

Selected highlights — Table 22

(Millions of Canadian dollars, number of and percentage amounts)	2015	2014	2013
Total revenue	$ 934	$ 861	$ 799
Other information			
Net interest margin (1)	3.87%	4.29%	4.58%
Average loans and acceptances (1)	$ 9,000	$ 7,600	$ 7,400
Average deposits	17,400	15,200	14,100
AUA	9,800	9,000	8,600
AUM	4,800	4,000	3,400
Number of:			
Branches	79	93	116
ATM	274	309	351

(1) Amounts have been revised from those previously presented.

Average loans and deposits (Millions of Canadian dollars)



Wealth Management

Wealth Management comprises Canadian Wealth Management, U.S. & International Wealth Management and Global Asset Management (GAM). Wealth Management serves individual and institutional clients in target markets around the world. From our offices in key financial centres mainly in Canada, the U.S., the U.K., Channel Islands, and Asia, Wealth Management offers a comprehensive suite of investment, trust, banking, credit and other wealth management solutions to affluent, high net worth (HNW), and ultra-high net worth (UHNW) clients. Our asset management group, Global Asset Management, which includes BlueBay Asset Management (BlueBay), is an established global leader in investment management services, providing investment strategies and fund solutions directly to institutional investors and also to individual clients through our distribution channels and third-party distributors. On November 2, 2015, we completed the acquisition of City National, which will enhance and complement our existing U.S. businesses and product offerings.

Economic and market review

Economic activity in Canada and the U.S. slowed during the early part of fiscal 2015, although the U.S. economy started to recover more quickly than the Canadian economy in the latter part of the year. Despite this stalled economic activity, we continued to see growth in our average fee-based client assets through capital appreciation and net sales. The Euro area economy grew marginally during the fiscal year, leading the ECB to implement a highly stimulative monetary policy to help restore investor confidence and stimulate economic activity in the region. Global capital markets remained volatile throughout the year, leading to lower transaction volumes during the year. In addition, heightened regulation has driven up compliance and technology costs.

Highlights

- Capital appreciation and strong net sales continued to drive client assets higher, which surpassed $1.2 trillion this year.
- We continued to grow and invest in our high-performing asset management business and maintained a leading market share of 14.5% of the Canadian mutual fund asset management industry. We continued to increase BlueBay's distribution footprint with institutional clients and expand our international distribution capabilities to U.S. and international institutional clients and professional buyers.
- In Canada, our full service private wealth business is the industry leader. We continue to extend our leadership amongst HNW clients by focusing on delivering comprehensive value to our clients, leveraging our expertise around business owners, succession and wealth planning.
- In the U.S., our second home market, we are among the top 10 full service brokerage firms in terms of assets and number of advisors, and we continue to focus on improving advisor productivity. Furthermore, our recent acquisition of City National will enhance our U.S. product offering.
- Outside Canada and the U.S., we continued to realign our International Wealth Management business to focus on key client segments, including HNW and UHNW clients in select target markets, while enhancing our product offering and operating environment, creating a scalable and profitable business aligned to a more conservative risk profile.
- The strength of our global capabilities and continued commitment to deliver integrated global wealth management advice, solutions and services to HNW and UHNW clients helped us earn significant industry awards. We were ranked or named:
  - For the second year in a row, we ranked 5th largest global wealth manager by client assets (*Scorpio Partnership's 2015 Global Private Banking KPI Benchmark*)
  - Best Private Banking services overall for an eighth consecutive year in Canada and Best Private Banking services overall for the second year in a row in Jersey (*Euromoney*)
  - A top 50 Global Asset Manager (*Pensions & Investments / Towers Watson*)
  - Best Bank-owned Brokerage Firm in Canada (*International Executive Brokerage Report Card*)
  - Trust Company of the Year (*Society of Trust and Estate Practitioners*)
  - RBC Wealth Management® and RBC Asset Management® brand was recognized as the 8th best banking brand globally (*Brand Finance Banking 500*)

Outlook and priorities

Global market volatility, investor uncertainty and low interest rates are expected to continue into 2016. Despite the overall economic uncertainty and volatile equity markets, we expect global private wealth to continue to grow driven by growth in the HNW client segment. Our revenue is expected to increase mainly due to higher client assets. We will continue to leverage our brand, reputation, and financial strength to increase our market share of HNW and UHNW globally. In addition, changing demographics and rapid advancements in digitization are expected to drive an accelerated pace of change, requiring a greater focus on delivering a digitally-integrated, multi-channel experience for our clients and client-facing professionals.

For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2016

- Leverage and grow our high performing asset management business globally.
- Deepen client relationships by bringing the best of RBC to our clients, leveraging the RBC enterprise brand, capabilities and competitive strengths.
- Focus on developing a differentiated client experience tailored to key HNW and UHNW client segments in our priority markets, with a greater emphasis on digital enablement.
- Drive sustainable growth in our international wealth business by enhancing our solution offering and achieving a more scalable and streamlined operating model.
- Leverage the combined strengths of City National and RBC U.S. Wealth Management to create a powerful and scalable engine for growth in the U.S.

Wealth Management — Table 23

(Millions of Canadian dollars, except number of and percentage amounts and as otherwise noted)	2015	2014	2013
Net interest income	$ 493	$ 469	$ 396
Non-interest income			
Fee-based revenue	4,699	4,185	3,463
Transactional and other revenue	1,583	1,659	1,628
Total revenue	6,775	6,313	5,487
PCL	46	19	51
Non-interest expense	5,292	4,800	4,219
Net income before income taxes	1,437	1,494	1,217
Net income	$ 1,041	$ 1,083	$ 886
Revenue by business			
Canadian Wealth Management	$ 2,226	$ 2,186	$ 1,889
U.S. & International Wealth Management	2,729	2,430	2,225
U.S. & International Wealth Management (US$ millions)	2,181	2,221	2,174
Global Asset Management (1)	1,820	1,697	1,373
Key ratios			
ROE	17.4%	19.2%	15.8%
Pre-tax margin (2)	21.2%	23.7%	22.2%
Selected average balance sheet information			
Total assets	$ 29,100	$ 25,800	$ 21,600
Loans and acceptances	17,700	15,700	12,100
Deposits	39,500	36,200	31,900
Attributed capital	5,900	5,500	5,400
Other information			
Revenue per advisor (000s) (3)	$ 1,089	$ 983	$ 862
AUA (4)	749,700	717,500	639,200
AUM (4)	492,800	452,300	387,200
Average AUA	755,600	690,500	609,500
Average AUM	484,700	427,800	367,600
Number of employees (FTE)	12,598	12,919	12,462
Number of advisors (5)	3,954	4,245	4,216

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items

(Millions of Canadian dollars, except percentage amounts)	2015 vs. 2014
Increase (decrease):	
Total revenue	$ 301
Non-interest expense	263
Net income	19
Percentage change in average US$ equivalent of C$1.00	(13)%
Percentage change in average British pound equivalent of C$1.00	(6)%
Percentage change in average Euro equivalent of C$1.00	4%

(1) Effective the first quarter of 2014, we have aligned the reporting period of BlueBay, which resulted in an additional month of earnings being included in 2014.
(2) Pre-tax margin is defined as net income before income taxes divided by Total revenue.
(3) Represents investment advisors and financial consultants of our Canadian and U.S. full-service wealth businesses.
(4) Represents year-end spot balances.
(5) Represents client-facing advisors across all our wealth management businesses.

Client assets – AUA — Table 24

(Millions of Canadian dollars)	2015	2014
AUA, beginning balance	$ 717,500	$ 639,200
Net asset flows	(30,600)	16,300
Market impact and other	62,800	62,000
AUA, balance at end of year	$ 749,700	$ 717,500

Client assets – AUM — Table 25

(Millions of Canadian dollars)	2015	2014
AUM, beginning balance	$ 452,300	$ 387,200
Net asset flows:		
Money market	(4,900)	(5,600)
Fixed income	8,800	14,000
Equity	900	4,100
Multi-asset and other	13,400	16,900
Market impact and other	22,300	35,700
AUM, balance at end of year	$ 492,800	$ 452,300

AUA by geographic mix and asset class		Table 26
(Millions of Canadian dollars)	2015	2014
Canada (1)		
Money Market	$ 21,500	$ 21,600
Fixed Income	34,900	38,700
Equity	79,800	83,200
Multi-asset and other	157,400	147,300
Total Canada	$ 293,600	$ 290,800
U.S. (1)		
Money Market	$ 32,900	$ 28,500
Fixed Income	90,800	82,500
Equity	152,700	138,200
Multi-asset and other	6,400	3,900
Total U.S.	$ 282,800	$ 253,100
Other International (1)		
Money Market	$ 24,500	$ 25,900
Fixed Income	26,500	33,800
Equity	93,300	89,200
Multi-asset and other	29,000	24,700
Total International	$ 173,300	$ 173,600
Total AUA	$ 749,700	$ 717,500

(1) Geographic information is based on the location from where our clients are serviced.

Financial performance

2015 vs. 2014

Net income decreased $42 million or 4% compared to last year, primarily reflecting higher costs in support of business growth in our Global Asset Management and Canadian Wealth Management businesses, restructuring costs of $122 million ($90 million after-tax) largely related to our U.S. & International Wealth Management business, lower transaction volumes, and higher PCL. These factors were partly offset by higher earnings from growth in average fee-based client assets.

Total revenue increased $462 million or 7%, mainly due to growth in average fee-based client assets resulting from capital appreciation and net sales, and the positive impact of foreign exchange translation. These factors were partly offset by lower transaction volumes.

PCL increased $27 million mainly due to provisions related to our U.S. & International Wealth Management business.

Non-interest expense increased $492 million or 10%, mainly reflecting an increase due to the impact of foreign exchange translation, higher costs in support of business growth in our Global Asset Management and Canadian Wealth Management businesses, and the restructuring costs noted above.

2014 vs. 2013

Net income increased $197 million or 22% from 2013, mainly due to higher earnings from growth in average fee-based client assets resulting from capital appreciation and strong net sales, and lower PCL.

Business line review

Canadian Wealth Management

Canadian Wealth Management includes our full-service Canadian wealth advisory business, which is the largest in Canada as measured by AUA, with over 1,600 investment advisors providing comprehensive advice-based financial solutions to affluent, HNW and UHNW clients. Additionally, we provide discretionary investment management and estate and trust services to our clients through approximately 65 investment counsellors and 91 trust professionals across Canada.

We compete with domestic banks and trust companies, investment counselling firms, bank-owned full service brokerages and boutique brokerages, mutual fund companies and global private banks. In Canada, bank-owned wealth managers continue to be the major players.

Financial performance

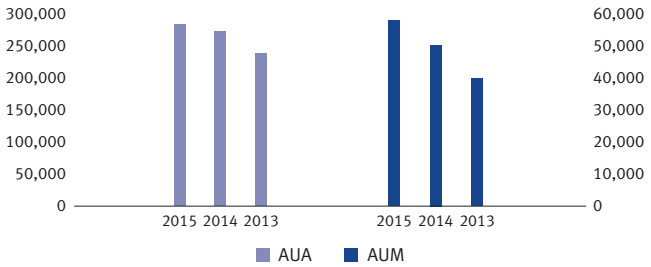
Revenue increased $40 million or 2% from a year ago, mainly due to higher fee-based client assets reflecting net sales and capital appreciation, partly offset by lower transaction volumes, reflecting challenging market conditions in the second half of the year.

Selected highlights — Table 27

(Millions of Canadian dollars)	2015	2014	2013
Total revenue	**$ 2,226**	$ 2,186	$ 1,889
Other information			
Total loans and acceptances (1)	**1,500**	3,000	2,500
Total deposits (1)	**13,600**	15,300	13,400
AUA	**287,800**	285,100	251,400
AUM	**60,800**	55,400	43,600
Average AUA	**284,300**	272,900	239,100
Average AUM	**58,100**	50,400	40,000
Total assets under fee-based programs	**182,000**	166,700	139,400

(1) Represents an average amount, which is calculated using methods intended to approximate the average of the daily balances for the period.

Average AUA and AUM (1) (Millions of Canadian dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

U.S. & International Wealth Management

U.S. Wealth Management includes our private client group, which is the 8th largest full service wealth advisory firm in the U.S., as measured by number of advisors, with over 1,800 financial advisors. Additionally, our correspondent and advisor services businesses deliver clearing and execution services for small to mid-sized independent broker-dealers and registered investment advisor firms. In the U.S., we operate in a fragmented and extremely competitive industry. There are approximately 4,000 registered broker-dealers in the U.S., comprising independent, regional and global players. As previously announced, we completed the acquisition of City National on November 2, 2015, and we are combining U.S. Wealth Management and City National into one line of business effective the first quarter of 2016.

International Wealth Management includes Wealth Management – International and Wealth Management – Asia. We provide customized and integrated trust, banking, credit and investment solutions to HNW and UHNW clients and corporate clients with over 1,400 employees located in 16 countries around the world. Competitors to our International Wealth Management business comprise global wealth managers, traditional offshore private banks, domestic wealth managers and U.S. investment-led private client operations. In the fourth quarter of 2014, we announced a restructuring program designed to transform our global businesses into sustainable and profitable businesses aligned with a conservative risk profile.

Financial performance

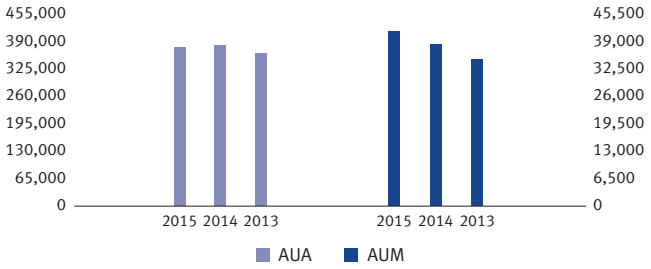
Revenue increased $299 million or 12% from a year ago. In U.S. dollars, revenue decreased $40 million or 2%, mainly reflecting the impact of the restructuring of our U.S. & International Wealth Management business, lower transaction volumes, and a change in the fair value of our U.S. share-based compensation plan.

Selected highlights — Table 28

(Millions of Canadian dollars, except otherwise noted)	2015	2014	2013
Total revenue	**$ 2,729**	$ 2,430	$ 2,225
Other information (Millions of U.S. dollars)			
Total revenue	**2,181**	2,221	2,174
Total loans, guarantees and letters of credit (1)	**15,100**	14,500	12,100
Total deposits (1)	**20,700**	19,100	18,000
AUA	**353,500**	383,700	371,900
AUM	**38,500**	41,100	35,600
Average AUA	**376,500**	382,000	361,800
Average AUM	**41,500**	38,400	34,700
Total assets under fee-based programs (2)	**94,500**	94,500	83,200

(1) Represents an average amount, which is calculated using methods intended to approximate the average of the daily balances for the period.
(2) Represents amounts related to our U.S. wealth management businesses.

Average AUA and AUM (1) (Millions of U.S. dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

Global Asset Management

Global Asset Management provides global investment management services and solutions for individual and institutional investors in Canada, the U.S., the U.K., Europe and Asia. We provide a broad range of investment management services through mutual, pooled and private funds, fee-based accounts and separately managed portfolios. We distribute our investment solutions through a broad network of bank branches, our self-directed and full service wealth advisory businesses, independent third-party advisors and private banks, and directly to individual clients. We also provide investment solutions directly to institutional clients, including pension plans, insurance companies, corporations, and endowments and foundations.

We are the largest retail fund company in Canada as well as a leading institutional asset manager. We face competition in Canada from banks, insurance companies, asset management organizations and boutique firms. The Canadian fund management industry is large and mature, but still a relatively fragmented industry.

In the U.S., our asset management business offers investment management solutions and services primarily to institutional investors and competes with independent asset management firms, as well as those that are part of national and international banks, and insurance companies.

Internationally, through our leading global capabilities of BlueBay and RBC Global Asset Management®, we offer investment management solutions for institutions and, through private banks including RBC Wealth Management, to HNW and UHNW investors. We face competition from asset managers that are part of international banks as well as national, regional and boutique asset managers in the geographies where we serve clients.

Financial performance

Revenue increased $123 million or 7% from a year ago, mainly due to an increase of 9% in AUM reflecting strong net sales and capital appreciation, and the positive impact of foreign exchange translation, partly offset by net redemptions in our emerging markets funds.

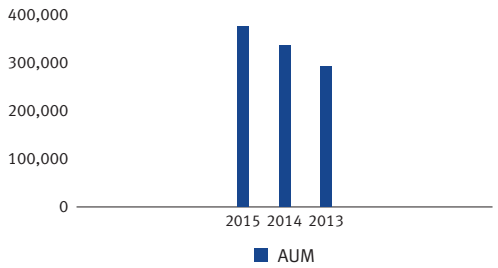
Selected highlights — **Table 29**

(Millions of Canadian dollars)	2015	2014	2013
Total revenue (1)	**$ 1,820**	$ 1,697	$ 1,373
Other information			
Canadian net long-term mutual fund sales (2)	**9,857**	10,982	8,064
Canadian net money market mutual fund (redemptions) sales (2)	**(605)**	(1,229)	(1,348)
AUM	**381,700**	350,600	306,500
Average AUM	**374,700**	335,300	292,100

(1) Effective the first quarter of 2014, we have aligned the reporting period of BlueBay, which resulted in an additional month of earnings being included in 2014.

(2) As reported to the Investment Funds Institute of Canada. Includes all prospectus-based mutual funds across our Canadian Global Asset Management businesses.

Average AUM (1) (Millions of Canadian dollars)



(1) Represents average balances, which are more representative of the impact client balances have upon our revenue.

Insurance

Insurance comprises our operations in Canada and globally and operates under two business lines: Canadian Insurance and International Insurance, providing a wide range of life, health, home, auto, travel, wealth, group and reinsurance products and solutions. In Canada, we offer our products and services through our proprietary distribution channels, comprised of the field sales force which includes retail insurance stores, our field sales representatives, advice centres and online, as well as through independent insurance advisors and affinity relationships. Outside Canada, we operate in reinsurance markets globally offering life, accident and annuity reinsurance products. Our competitive environment is discussed below in each business.

Economic and market review

The global insurance industry has adjusted to the effects of the economic crisis such as slow economic growth rates, persistently low interest rates and low inflation rates, and continues to stabilize. The approach of many insurance companies has been to review product features/pricing, conserve capital and reduce expenses. Although these factors continue to put strain on our businesses, product and pricing actions we have taken in recent years, a migration to lower-cost proprietary distribution channels, conservative investment practices and diversified product lines have allowed us to continue to navigate this challenging environment. In addition, recent tax legislation impacting certain foreign affiliates, which became effective on November 1, 2014, has had a negative effect on our financial results.

Highlights

- Ranked as the #1 Banking-based Insurance brand globally, according to the 2015 Brand Finance Banking 500. The annual study, conducted by Brand Finance, ranks the world's biggest banks by their brand value, which reflects the premium generated by the brand in the industry.
- We introduced Pension Plan De-Risking Solutions. Our first offering, Group Annuities, will help employers simplify the management of their defined benefit pension plans. We are leveraging the strengths of partners across RBC to deliver the solution, bringing the best of RBC to our clients.
- Our Reinsurance business has achieved steady growth, ranking us as the 3rd largest life retrocessionaire and we continue to be active in the U.K. annuity longevity reinsurance market.

Outlook and priorities

Overall, moderate growth in the industry is projected over the short to medium term. We expect continued organic business growth as a result of the product and pricing actions taken during the last few years, including increasing volumes through our growing proprietary channels and through our ongoing focus on expense efficiency.

For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2016

- Deepen client relationships through cross-selling by continuing to provide our customers with a comprehensive suite of insurance products and services based on their unique family needs.
- Continue to improve our proprietary channels distribution efficiency through enhancements to performance management processes, a proactive sales culture and enhanced cross-selling initiatives.
- Continue to simplify the way we do business by streamlining all business processes while diligently managing our expenses.
- Pursue select international opportunities, within our risk appetite, with the aim of continuing to grow our core reinsurance business.

Insurance			Table 30
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	2015	2014	2013
Non-interest income			
Net earned premiums	$ 3,507	$ 3,742	$ 3,674
Investment income (1)	445	938	(17)
Fee income	484	284	271
Total revenue	4,436	4,964	3,928
Insurance policyholder benefits and claims (1)	2,741	3,194	2,326
Insurance policyholder acquisition expense	222	379	458
Non-interest expense	613	579	551
Net income before income taxes	860	812	593
Net income	$ 706	$ 781	$ 595
Revenue by business			
Canadian Insurance	$ 2,725	$ 2,911	$ 1,962
International Insurance	1,711	2,053	1,966
Key ratios			
ROE	44.3%	49.7%	41.4%
Selected average balance sheet information			
Total assets	$ 13,700	$ 12,000	$ 11,900
Attributed capital	1,600	1,550	1,400
Other information			
Premiums and deposits (2)	$ 5,016	$ 5,164	$ 4,924
Canadian Insurance	2,725	2,419	2,344
International Insurance	2,291	2,745	2,580
Insurance claims and policy benefit liabilities	9,110	8,564	$ 8,034
Fair value changes on investments backing policyholder liabilities (1)	(24)	439	(491)
Embedded value (3)	6,952	6,239	6,302
AUM	800	700	500
Number of employees (FTE)	3,163	3,126	2,965

Estimated impact of U.S. dollar and British pound translation on key income statement items

(Millions of Canadian dollars, except percentage amounts)	2015 vs. 2014
Increase (decrease):	
Total revenue	$ 68
PBCAE	75
Non-interest expense	–
Net income	(7)
Percentage change in average US$ equivalent of C$1.00	(13)%
Percentage change in average British pound equivalent of C$1.00	(6)%

(1) Investment income can experience volatility arising from fluctuation of fair value through profit or loss (FVTPL) assets. The investments which support actuarial liabilities are predominantly fixed income assets designated as at FVTPL. Consequently, changes in the fair values of these assets are recorded in investment income in the consolidated statement of income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in insurance policyholder benefits and claims.

(2) Premiums and deposits include premiums on risk-based insurance and annuity products, and individual and group segregated fund deposits, consistent with insurance industry practices.

(3) Embedded value is defined as the sum of value of equity held in our Insurance segment and the value of in-force business (existing policies). For further details, refer to the Key performance and non-GAAP measures section.

Financial performance

2015 vs. 2014

Net income decreased $75 million or 10%, mainly due to a change in Canadian tax legislation impacting certain foreign affiliates which became effective November 1, 2014, a lower level of favourable actuarial adjustments in the current year, and higher net claims costs. These factors were partially offset by higher earnings from new U.K. annuity contracts, and a favourable impact of investment-related activities on the Canadian life business.

Total revenue decreased $528 million or 11%, mainly due to a reduction of $463 million related to the change in fair value of investments backing our policyholder liabilities resulting from changes in long-term interest rates, and a reduction of revenue related to our retrocession contracts, both of which were largely offset in PBCAE. These factors were partially offset by business growth in Canadian and International insurance, and the positive impact of foreign exchange translation.

PBCAE decreased $610 million or 17%, mainly due to a reduction of PBCAE related to our retrocession contracts, and the change in fair value of investments backing our policyholder liabilities, both of which were largely offset in revenue. These factors were partially offset by business growth as noted above, a lower level of favourable actuarial adjustments reflecting management actions and assumption changes, and an increase due to the impact of foreign exchange translation.

Non-interest expense increased $34 million or 6%, mainly due to higher costs to support business growth as well as increased costs related to strategic initiatives.

Premiums and deposits were down $148 million or 3%, as the reduction related to our retrocession contracts was partly offset by business growth in International and Canadian Insurance.

Embedded value increased $713 million, reflecting business growth mainly in International Insurance, a favourable change in interest rate assumptions, and the impact of foreign exchange translation. In addition, the transfer of capital through dividend payments from our insurance businesses was lower compared to the prior year. For further details, refer to the Key performance and non-GAAP measures section.

2014 vs. 2013
Net income increased $186 million or 31% from 2013, mainly due to lower net claims costs, business growth in our European life and U.K. annuity products, and favourable actuarial adjustments reflecting management actions and assumption changes. Our results in 2013 included a charge of $160 million ($118 million after-tax) as a result of new tax legislation in Canada, which affects the policyholders' tax treatment of certain individual life insurance policies, and a favourable impact from investment-related activities on the Canadian life business.

Business line review

Canadian Insurance

We offer life, health, property and casualty insurance products, as well as wealth accumulation solutions, to individual and group clients across Canada. Our life and health portfolio includes universal life, term life, critical illness, disability, long-term care insurance and group benefits. We offer a wide range of property and casualty products including home, auto and travel insurance. Our travel products include out of province/country medical coverage, and trip cancellation and interruption insurance.

In Canada, we compete against over 200 insurance companies, with the majority of the organizations specializing in either life and health, or property and casualty products. We hold a leading market position in disability insurance products, have a significant presence in life and travel products, and have a growing presence in the home, auto and wealth markets.

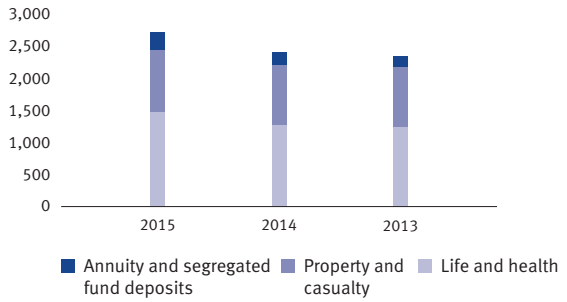
Financial performance
Total revenue decreased $186 million or 6% from last year, mainly due to the change in fair value of investments backing our policyholder liabilities resulting from changes in long-term interest rates, largely offset in PBCAE. This factor was partially offset by business growth in our life, health, home and auto insurance businesses.

Premiums and deposits increased $306 million or 13% reflecting business growth.

Selected highlights — Table 31

(Millions of Canadian dollars)	2015	2014	2013
Total revenue	$ 2,725	$ 2,911	$ 1,962
Other information			
Premiums and deposits			
Life and health	1,484	1,266	1,245
Property and casualty	958	951	942
Annuity and segregated fund deposits	283	202	157
Fair value changes on investments backing policyholder liabilities	54	490	(510)

Premiums and deposits (Millions of Canadian dollars)



International Insurance

International Insurance is primarily comprised of our reinsurance businesses which insure risks of other insurance and reinsurance companies. We offer life and health, accident and annuity reinsurance products.

The global reinsurance market is dominated by a few large players, with significant presence in the U.S., the U.K. and the Euro area. The reinsurance industry is competitive but barriers to entry remain high.

Financial performance
Total revenue decreased $342 million or 17%, mainly due to a reduction of revenue related to our retrocession contracts, largely offset in PBCAE. These factors were partially offset by business growth in our International life and U.K. annuity products and a positive impact of foreign exchange translation.

Premiums and deposits decreased $454 million, or 17% driven by the reduction related to our retrocession contracts, partially offset by business growth.

Selected highlights — Table 32

(Millions of Canadian dollars)	2015	2014	2013
Total revenue	$ 1,711	$ 2,053	$ 1,966
Other information			
Premiums and deposits			
Life and health	1,483	2,128	2,069
Property and casualty	(4)	6	50
Annuity	812	611	461

Investor & Treasury Services

Investor & Treasury Services is a specialist provider of asset and treasury services, custody, payments, and transaction banking for financial institutions and other institutional investors worldwide. We deliver custodial, fund accounting, financing and other services to safeguard client assets, maximize liquidity and manage risk across multiple jurisdictions. We also provide short-term funding and liquidity management for RBC. We are a global custodian with a network of offices across North America, Europe and Asia-Pacific. While we compete against the world's largest global custodians, we remain a specialist provider with a focus on asset managers. Our transaction banking business competes primarily with major Canadian banks.

Economic and market review

The highly competitive environment in the global custody industry continued to pressure margins. Low to negative interest rates globally have reduced deposit rates, leading to margin compression from deposit-gathering. Moreover, heightened regulation has driven up compliance and technology costs. However, in the first nine months of the fiscal year, increased client activity and heightened market volatility benefited our foreign exchange forwards business, drove higher transaction volumes, grew our core fees and benefited deposit growth.

Highlights

- Rated by our clients the #1 global custodian for five consecutive years *(Global Custody Survey, Global Investor ISF)*.
- Leading offshore provider in Luxembourg and Dublin, and rated UCITS Fund Administrator of the Year. *(Custody Risk, European Awards, 2015)*.
- Canada's leading asset management provider with number one ratings across client service, custody, fund administration and Canadian dollar transactions *(Global Custody Survey, Global Investor ISF, 2015)*.
- High level of investment in client-focused technology solutions.

Outlook and priorities

In 2016, our aim is to continue to be the leading provider of custody, asset services and cash management in Canada and a leading provider of fund services in select offshore markets. Our focus is on driving top-line growth by leveraging our leadership position in Canada and capabilities in Luxembourg and Ireland to win new business and deepen relationships with existing clients. We are continuing to execute on strategic, transformational initiatives to deliver and enhance client experience. While we expect the global custody industry to remain challenging in the near-term, we are well-positioned to compete in the continuously changing operating environment.

For further details on our general economic review and outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2016

- Maintain our leadership position in Canada.
- Leverage the strength of our leading offshore service offering in Luxembourg and Ireland.
- Increase investment in client-focused technology solutions.
- Evolve our business model to enhance client service and improve efficiency.
- Maintain prudent risk management, exercise sound judgment, and awareness of key issues.
- Continue to invest in talent management and employee training and development.
- Leverage Investor & Treasury Services expertise in liquidity management in support of our growth strategies.

Investor & Treasury Services			Table 33
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	**2015**	2014	2013
Net interest income	**$ 818**	$ 732	$ 671
Non-interest income	**1,220**	1,152	1,133
Total revenue (1)	**2,038**	1,884	1,804
Non-interest expense	**1,300**	1,286	1,348
Net income before income taxes	**738**	598	456
Net income	**$ 556**	$ 441	$ 339
Key Ratios			
ROE	**20.3%**	19.8%	16.5%
Selected average balance sheet information			
Total assets	**$ 125,300**	$ 94,200	$ 83,100
Deposits	**139,600**	112,100	104,300
Client deposits	**50,400**	42,700	36,100
Wholesale funding deposits	**89,200**	69,400	68,200
Attributed capital	**2,700**	2,150	2,000
Other Information			
AUA (2)	**3,620,300**	3,702,800	3,208,800
Average AUA	**3,793,000**	3,463,000	3,052,600
Number of employees (FTE)	**4,774**	4,963	5,208

Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items

(Millions of Canadian dollars, except percentage amounts)	**2015 vs. 2014**
Increase (decrease):	
Total revenue	**$ (9)**
Non-interest expense	**(9)**
Net income	**(1)**
Percentage change in average US$ equivalent of C$1.00	**(13)%**
Percentage change in average British pound equivalent of C$1.00	**(6)%**
Percentage change in average Euro equivalent of C$1.00	**4%**

(1) Effective the third quarter of 2015, we have aligned the reporting period of Investor Services, which resulted in an additional month of earnings being included in 2015. The net impact of the additional month was recorded in revenue.
(2) Represents period-end spot balances.

Financial performance
2015 vs. 2014
Net income increased $115 million or 26%, primarily due to increased client activity in our foreign exchange forwards business and higher foreign exchange transaction volumes, an additional month of earnings in Investor Services of $42 million ($28 million after-tax), increased custodial fees, and higher earnings from growth in client deposits. These factors were partially offset by lower funding and liquidity results.

Total revenue increased $154 million or 8%, mainly related to higher revenue from our foreign exchange forwards business and higher foreign exchange transaction volumes reflecting increased client activity through the first nine months of the year primarily due to market volatility, an additional month of revenue in Investor Services as noted above, higher custodial fees, and higher net interest income reflecting growth in client deposits. These factors were partially offset by lower funding and liquidity results due to widening credit spreads and unfavourable market conditions.

Non-interest expense increased $14 million or 1%, largely reflecting continuing benefits from our efficiency management activities.

2014 vs. 2013
Net income was up $102 million from 2013, largely due to benefits from our efficiency management activities and higher earnings from growth in client deposits. In addition, results in 2013 included a restructuring charge of $44 million ($31 million after-tax) related to the integration of Investor Services.

Capital Markets

Capital Markets provides public and private companies, institutional investors, governments and central banks globally with a wide range of capital markets products and services across our two main business lines, Corporate and Investment Banking and Global Markets. Our legacy portfolio is grouped under Other.

In North America, we offer a full suite of products and services which include corporate and investment banking, equity and debt origination and distribution, and structuring and trading. In Canada, we compete mainly with Canadian banks where we are the premier global investment bank and market leader with a strategic presence in all lines of capital markets businesses. In the U.S., we have full industry sector coverage and investment banking product range and compete with large U.S. and global investment banks as well as smaller regional firms. Outside North America, we have a select presence in the U.K. and Europe, and Other international, where we offer a diversified set of capabilities in our key sectors of expertise such as energy, mining and infrastructure and we have expanded into industrial, consumer and health care in Europe. In the U.K. and Europe, we compete in our key sectors of expertise with global and regional investment banks. In Other international, we compete with global and regional investment banks in select products, consisting of fixed income distribution and currencies trading and corporate and investment banking in Australia, Asia, and the Caribbean.

Economic and market review
Global capital markets improved in the first half of fiscal 2015, which contributed to solid Global Markets and Corporate and Investment Banking results. However, market conditions deteriorated throughout the latter half of fiscal 2015, reflecting increased market volatility, primarily due to

the effect of low global oil and commodity prices and diverging monetary policies amongst global central banks, which led to decreased levels of client activity and volumes. Our corporate and investment banking businesses performed well, reflecting economic growth, particularly in the U.S., the low interest rate environment, and our continued focus on origination and increased activity from client-focused strategies. Our equity and fixed income trading businesses performed well, largely reflecting strong results in the first half of fiscal 2015, although markets were challenged throughout the latter half of the year due to increased market volatility.

Highlights

- We continued to focus on the efficient deployment of our capital and growth in our corporate and investment banking businesses, particularly in the U.S. and Europe. We re-allocated capital from trading to corporate and investment banking businesses and managed risks by narrowing the focus of our trading products.
- In Canada, we maintained our market leadership by deepening our existing client relationships despite challenges in both the energy and commodity sectors, gaining new clients by leveraging our strong cross-border capabilities and improving collaboration with Wealth Management to drive operational efficiencies, and offering a full suite of global capabilities. We continued to win significant mandates including acting as exclusive financial advisor to Enbridge Inc. on the transfer of its Canadian liquids pipeline and renewable energy assets, valued at $30.4 billion, to its partially owned, publicly traded subsidiary Enbridge Income Fund.
- In the U.S., we continued to leverage our key strategic investments made in recent years to expand our corporate and investment banking businesses. We successfully positioned our lending relationships as we continued to focus on origination and increased activity from client-focused strategies. We exited certain proprietary trading strategies in 2014 and continue to ensure that any remaining strategies comply with the Volcker Rule. We continued growing our businesses and won several significant mandates including acting as joint bookrunner on the acquisition financing supporting Permira Advisers Ltd. and the Canadian Pension Plan Investment Board's US$5.3 billion acquisition of Informatica Corporation, as well as acting as lead financial advisor to Raytheon, one of the world's largest global defense contractors, on its announced definitive agreement with Vista Equity Partners to form a new, jointly owned entity valued at US$2.3 billion.
- In the U.K. and Europe, we continued to expand our corporate and investment banking businesses. We won new mandates including acting as advisor to the Bazalgette Consortium on the Group's successful bid to provide funding for the £4.2 billion Thames Tideway Tunnel project.
- In Other international, we continued to focus on our corporate and investment banking, fixed income trading distribution and foreign exchange trading capabilities.
- As a result of our successes in each of our regions, we received external recognition as an industry leader and were named or ranked:
  - Best Investment Bank in Canada (*Euromoney Magazine*) for the eighth consecutive year.
  - The largest investment bank in Canada by fees for the first nine months of 2015 (*Dealogic)*.
  - The 10th largest investment bank globally and in the Americas (*Thomson Reuters*) by fees for the first nine months of 2015.

Outlook and priorities

In 2016, as a result of strategic investments in our investment banking businesses in recent years, particularly in the U.S. and Europe, we anticipate growth in our investment banking businesses reflecting our focus on client activities. However, we expect that marginal growth in our lending revenue will be impacted by narrower spreads reflecting increased competition, as well as the risk of higher PCL.

Overall we anticipate net improvements in our global markets businesses driven by growth in our fixed income, currencies and commodities businesses as compared to the challenging market conditions in 2015. However, improvements in our businesses will be dependent on growth in the global economy, and stabilizing market conditions. We also anticipate that several tax changes in Canada could negatively impact our earnings, and heightened regulations will unfavourably impact growth in our businesses.

For further details, refer to our Risk management – Top and emerging risks section. For further details on our general economic outlook, refer to the Economic and market review and outlook section.

Key strategic priorities for 2016

- Maintain our leadership position in Canada by focusing on long-term client relationships, leveraging our global capabilities, and continuing to improve collaboration with Wealth Management.
- Expand and strengthen client relationships in the U.S. by building on our momentum through expanded origination, advisory and distribution activity, and driving cross-selling through our diversified loan book.
- Build on our core strengths in Europe in both Corporate and Investment Banking and Global Markets by continuing to grow and deepen client relationships, and in Asia by optimizing the performance of our existing footprint.
- Optimize capital use to earn high risk-adjusted returns by maintaining both a balanced approach between investment banking and trading revenue and a disciplined approach to managing the risks and costs of our business.
- Manage through the significant changes in the regulatory environment.

Capital Markets financial highlights			Table 34
(Millions of Canadian dollars, except percentage amounts and as otherwise noted)	**2015**	2014	2013
Net interest income (1)	**$ 3,970**	$ 3,485	$ 2,872
Non-interest income	**4,093**	3,881	3,708
Total revenue (1)	**8,063**	7,366	6,580
PCL	**71**	44	188
Non-interest expense	**4,696**	4,344	3,856
Net income before income taxes	**3,296**	2,978	2,536
Net income	**$ 2,319**	$ 2,055	$ 1,700
Revenue by business			
Corporate and Investment Banking	**$ 3,697**	$ 3,437	$ 3,014
Global Markets (2)	**4,477**	3,896	3,314
Other (2)	**(111)**	33	252
Key ratios			
ROE	**13.6%**	14.1%	14.1%
Selected average balance sheet information			
Total assets	**$ 477,300**	$ 392,300	$ 368,300
Trading securities	**116,200**	103,800	100,800
Loans and acceptances	**79,700**	64,800	54,700
Deposits	**60,300**	47,600	38,400
Attributed capital	**16,550**	14,100	11,500
Other information			
Number of employees (FTE)	**3,996**	3,917	3,718
Credit information			
Gross impaired loans as a % of average net loans and acceptances	**0.37%**	0.08%	0.42%
PCL on impaired loans as a % of average net loans and acceptances	**0.09%**	0.07%	0.34%

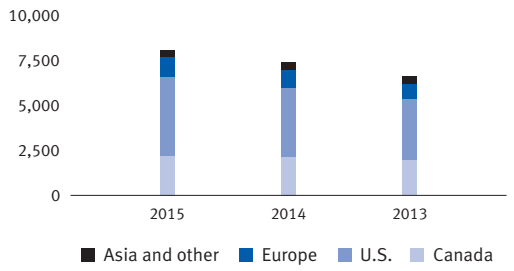
Estimated impact of U.S. dollar, British pound and Euro translation on key income statement items

(Millions of Canadian dollars, except percentage amounts)	**2015 vs. 2014**
Increase (decrease):	
Total revenue	**$ 602**
Non-interest expense	**364**
Net income	**145**
Percentage change in average US$ equivalent of C$1.00	**(13)%**
Percentage change in average British pound equivalent of C$1.00	**(6)%**
Percentage change in average Euro equivalent of C$1.00	**4%**

(1) The taxable equivalent basis (teb) adjustment for 2015 was $570 million (2014 – $492 million, 2013 – $380 million). For further discussion, refer to the How we measure and report our business segments section of our 2015 Annual Report.

(2) Effective the first quarter of 2015, we reclassified amounts from Global Markets to Other related to certain proprietary trading strategies which we exited in the fourth quarter of 2014 to comply with the Volcker Rule. Prior period amounts have been revised from those previously presented.

Revenue by region (Millions of Canadian dollars)



Financial performance

2015 vs. 2014

Net income increased $264 million or 13%, driven by growth in our global markets businesses mainly reflecting increased client activity, continued solid performance in our corporate and investment banking businesses, and the positive impact of foreign exchange translation. These factors were partially offset by lower results in certain legacy portfolios.

Total revenue increased $697 million or 9%, largely due to the positive impact of foreign exchange translation, growth in our global markets businesses reflecting increased client activity and more favourable market conditions in the first half of the year, and continued solid performance in our corporate and investment banking businesses. These factors were partially offset by lower revenue in certain legacy portfolios. In addition, our prior year trading revenue was unfavourably impacted by the implementation of funding valuation adjustments, and the exit from certain proprietary trading strategies to comply with the Volcker Rule.

PCL increased $27 million or 61%, primarily due to provisions taken on several accounts. For further details, refer to the Credit quality performance section.

Non-interest expense increased $352 million or 8%, reflecting an increase due to the impact of foreign exchange translation. Lower variable compensation and lower litigation provisions and related legal costs were mostly offset by higher costs to support business growth.

2014 vs. 2013

Net income increased $355 million or 21% from 2013, primarily due to higher equity trading revenue reflecting strong market conditions, strong growth in most of our investment banking businesses and higher lending revenue. Lower PCL and the positive impact of foreign exchange translation also contributed to the increase. These factors were partially offset by higher litigation provisions and related legal costs, and higher variable compensation on improved results. In addition, our 2014 results were unfavourably impacted by lower fixed income trading revenue largely driven by the unfavourable impact of the implementation of funding valuation adjustments, and the exit from certain proprietary trading strategies to comply with the Volcker Rule.

Business line review

Corporate and Investment Banking

Corporate and Investment Banking comprises our corporate lending, loan syndications, debt and equity origination, M&A advisory services, private equity, research, client securitization and the global credit businesses. For debt and equity origination, revenue is allocated between Corporate and Investment Banking and Global Markets based on the contribution of each group in accordance with an established agreement.

Financial performance

Corporate and Investment Banking revenue of $3,697 million increased $260 million or 8% including the positive impact of foreign exchange translation, as compared to last year.

Investment banking revenue increased $97 million or 6%, primarily due to strong growth in M&A activity reflecting increased mandates in the U.S. and Europe, and higher debt origination as a result of increased issuance activity mainly in the U.S. Higher loan syndication activity in Europe also contributed to the increase. These factors were partially offset by lower equity origination reflecting decreased client activity in all regions as compared to the strong levels last year, and lower distributions on private equity investments.

Lending and other revenue increased $163 million or 10%, due to solid lending growth in the U.S and Europe, and strong performance in our securitization businesses.

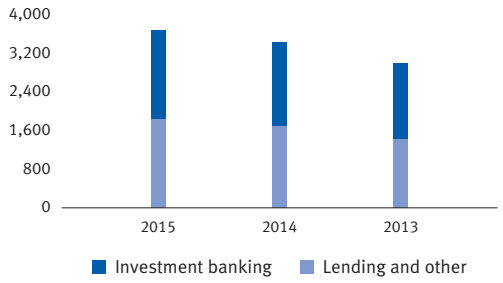
Selected highlights — Table 35

(Millions of Canadian dollars)	2015	2014	2013
Total revenue (1)	$ 3,697	$ 3,437	$ 3,014
Breakdown of revenue (1)			
Investment banking	1,833	1,736	1,574
Lending and other (2)	1,864	1,701	1,440
Other information			
Average assets	63,900	49,500	40,000
Average loans and acceptances	56,200	42,500	34,400

(1) The teb adjustment for 2015 was $25 million (2014 – $13 million, 2013 – $2 million). For further discussion, refer to the How we measure and report our business segments section.

(2) Comprises our corporate lending, client securitization, and global credit businesses.

Breakdown of total revenue (Millions of Canadian dollars)



Global Markets

Global Markets comprises our fixed income, foreign exchange, equity sales and trading, repos and secured financing and commodities businesses.

Financial performance

Total revenue of $4,477 million increased $581 million or 15%, including the positive impact of foreign exchange translation, as compared to last year.

Revenue in our Fixed income, currencies and commodities business increased $121 million or 7%, mainly due to higher debt origination reflecting increased client issuance activity in all regions, and higher currencies and commodities trading revenue. These factors were partially offset by lower fixed income trading revenue reflecting challenging market conditions in the second half of the year. In addition, our prior year trading revenue was unfavourably impacted by the implementation of funding valuation adjustments.

Revenue in our Equities business increased $218 million or 19%, primarily due to higher equities trading revenue reflecting increased client activity primarily in the first half of the year, and volume growth in our cash equities businesses. These factors were partially offset by lower equity origination as compared to the strong levels last year.

Revenue in our Repo and secured financing business increased $242 million or 24%, mainly reflecting higher client volumes and the positive impact of foreign exchange translation.

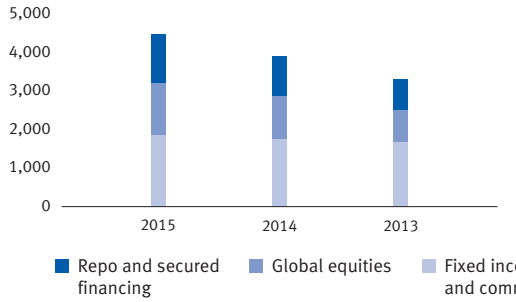
Selected highlights — Table 36

(Millions of Canadian dollars)	2015	2014	2013
Total revenue (1)	$ 4,477	$ 3,896	$ 3,314
Breakdown of revenue (1)			
Fixed income, currencies and commodities	1,881	1,760	1,680
Equities	1,336	1,118	856
Repo and secured financing (2)	1,260	1,018	778
Other information			
Average assets	494,400	366,000	343,700

(1) The teb adjustment for 2015 was $545 million (2014 – $470 million, 2013 – $357 million). For further discussion, refer to the How we measure and report our business segments section.

(2) Comprises our secured funding businesses for internal businesses and external clients.

Breakdown of total revenue (Millions of Canadian dollars)



Other

Other includes our legacy portfolio which consists of our bank-owned life insurance (BOLI) stable value products, U.S. commercial mortgage-backed securities, U.S. auction rate securities (ARS), structured rates in Asia, and certain proprietary trading strategies. In recent years, in order to optimize our capital employed to improve our risk-adjusted returns and reduce our liquidity risk on various products, we have significantly reduced several of our legacy portfolios. Our legacy portfolios decreased by 37% as compared to last year.

Financial performance
Revenue decreased $144 million as compared to last year, mainly in certain legacy portfolios, including the exit of certain proprietary trading strategies last year to comply with the Volcker Rule.

Corporate Support

Corporate Support — **Table 37**

(Millions of Canadian dollars)	2015	2014	2013
Net interest income (loss) (1)	$ (514)	$ (313)	$ (124)
Non-interest income (loss)	210	164	(12)
Total revenue (1)	(304)	(149)	(136)
PCL	(3)	(2)	3
Non-interest expense	125	89	72
Net income (loss) before income taxes (1)	(426)	(236)	(211)
Income taxes (recoveries) (1)	(824)	(405)	(653)
Net income (2)	$ 398	$ 169	$ 442
Other information			
Number of employees (FTE)	13,301	12,460	11,943

(1) Teb adjusted.
(2) Net income reflects income attributable to both shareholders and Non-Controlling Interests (NCI). Net income attributable to NCI for the year ended October 31, 2015 was $94 million (October 31, 2014 – $93 million; October 31, 2013 – $93 million).

Due to the nature of activities and consolidation adjustments reported in this segment, we believe that a comparative period analysis is not relevant. The following identifies material items affecting the reported results in each period.

Net interest income (loss) and income taxes (recoveries) in each period in Corporate Support include the deduction of the teb adjustments related to the gross-up of income from Canadian taxable corporate dividends recorded in Capital Markets. The amount deducted from net interest income (loss) was offset by an equivalent increase in income taxes (recoveries). The teb amount for the year ended October 31, 2015 was $570 million as compared to $492 million last year and $380 million for the year ended October 31, 2013.

In addition to the teb impacts noted above, the following identifies the other material items affecting the reported results in each period.

2015
Net income was $398 million, largely reflecting net favourable tax adjustments, asset/liability management activities, a gain of $108 million (before- and after-tax) from the wind-up of a U.S.-based funding subsidiary that resulted in the release of CTA, and a gain on sale of a real estate asset. These factors were partially offset by transaction costs related to our acquisition of City National.

2014
Net income was $169 million largely reflecting asset/liability management activities and gains on private equity investments mainly related to the sale of a legacy portfolio, partially offset by net unfavourable tax adjustments.

2013
Net income was $442 million largely reflecting net favourable tax adjustments, including $214 million of income tax adjustments related to previous years, and asset/liability management activities.

Results by geographic segment (1)

For geographic reporting, our segments are grouped into the following: Canada, U.S., and Other International. Transactions are primarily recorded in the location that best reflects the risk due to negative changes in economic conditions and prospects for growth due to positive economic changes. The following table summarizes our financial results by geographic region.

Table 38

	2015				2014 (2)				2013 (2)			
(Millions of Canadian dollars)	Canada	U.S.	Other International	Total	Canada	U.S.	Other International	Total	Canada	U.S.	Other International	Total
Net interest income	$ 11,538	$ 1,977	$ 1,256	$ 14,771	$ 11,128	$ 1,697	$ 1,291	$ 14,116	$ 10,961	$ 1,448	$ 840	$ 13,249
Non-interest income	10,889	4,619	5,042	20,550	10,488	4,257	5,247	19,992	8,601	3,810	5,022	17,433
Total revenue	$ 22,427	$ 6,596	$ 6,298	$ 35,321	$ 21,616	$ 5,954	$ 6,538	$ 34,108	$ 19,562	$ 5,258	$ 5,862	$ 30,682
PCL	933	98	66	1,097	922	52	190	1,164	892	78	267	1,237
PBCAE	1,976	–	987	2,963	2,188	1	1,384	3,573	1,425	10	1,349	2,784
Non-interest expense	10,139	4,762	3,737	18,638	9,650	4,199	3,812	17,661	9,210	3,663	3,341	16,214
Income taxes	1,727	649	221	2,597	1,983	660	63	2,706	1,710	370	25	2,105
Net income	$ 7,652	$ 1,087	$ 1,287	$ 10,026	$ 6,873	$ 1,042	$ 1,089	$ 9,004	$ 6,325	$ 1,137	$ 880	$ 8,342

(1) For further details, refer to Note 30 of our audited 2015 Annual Consolidated Financial Statements.
(2) Amounts have been revised from those previously presented.

2015 vs. 2014

Net income in Canada was up $779 million or 11% from the prior year, mainly due to solid volume growth and strong fee-based revenue growth across most businesses in Canadian Banking, a lower effective tax rate reflecting net favourable income tax adjustments, and higher earnings in Investor & Treasury Services. A gain of $108 million (before- and after-tax) from the wind-up of a U.S.-based funding subsidiary that resulted in the release of CTA also contributed to the increase. These factors were partially offset by higher costs in support of business growth, and lower spreads.

U.S. net income increased $45 million or 4% compared to last year, primarily due to the positive impact of foreign exchange translation, growth in our global markets businesses reflecting increased client activity and more favourable market conditions in the first half of the year, and higher results in most corporate and investment banking businesses. Lower litigation provisions and related legal costs in Capital Markets also contributed to the increase. These factors were partially offset by higher costs in support of business growth.

Other International net income was up $198 million or 18% from the prior year, mainly due to lower provisions in our Caribbean portfolios, and higher lending activity in Europe. These factors were partially offset by restructuring costs related to our U.S. & International Wealth Management business. In addition, our results last year were unfavourably impacted by a loss of $100 million (before- and after-tax) related to the sale of RBC Jamaica and a provision of $40 million ($32 million after-tax) related to post-employment benefits and restructuring charges in the Caribbean.

2014 vs. 2013

Net income in Canada was up $548 million or 9% as compared to 2013, mainly due to solid volume growth across most of our businesses in Canadian Banking, and higher earnings from growth in average fee-based client assets resulting from capital appreciation and strong net sales in Wealth Management. Strong fee-based revenue growth primarily attributable to higher mutual fund distribution fees and card services revenue in Canadian Banking also contributed to the increase. These factors were partially offset by higher costs in support of business growth including higher staff and marketing costs, and the unfavourable impact of the implementation of the funding valuation adjustments. In addition, results in 2013 benefited from net favourable tax adjustments. Our results in 2013 were also unfavourably impacted by a charge of $160 million ($118 million after-tax) as a result of new tax legislation in Canada, which affects the policyholders' tax treatment of certain individual life insurance policies.

U.S. net income was down $95 million or 8% as compared to 2013, as 2013 benefited from favourable income tax adjustments, including $214 million related to prior years. Strong growth in our lending portfolio, strong equity markets and our continued focus on equity origination and increased activity from client-focused strategies were partly offset by higher litigation provisions and related legal costs in Capital Markets.

Other International net income was up $209 million or 24% as compared to 2013, largely due to lower PCL in Capital Markets, higher trading revenue in Europe, and higher lending in Capital Markets. These factors were partially offset by a loss of $100 million (before- and after-tax) related to the sale of RBC Jamaica, and a provision of $40 million ($32 million after-tax) related to post-employment benefits and restructuring charges in the Caribbean. In addition, our results in 2013 were unfavourably impacted by a restructuring charge of $44 million related to the integration of Investor Services, primarily in Europe.

Quarterly financial information

Fourth quarter 2015 performance

Q4 2015 vs. Q4 2014

Fourth quarter net income of $2,593 million was up $260 million or 11%, from last year. Diluted EPS of $1.74 was up $0.17 and ROE of 17.9% was down 110 bps. Our fourth quarter earnings reflected solid earnings growth in our Capital Markets and Personal & Commercial Banking segments, a lower effective tax rate due to net favourable tax adjustments, lower PCL, and the impact of foreign exchange translation. These factors were partially offset by lower funding and liquidity results in Investor & Treasury Services due to widening credit spreads and unfavourable market conditions, and restructuring costs and lower transaction volumes in Wealth Management.

Total revenue decreased $363 million or 4%, mainly due to a change in the fair value of investments backing our policyholder liabilities, and a reduction in revenue related to our retrocession contracts, both of which were largely offset in PBCAE, in our Insurance segment. Lower equity origination revenue reflecting decreased client issuance activity, and lower fixed income trading revenue primarily due to unfavourable

market conditions which negatively impacted Capital Markets revenue, while lower transaction volumes in Wealth Management, and lower spreads in Personal & Commercial Banking also contributed to the decrease in revenue. These factors were partly offset by the positive impact of foreign exchange translation, and business growth primarily in our life, annuity, home and auto insurance businesses, higher equity trading revenue in Capital Markets reflecting increased client activity, and solid volume growth across most businesses in Canadian Banking. In addition, our prior year revenue was unfavourably impacted by the implementation of funding valuation adjustments, and the exit from certain proprietary trading strategies to comply with the Volcker Rule in Capital Markets, as well as favourable net cumulative accounting adjustments in Canadian Banking.

Total PCL decreased $70 million from last year, mainly reflecting lower provisions in our Caribbean portfolios due to provisions of $50 million on our Caribbean impaired residential mortgage portfolio included in the prior year. Lower provisions in our Canadian commercial lending portfolio also contributed to the decrease. The PCL ratio of 23 bps decreased 8 bps from last year.

PBCAE decreased $460 million or 61%, largely reflecting a change in fair value of investments backing our policyholder liabilities, and a reduction of PBCAE related to our retrocession contracts, both of which were largely offset in revenue. These factors were partially offset by business growth as noted above.

Non-interest expense increased $307 million or 7%, primarily reflecting the impact of foreign exchange translation, higher costs in support of business growth, and restructuring costs of $46 million ($38 million after-tax) largely related to our U.S. & International Wealth Management business, including the sale of RBC Suisse.

Income tax expense decreased $400 million or 65% from last year, and the effective income tax rate decreased from 20.8% last year to 7.6%, primarily due to net favourable tax adjustments in Corporate Support and Capital Markets.

Q4 2015 vs. Q3 2015

Net income of $2,593 million increased $118 million, or 5% compared to the prior quarter, largely due to a lower effective tax rate reflecting net favourable tax adjustments, and higher earnings in Insurance and Capital Markets. These factors were partly offset by lower funding and liquidity results in Investor & Treasury Services, and restructuring costs in Wealth Management as noted above.

Quarterly results and trend analysis

Our quarterly results are impacted by a number of trends and recurring factors, which include seasonality of certain businesses, general economic and market conditions, and fluctuations in the Canadian dollar relative to other currencies. The following table summarizes our results for the last eight quarters (the period):

Quarterly results (1) — **Table 39**

(Millions of Canadian dollars, except per share and percentage amounts)	2015				2014			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Net interest income	$ 3,800	$ 3,783	$ 3,557	$ 3,631	$ 3,560	$ 3,647	$ 3,449	$ 3,460
Non-interest income	4,219	5,045	5,273	6,013	4,822	5,343	4,827	5,000
Total revenue	$ 8,019	$ 8,828	$ 8,830	$ 9,644	$ 8,382	$ 8,990	$ 8,276	$ 8,460
PCL	275	270	282	270	345	283	244	292
PBCAE	292	656	493	1,522	752	1,009	830	982
Non-interest expense	4,647	4,635	4,736	4,620	4,340	4,602	4,332	4,387
Net income before income taxes	$ 2,805	$ 3,267	$ 3,319	$ 3,232	$ 2,945	$ 3,096	$ 2,870	$ 2,799
Income taxes	212	792	817	776	612	718	669	707
Net income	$ 2,593	$ 2,475	$ 2,502	$ 2,456	$ 2,333	$ 2,378	$ 2,201	$ 2,092
EPS – basic	$ 1.74	$ 1.66	$ 1.68	$ 1.66	$ 1.57	$ 1.59	$ 1.47	$ 1.39
– diluted	1.74	1.66	1.68	1.65	1.57	1.59	1.47	1.38
Segments – net income (loss)								
Personal & Commercial Banking	$ 1,270	$ 1,281	$ 1,200	$ 1,255	$ 1,151	$ 1,138	$ 1,115	$ 1,071
Wealth Management	255	285	271	230	285	285	278	235
Insurance	225	173	123	185	256	214	154	157
Investor & Treasury Services	88	167	159	142	113	110	112	106
Capital Markets	555	545	625	594	402	641	507	505
Corporate Support	200	24	124	50	126	(10)	35	18
Net income	$ 2,593	$ 2,475	$ 2,502	$ 2,456	$ 2,333	$ 2,378	$ 2,201	$ 2,092
Effective income tax rate	7.6%	24.2%	24.6%	24.0%	20.8%	23.2%	23.3%	25.3%
Period average US$ equivalent of C$1.00	$ 0.758	$ 0.789	$ 0.806	$ 0.839	$ 0.900	$ 0.925	$ 0.907	$ 0.926

(1) Fluctuations in the Canadian dollar relative to other foreign currencies have affected our consolidated results over the period.

Seasonality

Seasonal factors may impact our results in certain quarters. The first quarter has historically been seasonally stronger for our capital markets businesses. The second quarter has fewer days than the other quarters, which generally results in a decrease in net interest income and certain expense items. The third quarter results for Investor & Treasury Services are generally favourably impacted by higher securities lending as a result of the European dividend season. The third and fourth quarters include the summer months during which market activity generally tends to slow, negatively impacting the results of our capital markets, brokerage and investment management businesses.

Specified items affecting our consolidated results

- In the second quarter of 2015, our results included a gain of $108 million (before- and after-tax) from the wind-up of a U.S.-based funding subsidiary that resulted in the release of foreign currency translation adjustment that was previously booked in other components of equity.
- In the third quarter of 2014, our results included a loss of $40 million (before- and after-tax) which includes foreign currency translation related to the closing of the sale of RBC Jamaica.
- In the first quarter of 2014, our results included a loss of $60 million (before- and after-tax) related to the announced sale of RBC Jamaica, as well as a provision of $40 million ($32 million after-tax) related to post-employment benefits and restructuring charges in the Caribbean.

Trend analysis

The Canadian and U.S. economies have generally improved over the period, reflecting solid consumer spending, stronger labour markets and firm housing market activity. Since the third quarter of 2014, growth in Canada has moderated with growth contracting in the first half of calendar 2015 due to the sharp decline in global oil prices, and slow export activity. Global equity indices experienced volatility throughout the period resulting from the possibility of Euro area recession, the lower global oil prices, and diverging monetary policies amongst global central banks. For further details, refer to the Economic and market review and outlook section.

Earnings have generally trended upwards over the period, driven by solid volume growth and higher fee-based revenue growth in our Canadian Banking businesses, and higher earnings from growth in average fee-based client assets reflecting capital appreciation and strong net sales in Wealth Management. Capital Markets results have generally trended upwards since the first quarter of 2014, and were negatively impacted in the fourth quarter of 2014 by the exit from certain proprietary trading strategies to comply with the Volcker Rule and the implementation of funding valuation adjustments. Results in our Insurance segment have fluctuated in 2015, as they were impacted by an unfavourable change in Canadian tax legislation impacting certain foreign affiliates, which became effective November 1, 2014. Investor & Treasury Services results have generally trended upwards over the period largely due to increased client activity in our foreign exchange business and higher foreign exchange transaction volumes. Investor & Treasury Services results in the third quarter of 2015 benefited from an additional month of earnings as a result of aligning the reporting periods, while results in the fourth quarter of 2015 were impacted by lower funding and liquidity results due to widening credit spreads and unfavourable market conditions.

Revenue has generally fluctuated over the period mostly due to the change in fair value of investments backing our policyholder liabilities, which is largely offset in PBCAE. Solid volume growth and higher fee-based revenue growth in our Canadian Banking businesses, and growth in average fee-based client assets in Wealth Management have increased revenue over the period. Trading revenue has generally trended upwards since the first quarter of 2014, and was unfavourably impacted in the fourth quarter of 2014 by the exit of certain proprietary trading strategies and the implementation of funding valuation adjustments. Trading revenue in the second half of 2015 was negatively impacted due to widening credit spreads. Net interest income has trended upwards over the period, largely due to solid volume growth across our Canadian Banking businesses, and higher trading-related net interest income and solid lending activity in Capital Markets. Starting in the first quarter of 2014, the positive impact of foreign exchange translation due to a generally weaker Canadian dollar has also contributed to the increase in revenue. Insurance revenue is primarily impacted by changes in the fair value of investments backing our policyholder liabilities, which is largely offset in PBCAE.

Asset quality remained strong over the period despite increased lending activity, with PCL remaining relatively stable over the period. The fourth quarter of 2014 included additional provisions in Personal & Commercial Banking related to our impaired residential mortgages portfolio in the Caribbean. Wealth Management had provisions related to our U.S. & International Wealth Management business starting in the first quarter of 2014. PCL in Capital Markets has fluctuated over the period.

PBCAE has fluctuated quarterly as it includes the changes to the fair value of investments backing our policyholder liabilities, which is largely offset in revenue. PBCAE has also increased due to business growth in our Insurance businesses, as well as actuarial liability adjustments and generally lower claims costs over the period.

While we continue to focus on efficiency management activities, non-interest expense has generally trended upwards over the period, mostly to support business growth. Restructuring costs related to our U.S. & International Wealth Management business have increased non-interest expense since the fourth quarter of 2014. Non-interest expense in 2014 was impacted by the loss related to the sale of RBC Jamaica and a provision in the Caribbean. Since the first quarter of 2014, non-interest expense has increased due to the impact of foreign exchange translation generally reflecting the weaker Canadian dollar.

Our effective income tax rate has fluctuated over the period, mostly due to varying levels of income being reported in jurisdictions with different tax rates, as well as fluctuating levels of income from tax-advantaged sources such as Canadian taxable corporate dividends. Our effective income tax rate has generally been impacted over the period by higher earnings before income taxes, increased earnings in higher tax jurisdictions, and by net favourable tax adjustments.

Financial condition

Condensed balance sheets

The following table shows our condensed balance sheet:

Table 40

(Millions of Canadian dollars)	2015	2014	2013
Assets (1)			
Cash and due from banks	$ 12,452	$ 17,421	$ 15,550
Interest-bearing deposits with banks	22,690	8,399	9,039
Securities	215,508	199,148	182,710
Assets purchased under reverse repurchase agreements and securities borrowed	174,723	135,580	117,517
Loans			
Retail	348,183	334,269	320,666
Wholesale	126,069	102,954	90,143
Allowance for loan losses	(2,029)	(1,994)	(1,959)
Segregated fund net assets	830	675	513
Other – Derivatives	105,626	87,402	74,822
– Other	70,156	56,696	50,744
Total assets	$ 1,074,208	$ 940,550	$ 859,745
Liabilities (1)			
Deposits	$ 697,227	$ 614,100	$ 563,079
Segregated fund liabilities	830	675	513
Other – Derivatives	107,860	88,982	76,745
– Other	196,985	174,431	162,505
Subordinated debentures	7,362	7,859	7,443
Total liabilities	1,010,264	886,047	810,285
Equity attributable to shareholders	62,146	52,690	47,665
Non-controlling interests	1,798	1,813	1,795
Total equity	63,944	54,503	49,460
Total liabilities and equity	$ 1,074,208	$ 940,550	$ 859,745

(1) Foreign currency-denominated assets and liabilities are translated to Canadian dollars.

2015 vs. 2014

Total assets were up $134 billion or 14% from last year, primarily reflecting an increase of $96 billion due to the impact of foreign exchange translation as a result of the weaker Canadian dollar.

Interest-bearing deposits with banks increased $14 billion, largely reflecting higher deposits with central banks.

Securities were up $16 billion or 8% compared to last year, primarily reflecting an increase due to the impact of foreign exchange translation, and an increase in government debt securities largely reflecting our management of interest rate risk, partially offset by a decrease in equity trading positions mainly due to regulatory requirements and market conditions.

Assets purchased under reverse repurchase agreements (reverse repos) and securities borrowed increased $39 billion or 29%, mainly attributable to an increase due to the impact of foreign exchange translation and increased client and business activities.

Loans were up $37 billion or 8%, largely due to volume growth in wholesale loans and residential mortgages, and an increase due to the impact of foreign exchange translation.

Derivative assets were up $18 billion or 21%, mainly attributable to the increase due to the impact of foreign exchange translation and higher fair values on interest rate swaps. These factors were partially offset by lower fair values on foreign exchange cross-currency interest rate contracts and increased financial netting.

Other assets were up $13 billion or 24%, largely reflecting higher cash collateral requirements and an increase due to the impact of foreign exchange translation.

Total liabilities were up $124 billion or 14% from last year, primarily reflecting an increase of $96 billion due to the impact of foreign exchange translation as a result of the weaker Canadian dollar.

Deposits increased $83 billion or 14%, mainly reflecting an increase due to the impact of foreign exchange translation and the issuances of fixed term notes and covered bonds to satisfy our funding requirements. Growth in business and retail deposits also contributed to the increase.

Derivative liabilities were up $19 billion or 21%, mainly attributable to the increase due to the impact of foreign exchange translation and higher fair values on interest rate swaps. These factors were partially offset by lower fair values on foreign exchange cross-currency interest rate contracts and increased financial netting.

Other liabilities increased $23 billion or 13%, mainly reflecting an increase due to the impact of foreign exchange translation, higher obligations related to repurchase agreements largely reflecting increased client and business activities, and an increase in cash collateral requirements. These factors were partly offset by lower obligations related to securities sold short.

Total equity increased $9 billion or 17%, largely reflecting earnings, net of dividends.

Off-balance sheet arrangements

In the normal course of business, we engage in a variety of financial transactions that, for accounting purposes, are not recorded on our Consolidated Balance Sheets. Off-balance sheet transactions are generally undertaken for risk, capital and funding management purposes which benefit us and our clients. These include transactions with structured entities and may also include the issuance of guarantees. These transactions give rise to, among other risks, varying degrees of market, credit, liquidity and funding risk, which are discussed in the Risk management section.

We use structured entities to securitize our financial assets as well as assist our clients in securitizing their financial assets. These entities are not operating entities, typically have no employees, and may or may not be recorded on our Consolidated Balance Sheets.

In the normal course of business, we engage in a variety of financial transactions that may qualify for derecognition. We apply the derecognition rules to determine whether we have effectively transferred substantially all the risks and rewards or control associated with the financial assets to a third party. If the transaction meets specific criteria, it may qualify for full or partial derecognition from our Consolidated Balance Sheets.

Securitizations of our financial assets

We periodically securitize our credit card receivables, residential and commercial mortgage loans and bond participation certificates primarily to diversify our funding sources, to enhance our liquidity position and for capital purposes. We also securitize residential and commercial mortgage loans for sales and trading activities.

We securitize our credit card receivables, on a revolving basis, through a consolidated structured entity. We securitize single and multiple-family residential mortgages through the National Housing Act Mortgage-Backed Securities (NHA MBS) program. The majority of our securitization activities are recorded on our Consolidated Balance Sheets as we do not meet the derecognition criteria. During 2015, we derecognized $967 million of purchased mortgages where both the NHA MBS and the residual interests in the mortgages were sold to third parties resulting in the transfer of substantially all of the risks and rewards (2014 – $nil). For additional details of our securitization activities, refer to Note 6 and Note 7 of our audited 2015 Annual Consolidated Financial Statements.

We periodically securitize residential mortgage loans for the Canadian social housing program through the NHA MBS program, which are derecognized from our Consolidated Balance Sheets when sold to third party investors. During 2015, we securitized $112 million of residential mortgage loans for the Canadian social housing program (2014 – $158 million).

We also periodically securitize commercial mortgages by selling them in collateral pools, which meet certain diversification, leverage and debt coverage criteria, to structured entities, one of which is sponsored by us. Securitized commercial mortgage loans are derecognized from our Consolidated Balance Sheets as we have transferred substantially all of the risk and rewards of ownership of the securitized assets. Our continuing involvement with the transferred assets is limited to servicing the underlying commercial mortgages sold to our sponsored structured entity. As at October 31, 2015, there were $1.1 billion of commercial mortgages outstanding related to these securitization activities (October 31, 2014 – $1.3 billion). During 2015, we securitized $195 million of commercial mortgages which were sold to our sponsored entity (2014 – $173 million).

In prior years, we participated in bond securitization activities where we purchased government, government related and corporate bonds and repackaged those bonds in trusts that issue participation certificates, which were sold to third party investors. Securitized bonds are derecognized from our Consolidated Balance Sheets as we have transferred substantially all of the risk and rewards of ownership of the securitized assets. Our continuing involvement with the transferred assets is limited to servicing the underlying bonds. As at October 31, 2015, there were $138 million of bond participation certificates outstanding related to these prior period securitization activities (October 31, 2014 – $356 million). We did not securitize bond participation certificates during 2015 or 2014.

Involvement with unconsolidated structured entities

In the normal course of business, we engage in a variety of financial transactions with structured entities to support our customers' financing and investing needs, including securitization of client financial assets, creation of investment products, and other types of structured financing.

We have the ability to use credit mitigation tools such as third party guarantees, credit default swaps, and collateral to mitigate risks assumed through securitization and re-securitization exposures. The process in place to monitor the credit quality of our securitization and re-securitization exposures involves, among other things, reviewing the performance of the underlying assets. We affirm our ratings each quarter and formally confirm or assign a new rating at least annually. For further details on our activities to manage risks, refer to the Risk management section.

Below is a description of our activities with respect to certain significant unconsolidated structured entities. For a complete discussion of our interests in consolidated and unconsolidated structured entities, refer to Note 7 of our audited 2015 Annual Consolidated Financial Statements.

RBC-administered multi-seller conduits

We administer multi-seller conduits which are used primarily for the securitization of our clients' financial assets. We are involved in these conduit markets because our clients value these transactions. Our clients primarily use multi-seller conduits to diversify their financing sources and to reduce funding costs by leveraging the value of high-quality collateral. The conduits offer us a favourable revenue stream, risk-adjusted return and cross-selling opportunities.

We provide services such as transaction structuring, administration, backstop liquidity facilities and partial credit enhancements to the multi-seller conduits. Fee revenue for all such services amounted to $213 million during the year (2014 – $168 million). We do not maintain any ownership or retained interests in these multi-seller conduits and have no rights to, or control of, their assets.

Our total commitment to the conduits in the form of backstop liquidity and credit enhancement facilities is shown below. The total committed amount of these facilities exceeds the total amount of the maximum assets that may have to be purchased by the conduits under the purchase agreements. As a result, the maximum exposure to loss attributable to our backstop liquidity and credit enhancement facilities is less than the total committed amounts of these facilities.

Liquidity and credit enhancement facilities — **Table 41**

As at October 31 (Millions of Canadian dollars)	2015 Notional of committed amounts (1)	2015 Allocable notional amounts	2015 Outstanding loans (2)	2015 Maximum exposure to loss (3)	2014 (4) Notional of committed amounts (1)	2014 (4) Allocable notional amounts	2014 (4) Outstanding loans (2)	2014 (4) Maximum exposure to loss (3)
Backstop liquidity facilities	$ 37,770	$ 34,163	$ 764	$ 34,927	$ 31,019	$ 28,056	$ 864	$ 28,920
Credit enhancement facilities	2,974	2,843	–	2,843	2,177	2,099	–	2,099
Total	$ 40,744	$ 37,006	$ 764	$ 37,770	$ 33,196	$ 30,155	$ 864	$ 31,019

(1) Based on total committed financing limit.
(2) Net of allowance for loan losses and write-offs.
(3) Not presented in the table above are derivative assets with a fair value of $19 million (2014 – $nil) which are a component of our total maximum exposure to loss from our interests in the multi-seller conduits. Refer to Note 7 of our audited 2015 Annual Consolidated Financial Statements for more details.
(4) Certain amounts have been revised from those previously reported.

As at October 31, 2015, the notional amount of backstop liquidity facilities we provide increased by $6,751 million or 22% from last year. Total loans extended to the multi-seller conduits under the backstop liquidity facilities decreased by $100 million from last year primarily due to principal repayments which were offset by exchange rate fluctuations. The partial credit enhancement facilities we provide increased by $797 million from last year. The changes in both the amount of backstop liquidity facilities and credit enhancement facilities provided to the multi-seller conduits as compared to last year primarily reflect increases related to exchange rate fluctuations and the outstanding securitized assets of the multi-seller conduits.

Maximum exposure to loss by client type — **Table 42**

As at October 31 (Millions)	2015 (US$)	2015 (C$)	2015 Total (C$)	2014 (US$)	2014 (C$)	2014 Total (C$)
Outstanding securitized assets						
Credit cards	$ 4,679	$ 510	$ 6,628	$ 5,768	$ 510	$ 7,011
Auto loans and leases	8,606	2,352	13,604	8,154	1,793	10,983
Student loans	3,473	–	4,541	2,536	–	2,858
Trade receivables	2,175	112	2,956	2,094	112	2,472
Asset-backed securities	584	–	764	767	–	864
Equipment receivables	1,362	–	1,781	1,301	–	1,466
Consumer loans	706	–	923	–	–	–
Dealer floor plan receivables	1,261	903	2,552	1,053	771	1,958
Fleet finance receivables	441	377	954	436	377	869
Insurance premiums	128	153	320	127	–	144
Residential mortgages	–	1,020	1,020	–	1,275	1,275
Transportation finance	1,204	153	1,727	857	153	1,119
Total	$ 24,619	$ 5,580	$ 37,770	$ 23,093	$ 4,991	$ 31,019
Canadian equivalent	$ 32,190	$ 5,580	$ 37,770	$ 26,028	$ 4,991	$ 31,019

Our overall exposure increased by 22% compared to last year reflecting an increase in the outstanding securitized assets of the multi-seller conduits and exchange rate fluctuations. Correspondingly, total assets of the multi-seller conduits increased by $6,616 million or 22% over last year, primarily due to increases in the Auto loans and leases, Student loans, Consumer loans, Transportation finance, Dealer floor plan and Trade receivables asset classes, which were partially offset by decreases in Credit cards and Residential mortgages asset classes. 100% of multi-seller conduits assets were internally rated A or above, consistent with last year. All transactions funded by the unconsolidated multi-seller conduits are internally rated using a rating system which is largely consistent with that of the external rating agencies.

Multiple independent debt rating agencies review all of the transactions in the multi-seller conduits. Transactions financed in two U.S. multi-seller conduits are reviewed by Moody's Investors Service (Moody's), Standard & Poor's (S&P) and Fitch Ratings (Fitch). One U.S. multi-seller conduit is reviewed by S&P. Transactions in the Canadian multi-seller conduits are reviewed by Dominion Bond Rating Services (DBRS) and Moody's. Each applicable rating agency also reviews ongoing transaction performance on a monthly basis and may publish reports detailing portfolio and program information related to the conduits.

As at October 31, 2015, the total asset-backed commercial paper (ABCP) issued by the conduits amounted to $25.5 billion, an increase of $5.7 billion or 29% from last year. The increase in the amount of ABCP issued by the multi-seller conduits compared to last year is primarily due to an increase in the outstanding securitized assets of the multi-seller conduits and exchange rate fluctuations. The rating agencies that rate the ABCP rated 71% (October 31, 2014 – 73%) of the total amount issued within the top ratings category and the remaining amount in the second highest ratings category.

We sometimes purchase ABCP issued by the multi-seller conduits in our capacity as a placement agent in order to facilitate overall program liquidity. As at October 31, 2015, the fair value of our inventory was $17 million, a decrease of $25 million from last year. The fluctuations in inventory held reflect normal trading activity. This inventory is classified as Securities – Trading on our Consolidated Balance Sheets.

Structured finance

We invest in ARS of trusts which fund their long-term investments in student loans by issuing short-term senior and subordinated notes. Our maximum exposure to loss in these ARS trusts as at October 31, 2015 was $546 million (October 31, 2014 – $913 million). The decrease in our maximum exposure to loss is primarily related to the sale of ARS. Interest income from the ARS investments, which is reported in Net-interest income was, $6.9 million during the year (2014 – $7.2 million).

We also provide liquidity facilities to certain municipal bond Tender Option Bond (TOB) trusts in which we have an interest but do not consolidate because the residual certificates issued by the TOB trusts are held by third parties. As at October 31, 2015, our maximum exposure

to loss from these unconsolidated municipal bond TOB trusts was $856 million (October 31, 2014 – $749 million). The increase in our maximum exposure to loss relative to last year is primarily due to exchange rate differences. Fee revenue from provision of liquidity facilities to these entities reported in Non-interest income was $3.7 million during the year (2014 – $2.8 million).

We provide senior warehouse financing to unaffiliated structured entities that are established by third parties to acquire loans and issue a term collateralized loan obligation transaction. A portion of the proceeds from the sale of the term collateralized loan obligations certificates is used to fully repay the senior warehouse financing that we provide. As at October 31, 2015 our maximum exposure to loss associated with the outstanding senior warehouse financing facilities was $444 million (October 31, 2014 – $nil). The increase in our maximum exposure to loss relative to the prior year is related to an increase in the outstanding drawings on certain financing facilities.

Investment funds

We enter into fee-based equity derivative transactions with third parties including mutual funds, unit investment trusts and other investment funds. These transactions provide their investors with the desired exposure to the reference funds, and we economically hedge our exposure from these derivatives by investing in those third party managed reference funds. Our maximum exposure as at October 31, 2015, which is primarily related to our investments in such reference funds, was $2.6 billion (October 31, 2014 – $3.4 billion). The decrease in our maximum exposure compared to last year is primarily due to the liquidation of certain reference funds in response to new regulatory requirements in the U.S.

We also provide liquidity facilities to certain third party investment funds. The funds issue unsecured variable-rate preferred shares and invest in portfolios of tax exempt bonds. As at October 31, 2015, our maximum exposure to these funds was $744 million (October 31, 2014 – $641 million). The increase in our maximum exposure compared to last year is primarily due to exchange rate differences.

Third-party securitization vehicles

We hold interests in certain unconsolidated third-party securitization vehicles, which are structured entities. We, as well as other financial institutions, are obligated to provide funding to these entities up to our maximum commitment level and are exposed to credit losses on the underlying assets after various credit enhancements. As at October 31, 2015, our maximum exposure to loss in these entities was $9.7 billion (October 31, 2014 – $2.4 billion). The increase in our maximum exposure compared to last year reflects additional securitized assets in these vehicles and exchange rate fluctuations. Interest and non-interest income earned in respect of these investments was $56 million (2014 – $20 million).

Guarantees, retail and commercial commitments

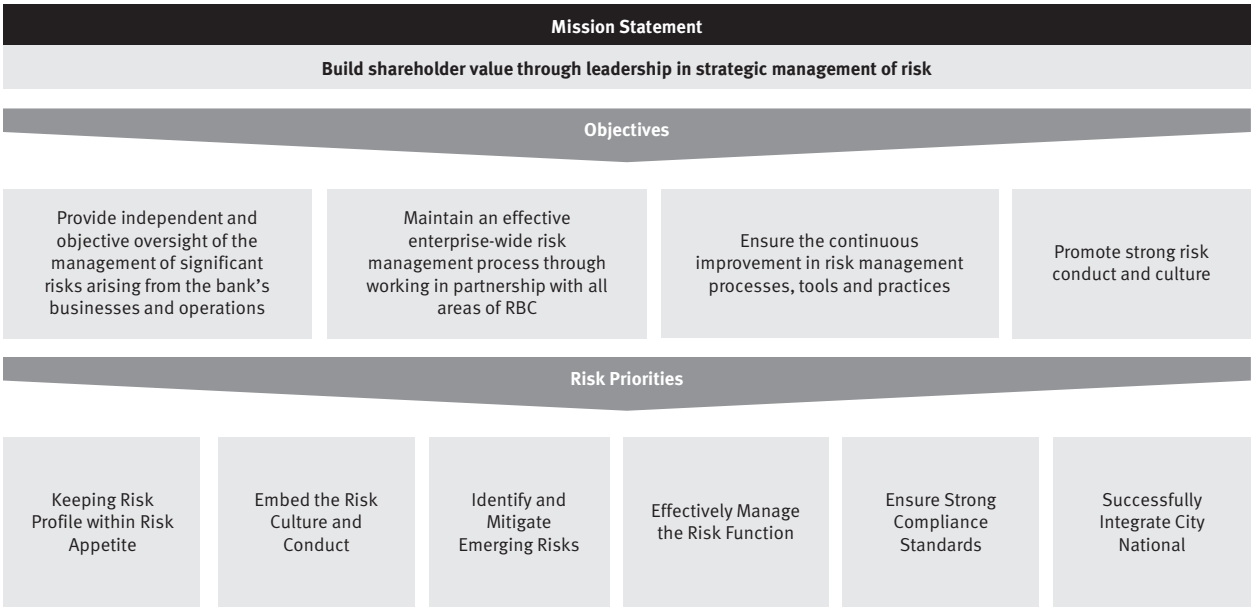
We provide guarantees and commitments to our clients that expose us to liquidity and funding risks. Our maximum potential amount of future payments in relation to our commitments and guarantee products as at October 31, 2015 amounted to $315 billion compared to $259 billion last year. The increase compared to last year relates primarily to business growth and the impact of exchange rate fluctuations in other credit-related commitments and securities lending indemnifications. Refer to Liquidity and funding risk and Note 26 to our audited 2015 Annual Consolidated Financial Statements for details regarding our guarantees and commitments.

Risk management

Overview

The ability to manage risk well is a core competency at RBC, and is supported by strong Risk Conduct and Culture, and an effective risk management approach. RBC defines risk as the potential for loss or an undesirable outcome with respect to volatility of actual earnings in relation to expected earnings, capital adequacy or liquidity. Organizational design and governance processes ensure that our Group Risk Management (GRM) function is independent from the businesses it supports.

We manage our risks by seeking to ensure that business activities and transactions provide an appropriate balance of return for the risks assumed and remain within our Risk Appetite, which is collectively managed throughout RBC, through adherence to our Enterprise Risk Appetite Framework. Our major risk categories include credit, market, liquidity, insurance, operational, regulatory compliance, strategic, reputation, legal and regulatory environment, competitive, and systemic risk. In order to avoid excessive concentration of risks, we strive to diversify our business lines, products and sector exposures. Our objectives and the corresponding priorities are guided by GRM's mission statement, which is to build shareholder value through leadership in the strategic management of risk, as shown below.



2015 Accomplishments

Throughout 2015, we have continued to take a prudent approach to risk management, as evidenced by the fact that we:

- Kept our Risk Profile within Risk Appetite despite economic challenges
- Maintained strong credit quality with a PCL as a percentage of average net loans and acceptances ratio of 24 bps, lower than in 2014 and 2013
- Maintained strong credit ratings
- Avoided major operational risk events
- Ensured sound management of regulatory compliance risk
- Further enhanced stress-testing capabilities
- Increased focus on Risk Conduct and Culture

Risk management principles

The following general principles apply to the management of risk at RBC:

1. **Effective balancing of risk and reward** by aligning business strategy with Risk Appetite, avoiding excessive concentration of risk through diversification, pricing appropriately for risk, mitigating risk through preventive and detective controls and transferring risk to third parties.
2. **Shared responsibility for risk management** as business segments are responsible for active management of their risks, with direction and oversight provided by GRM and other corporate functions groups.
3. **Business decisions are based on an understanding of risk** as we perform rigorous assessment of risks in relationships, products, transactions and other business activities.
4. **Avoid activities that are not consistent with our values, Code of Conduct or policies**, which contributes to the protection of our reputation.
5. **Proper focus on clients reduces our risks** by knowing our clients and ensuring that all products and transactions are suitable for and understood by our clients.
6. **Use of judgment and common sense** in order to manage risk throughout the organization.
7. **Be operationally prepared for a potential crisis** in order to maintain agility and readiness to respond to potential disruptors to the financial industry.

Top and emerging risks

Our view of risks is not static. An important component of our enterprise risk management approach is to ensure that top risks which are evolving or emerging risks are appropriately identified, managed, and incorporated into existing enterprise risk management assessment, measurement, monitoring and escalation processes.

These practices ensure management is forward-looking in its assessment of risks to the organization. Identification of top and emerging risks occurs in the course of businesses developing and pursuing approved strategies and as part of the execution of risk oversight responsibilities by GRM, Finance, Corporate Treasury, Global Compliance and other control functions.

Top and emerging risks occur as a result of exogenous factors, such as changes in the macroeconomic or regulatory environment, or endogenous factors, such as changes to our strategic imperatives, or failure to adapt to an evolving competitive or operational environment.

A top risk is an existing, significant risk that can potentially affect our earnings or capital within a one-year time horizon.

An emerging risk has a lower probability of occurring within a one-year horizon, but, in the event it materializes, can have a significant adverse impact on our ability to achieve our goals.

Top risks	Emerging risks
Weak oil and gas prices	Financial instability arising from the growth of the shadow banking system
High levels of Canadian household debt	Increased exposure to central clearing counterparties
Cybersecurity	Disruptive financial technology companies
Fraud	Conduct risk
Anti-Money Laundering	Litigation risk
Processing and execution risk	Increasing complexity of regulation
Exposure to more volatile sectors	

Details of the more pressing top and emerging risks we are facing are discussed below.

Weak oil and gas prices

Oil prices have continued to be low throughout 2015 and are forecast to remain depressed in the near future. This has had a severe, direct impact on the energy sector and has led, indirectly, to a softening of the housing market in Alberta. We have performed a number of low oil price stress tests, which focus specifically on the impact to our retail and wholesale portfolios. While we could see a rise in PCL, the overall magnitude depends upon how long oil prices stay low and how our corporate clients undertake management actions of their own. In our view, our exposure to weak oil and gas prices remains within our risk appetite.

High levels of Canadian household debt

Canadian household debt remains elevated as persistently low interest rates continue to fuel strong home sales, supporting home prices and contributing to an upward trend in mortgage credit growth. The risks surrounding elevated credit balances largely stem from households' continued ability to manage existing debt repayments when interest rates rise and a greater share of disposable income is needed to make payments. Additional risk stems from the potential for high household debt to amplify the impact of an external shock to the Canadian economy and/or extended downturn in domestic activity. The combination of increasing unemployment, rising interest rates, and a downturn in real estate markets would pose a risk to the credit quality of our retail lending portfolio. We actively manage our lending portfolios and stress test them against various scenarios. Our stress testing shows that the vast majority of our mortgage clients have sufficient capacity to absorb interest rate increases in the ranges currently forecasted. For further discussion relating to our retail portfolio, refer to the Credit risk section.

Cybersecurity

Cybersecurity has become an increasingly problematic issue, not only for the financial services sector, but for other industries in Canada and around the globe. Cyber-attacks in the industry are increasing in sophistication and are often focused on compromising sensitive data for inappropriate use or disrupting business operations. Such an attack could compromise our confidential information as well as that of our clients and third parties with whom we interact and may result in negative consequences, including remediation costs, loss of revenue, additional regulatory scrutiny, litigation and reputational damage. As a result, RBC continually monitors for malicious threats and adapts accordingly in an effort to ensure we maintain high privacy and security standards. The bank leverages and invests in advancements in cyber defense technologies to support our business model, protect our systems and enhance the experience of our clients on a global basis by employing industry best practices and provide our customers with confidence in their financial transactions. Our investments continue to manage the risks we face today and position the bank for the evolving threat landscape.

Anti-Money Laundering

RBC is subject to a dynamic set of anti-money laundering/anti-terrorist financing, economic sanctions and anti-bribery/anti-corruption (AML) laws and regulations across the multiple jurisdictions in which we operate. As the scope of criminal activities such as tax evasion, human trafficking, bribery and corruption continues to expand, regulators worldwide are intensifying regulatory requirements and increasing enforcement actions and penalties for those who fail to comply. As a consequence, money laundering, terrorist financing, economic sanctions violations, bribery and corruption (Money Laundering) pose significant legal, regulatory, financial and reputational risk to RBC. We are committed to the management of AML risk and have implemented advanced and evolving AML policies, processes and controls (Global AML Program) to mitigate the risk of Money Laundering activities and meet our regulatory obligations to deter, detect and report such activities. RBC has appointed a Senior Vice President, Financial Crimes and Chief Anti-Money Laundering Officer who is responsible for the independent oversight and implementation of the Global AML Program. The Global AML Program addresses our changing business activities, regulatory requirements and international best practices. RBC continuously enhances transaction monitoring, client due diligence and risk assessment processes and

practices to prevent or detect activities that pose potential risk to RBC. Internally, annual AML training is mandatory for all applicable employees, including senior management and the Board of Directors, to help ensure compliance and to educate on emerging AML trends. We meet our regulatory obligation to perform independent effectiveness testing by conducting regular assessments on the adequacy of the Global AML Program.

Exposure to more volatile sectors
Our wholesale loan growth has been strong in recent years, largely driven by Capital Markets. Demand for lending related to commercial real estate and leveraged financing has been particularly strong. To manage risks associated with this increase, we focus on diversification, driven by limits on single name, country and industry exposures across all businesses, portfolios and transactions. We continue to adhere to strict lending standards as we grow our wholesale credit portfolio. We also stress test our portfolio to assist in evaluating the potential impact of severe economic conditions.

Enterprise risk management

Under the oversight of the Board of Directors and Senior Management, the Enterprise Risk Management Framework provides an overview of our enterprise-wide programs for managing risk, including identifying, assessing, measuring, controlling, monitoring and reporting on the significant risks that face the organization. While Risk Appetite encompasses "what" risks RBC is able and willing to take, Risk Conduct and Culture articulates "how" we expect to take those risks.

Risk governance

The Risk Governance model at RBC is well-established. The Board of Directors oversees the implementation of our risk management framework, establishes the tone at the top, approves our Risk Appetite, provides oversight and carries out its risk management mandate primarily through its committees which include the Risk Committee, the Audit Committee, the Governance Committee and the Human Resources Committee.

The purpose of the Risk Committee is to oversee our risk management program. The Risk Committee's oversight role is designed to ensure that the risk management function is adequately independent from the businesses whose activities it reviews, and that the policies, procedures and controls used by management are sufficient to keep risks within our Risk Appetite.

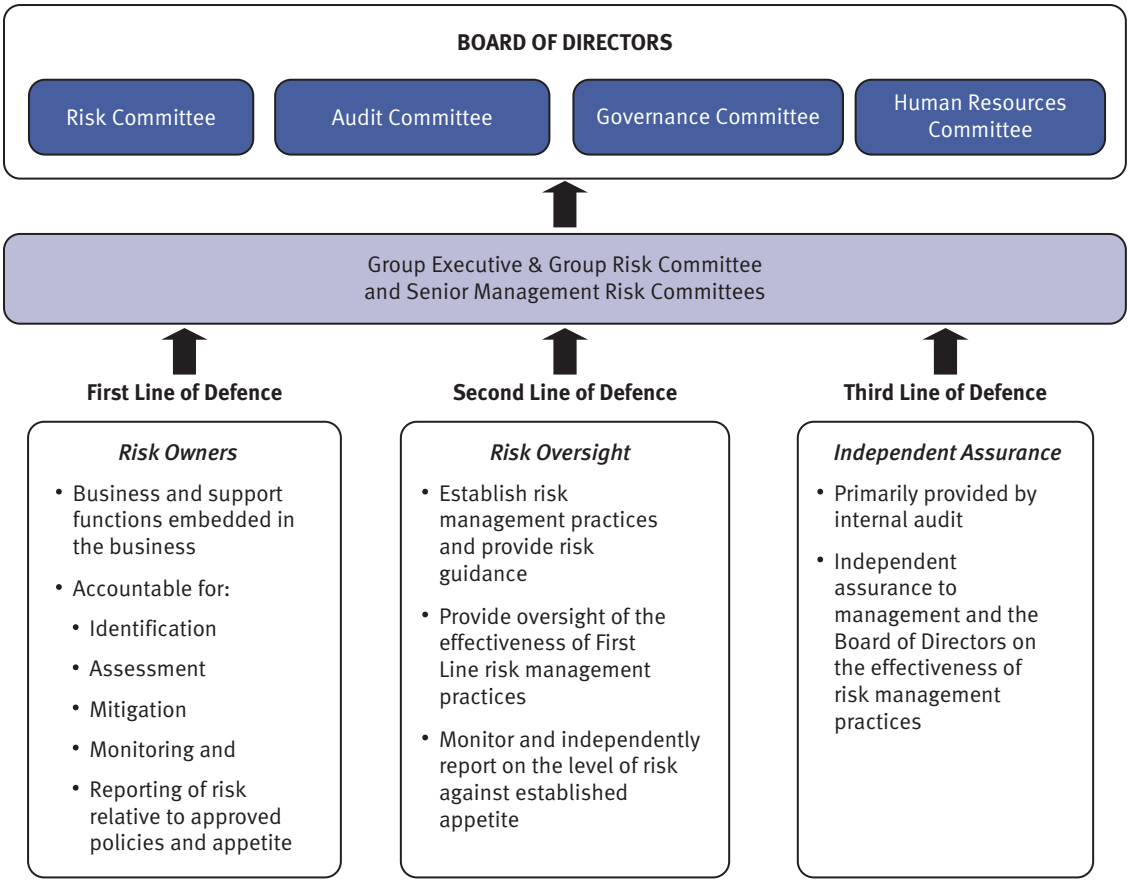
The Audit Committee also has a risk oversight role through its responsibilities to review our internal controls and the control environment, and to ensure that policies related to capital management and adequacy are in place and effective. The Audit Committee regularly reviews reporting on legal and regulatory compliance risks, including significant litigation issues.

The Governance Committee monitors the effectiveness of our corporate governance, reviews policies and programs, is responsible for the Code of Conduct, reviews our efforts to understand and meet changing public values and expectations, and identifies, assesses and advises management on public affairs issues related to our image and reputation.

The Human Resources Committee, along with the Risk Committee, actively oversees the design and operation of our compensation system.

The Group Executive (GE) is comprised of our senior management team and is led by the President & Chief Executive Officer (CEO) and includes the Chief Risk Officer (CRO) and Chief Administrative Officer & Chief Financial Officer (CAO & CFO). The GE is responsible for our strategy and its execution. The GE actively shapes and recommends our Risk Appetite for approval by the Board of Directors. The GE's risk oversight role is executed primarily through the mandate of the Group Risk Committee (GRC). The GRC, with the assistance of its supporting senior management risk committees, is responsible for ensuring that our overall Risk Profile is consistent with our strategic objectives and remains within our Risk Appetite and that there are ongoing, appropriate and effective risk management processes.

Employees at all levels of the organization are responsible for managing the day-to-day risks that arise in the context of their mandate. As shown below, RBC uses a Three Lines of Defence Governance Model to manage risks across the enterprise.



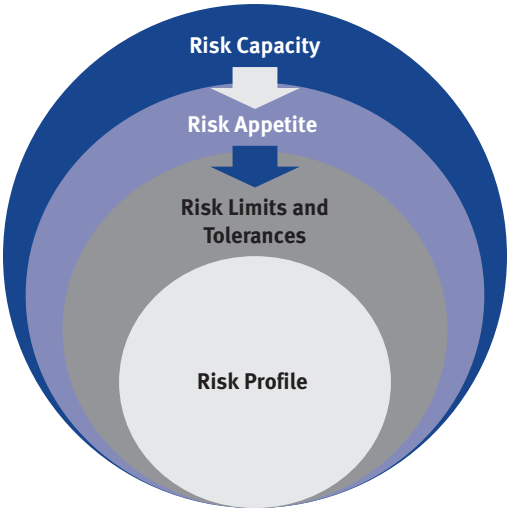
Risk Appetite

Our Risk Appetite is the amount and type of risk we are able and willing to accept in the pursuit of our business objectives. Our approach to articulating Risk Appetite is focused around three key concepts:

- The amount of Earnings at Risk that is determined to be acceptable over an economic cycle, using an expected future loss lens;
- The amount of Capital at Risk that is determined to be acceptable under stress, using an unexpected future loss lens; and
- Ensuring adequate liquidity throughout times of stress.

Our Risk Appetite Framework has several major components as follows:

- Define our Risk Capacity by identifying regulatory constraints that restrict our ability to accept risk.
- Establish and regularly confirm our Risk Appetite, comprised of drivers that are the business objectives which include risks we must accept to generate desired financial returns, and self-imposed constraints that limit or otherwise influence the amount of risk undertaken. Our self-imposed constraints include:
  - Manage exposure to future losses
  - Manage volatility of earnings
  - Avoid excessive concentrations of risk
  - Low exposure to stress events
  - Ensure sound management of liquidity and funding risk
  - Ensure sound management of regulatory compliance risk and operational risk
  - Ensure capital adequacy by maintaining capital ratios in excess of rating agencies' and regulatory expectations
  - Maintain strong credit ratings
  - Maintain Risk Profile that is in the top half of our peer group
- Set Risk Limits and Tolerances to ensure that risk-taking activities are within Risk Appetite.
- Assess our Risk Posture to confirm whether our strategic priorities entail taking on more risk over a one year time frame, using a scale of contracting, stable or expanding.
- Regularly measure and evaluate our Risk Profile, representing the risks we are exposed to, relative to our Risk Appetite, and ensure appropriate action is taken to prevent Risk Profile from surpassing Risk Appetite.



The Enterprise Risk Appetite Framework is structured in such a way that it can be applied at the enterprise, business segment, business unit, and legal entity levels. Risk Appetite is integrated into our business strategies and capital plan. We also ensure that the business strategy aligns with the enterprise and business segment level Risk Appetite.

Risk Conduct and Culture
We define Risk Conduct and Culture as a shared set of behavioural norms that sustain our core values, protect our clients, safeguard our shareholders' value, and support market integrity and stability from undue risk.

The following elements are foundational to our effective Risk Conduct and Culture:

- Communicate expectations in a highly visible, clear, consistent and ongoing manner – "Tone from the top"
- Hold people accountable across all businesses in accordance with the Three Lines of Defence governance model – "Accountability"
- Enable the right motivations by rewarding individuals and groups for taking the right risks in an informed manner – "Incentives"
- Effective communication of risk issues – "Constructive challenge"
- Provide escalation paths
- Take the right risks in order to keep Risk Profile within Risk Appetite

The desired Risk Conduct and Culture flows from RBC Values, Code of Conduct and Risk Management Principles, which include:

- Integrity
- Accountability for risk management
- Compliance with risk policies
- Integration of risk in decision-making
- Timely escalation and reporting of risk issues
- Communication of risk issues

Our enterprise risk management practices have led to the integration of risk disciplines into decision-making and all other key business processes. For example, our compensation programs and practices are risk-based and designed to reinforce desired risk behaviours and disincent risk-taking outside of risk limits. Compensation programs align with sound risk management principles and sustainable performance.

Risk metrics are increasingly integrated into how employees are compensated, assessed and developed:

- Risk-adjusted performance metrics are in place for senior management through to all direct reports of business line heads and business unit heads.
- Talent management and succession planning at senior levels consider risk competencies and experience.
- The approach to considering Risk Conduct and Culture as one of the criteria for promotion continues to evolve across individual businesses.
- Proportionate consequences and disciplinary actions are used to address compliance violations or policy breaches quickly and consistently across the organization, with an enterprise-wide, global approach established via the Code of Conduct governance requirements.

Risk measurement
Our ability to measure risks is a key component of our enterprise-wide risk and capital management processes. Certain measurement methodologies are common to a number of risk types, while others only apply to a single risk type. While quantitative risk measurement is important, we also place reliance on qualitative factors. Our measurement models and techniques are continually subject to independent assessment for appropriateness and reliability. For those risk types that are difficult to quantify, we place greater emphasis on qualitative risk factors and assessment of activities to gauge the overall level of risk to ensure that they are within our Risk Appetite. In addition, judgmental risk measures can still be developed, and techniques such as stress testing, and scenario and sensitivity analyses can also be used to assess and measure risks.

Quantifying expected loss
Expected loss is used to assess earnings at risk and is a representation of losses that are statistically expected to occur in the normal course of business in a given period of time. For credit risk, the key parameters used to measure our exposure to expected loss are probability of default, loss given default, and exposure at default. For market risk, a statistical technique known as Value-at-Risk (VaR) is used to measure losses under normal market conditions.

Quantifying unexpected loss
Unexpected loss is used to assess capital at risk and is a statistical estimate of the amount by which actual losses can exceed expected loss over a specified time horizon, measured at a specified level of confidence. We hold capital to withstand these unexpected losses, should they occur. For further details, refer to the Capital management section.

Stress testing
Stress testing examines potential impacts arising from exceptional but plausible adverse events, and is an important component of our risk management framework. Stress testing results are used in:

- Monitoring our Risk Profile relative to Risk Appetite in terms of earnings and capital at risk;
- Setting limits;
- Identifying key risks to and potential shifts in our capital and liquidity levels, and our financial position;
- Enhancing our understanding of available mitigating actions in response to adverse events; and
- Assessing the adequacy of our target capital levels.

Our enterprise-wide stress tests evaluate key balance sheet, income statement, leverage, capital, and liquidity impacts arising from risk exposures and changes in earnings. The results are used by the GRC, the Board of Directors and senior management risk committees to understand our performance drivers under stress, and review stressed capital, leverage, and liquidity ratios against regulatory thresholds and internal targets. The results are also incorporated into our Internal Capital Adequacy Assessment Process (ICAAP) and Capital Plan analyses.

We annually evaluate a number of enterprise-wide stress scenarios over a multi-year horizon, featuring a range of severities. Our Board of Directors reviews the recommended scenarios, and GRM leads the scenario assessment process. Results from across the organization are integrated to develop an enterprise-wide view of the impacts, with input from subject matter experts in GRM, Corporate Treasury, Finance, and Economics. Recent scenarios evaluated include global recessions, Canadian recessions, and energy price shocks.

Ongoing stress testing and scenario analyses within specific risk types such as market risk, liquidity risk, structural interest rate risk, retail and wholesale credit risk, operational risk, and insurance risk supplement and support our enterprise-wide analyses. Results from these risk-specific programs are used in a variety of decision-making processes including risk limit setting, portfolio composition evaluation, Risk Appetite articulation, and business strategy implementation.

In addition to ongoing enterprise-wide and risk specific stress testing programs, we also use ad-hoc and reverse stress testing to deepen our knowledge of the risks we face. Ad-hoc stress tests are one-off analyses used to investigate developing conditions or stress a particular portfolio in more depth. Reverse stress tests, starting with a severe outcome and aiming to reverse-engineer scenarios that might lead to it, are used in risk identification and understanding of risk/return boundaries.

In addition to internal stress tests, we participate in a number of regulator-required stress test exercises at both the consolidated and subsidiary levels.

Back-testing

We back-test many market and credit risk parameters, including Probability of default, Loss given default, and Usage given default. Back-testing is performed on a quarterly basis by comparing the realized values to the parameter estimates that are currently used to ensure the parameters remain appropriate for regulatory and economic capital calculations.

Validation of measurement models

We widely use models for many purposes, including valuation of financial products and the measurement and management of different types of risk. Models are subject to validation by qualified employees that are sufficiently independent of the model design and development, or by approved external parties. Model validation is a comprehensive independent review of a model that evaluates the applicability of the model's logic, its assumptions and theoretical underpinnings, the appropriateness of input data sources, the interpretation of the model results, and the strategic use of the model outputs. By reviewing and evaluating a model's assumptions and limitations, initial and ongoing model validation helps ensure the model incorporates current market developments and industry trends. Our model validation process is designed to ensure that all material underlying model risk factors are identified and successfully mitigated.

Risk control

Our enterprise-wide risk management approach is supported by a comprehensive set of risk controls. The controls are anchored by our Enterprise Risk Management and Risk-Specific Frameworks. These frameworks lay the foundation for the development and communication of policies, establishment of formal risk review and approval processes, and the establishment of delegated authorities and limits. The implementation of robust risk controls enables the optimization of risk and return on both a portfolio and a transactional basis.

Our risk management frameworks and policies are organized into the following five levels:

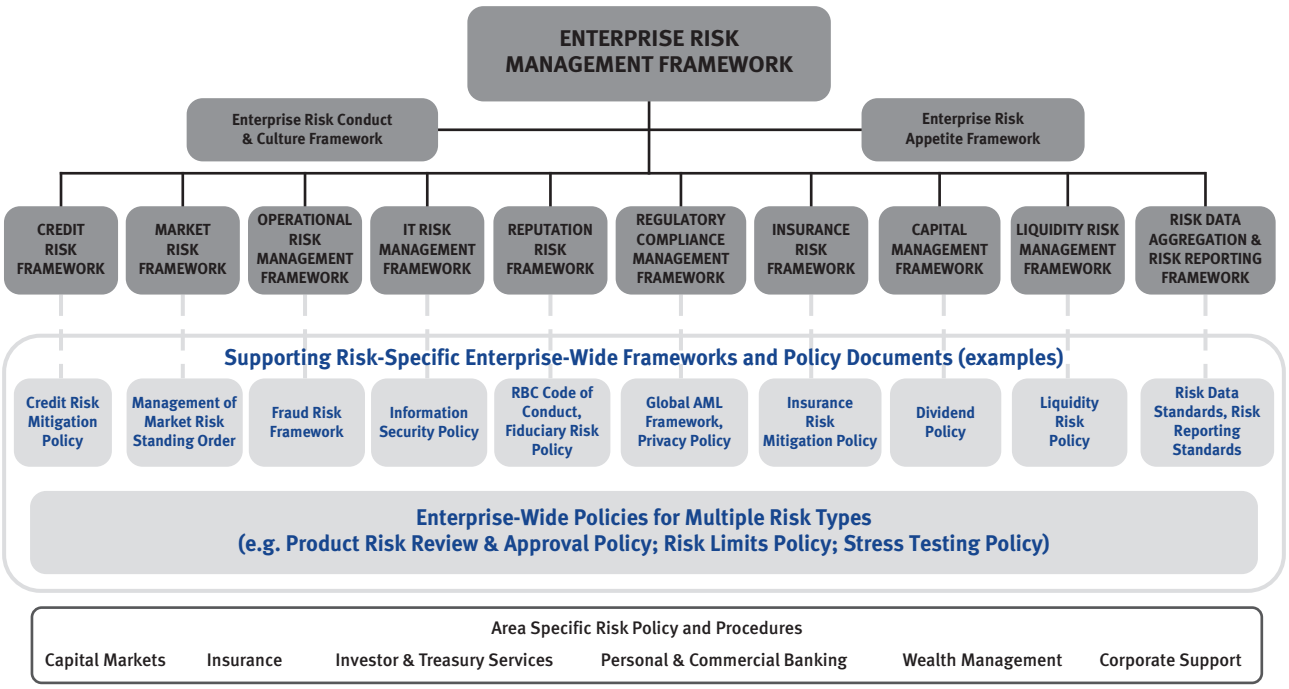
Level 1: Enterprise Risk Management Framework provides an overview of our enterprise-wide program for identifying, assessing, measuring, controlling, monitoring and reporting on the significant risks we face. This framework is underpinned by our Risk Appetite Framework and Risk Conduct and Culture Framework.

Level 2: Risk-Specific Frameworks elaborate on each specific risk type and the mechanisms for identifying, measuring, monitoring and reporting of our principal risks; key policies; and roles and responsibilities.

Level 3: Enterprise Risk Policies articulate minimum requirements, within which businesses and employees must operate.

Level 4: "Multi-risk" Enterprise Risk Policies govern activities such as product risk review and approval, stress testing, risk limits, risk approval authorities and model risk management.

Level 5: Business Segments and Corporate Support – Specific Policies and Procedures are established to manage the risks that are unique to their operations.



The approval hierarchy for risk frameworks and policy documents is as follows:

- **Board of Directors or Board Committees**
- **Senior Management Committees** (e.g. Policy Review Committee, Ethics & Compliance Committee, Asset Liability Committee) for most other frameworks and policies. Board or Board Committee approval is required in some instances (e.g. RBC Code of Conduct, Dividend Policy, and AML Framework)
- **Generally within businesses or Corporate Support committees.** GRM approval required if there are significant risk implications

Risk review and approval processes
Risk review and approval processes are established by GRM based on the nature, size and complexity of the risk involved. In general, the risk review and approval process involves a formal review and approval by an individual, group or committee that is independent from the originator. The approval responsibilities are governed by delegated authorities based on the following categories: transactions, structured credit, projects and initiatives, and new products and services.

Authorities and limits
The Risk Committee of the Board of Directors delegates credit, market and insurance risk authorities to the President & CEO and the CRO. The delegated authorities allow these officers to approve single name, geographic (country and region) and industry sector exposures within defined parameters to manage concentration risk, establish underwriting and inventory limits for trading and investment banking activities and set market risk tolerances.

The Board of Directors also delegates liquidity risk authorities to the President & CEO, CAO & CFO, and CRO. These limits act as a key risk control designed to ensure that reliable and cost-effective sources of cash or its equivalent are available to satisfy our current and prospective commitments.

Reporting
Enterprise and business segment level risk monitoring and reporting are critical components of our enterprise risk management program and support the ability of senior management and the Board of Directors to effectively perform their risk management and oversight responsibilities. On a quarterly basis, we provide to senior management and the Board of Directors the Enterprise Risk Report which includes a comprehensive review of our Risk Profile relative to our Risk Appetite and focuses on the range of risks we face along with an analysis of the related issues and trends. In addition to our regular risk monitoring, other risk specific presentations are provided to and discussed with senior management and the Board of Directors on top and emerging risks or changes in our Risk Profile.

Risk Pyramid
We use a pyramid to identify and categorize our principal risks. The Risk Pyramid provides a common language and discipline for the identification and assessment of risk in existing businesses, new businesses, products or initiatives, and acquisitions and alliances. It is maintained by GRM and reviewed regularly to ensure all key risks are reflected and ranked appropriately.

The placement of the principal risks within the Risk Pyramid is a function of two primary criteria:

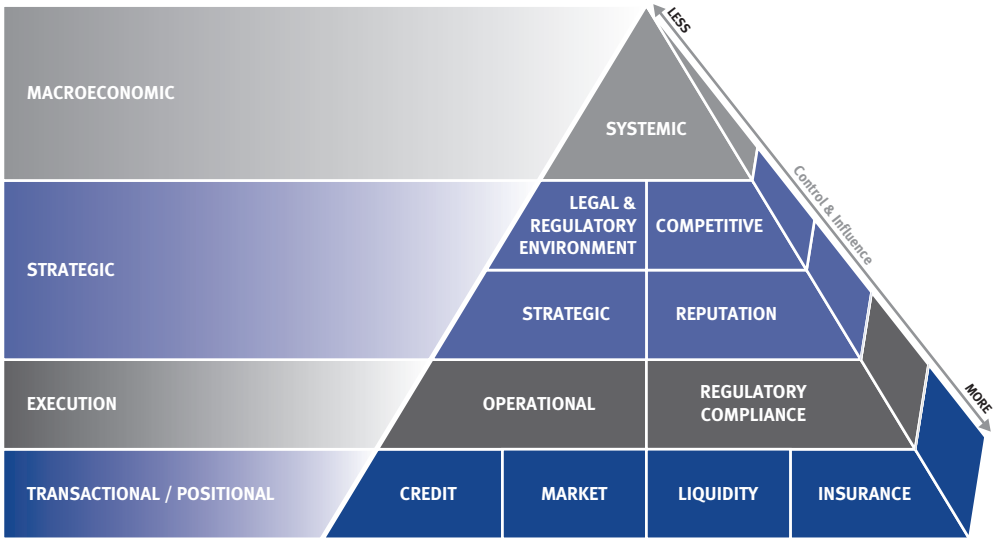
- *Risk Drivers* – Key factors that would have a strong influence on whether or not one or more of our risks will materialize. We have identified four key risk drivers: Macroeconomic, Strategic, Execution and Transactional / Positional; and
- *Control and Influence* – The risk types are organized vertically from the top of the pyramid to its base according to the relative degree of control and influence RBC is considered to have over each risk type.

Risk Drivers

- Macroeconomic: Adverse changes in the macroeconomic environment in which we operate can lead to a partial or total collapse of the real economy or the financial system in any of the regions in which we have a presence. Examples include a rapid deterioration in the Canadian housing market, a severe North American recession, and a downturn in China.
- Strategic: The strategic choices we make in terms of business mix will determine how our risk profile changes. Examples include credit portfolio mix, acquisitions, responding to the threats posed by non-traditional competitors, and responding to proposed changes in the regulatory framework.
- Execution: The complexity and scope of our operations across the globe exposes us to operational and regulatory compliance risks, including fraud, anti-money laundering, cybersecurity and conduct/fiduciary risk.
- Transactional/Positional: This driver of risk presents a more traditional risk perspective. This involves the risk of credit or market losses arising from the lending transactions and balance sheet positions we undertake every day.

The base of the pyramid – The risk categories along the base of the Risk Pyramid are those over which we have the greatest level of control and influence. We understand these risks and earn revenue by taking them. These are credit, market, liquidity and insurance risks. Operational risk and regulatory compliance risk, while still viewed as risks over which we have greater level of control and influence, are ranked higher on the pyramid than the other highly controllable risks. This ranking acknowledges the level of controllability associated with people, systems and external events.

The top of the pyramid – Systemic risk is placed at the top of the Risk Pyramid, and is generally considered the least controllable type of risk arising from the business environment impacting us. However, we have in place measures for mitigating the impacts of systemic risk such as stress testing programs and diversification. We are diversified across various business models, funding sources, products and geographies. Legal and regulatory environment and competitive risks, which can be viewed as somewhat controllable, can be influenced through our role as a corporate entity, and as an active participant in the Canadian and global financial services industry.



The shaded text along with the tables specifically marked with an asterisk(*) in the following sections of the MD&A represent our disclosures on credit, market and liquidity and funding risks in accordance with IFRS 7, *Financial Instruments: Disclosures*, and include discussion on how we measure our risks and the objectives, policies and methodologies for managing these risks. Therefore, these shaded text and tables represent an integral part of our 2015 Annual Consolidated Financial Statements.

Credit risk

Credit risk is the risk of loss associated with an obligor's potential inability or unwillingness to fulfill its contractual obligations. Credit risk may arise directly from the risk of default of a primary obligor (e.g. issuer, debtor, counterparty, borrower or policyholder), or indirectly from a secondary obligor (e.g. guarantor or reinsurer). Credit risk includes counterparty credit risk from both trading and non-trading activities.

The failure to effectively manage credit risk across all our products, services and activities can have a direct, immediate and material impact on our earnings and reputation.

We balance our risk and return by:

- Ensuring credit quality is not compromised for growth;
- Diversifying credit risks in transactions, relationships and portfolios;
- Using our credit risk rating and scoring systems or other approved credit risk assessment or rating methodologies, policies and tools;
- Pricing appropriately for the credit risk taken;
- Applying consistent credit risk exposure measurements;
- Mitigating credit risk through preventive and detective controls;
- Transferring credit risk to third parties, where appropriate, through approved credit risk mitigation techniques, including hedging activities and insurance coverage; and
- Ongoing credit risk monitoring and administration.

Risk measurement – Credit risk

We quantify credit risk, at both the individual obligor and portfolio levels, to manage expected credit losses in order to limit earnings volatility and minimize unexpected losses.

We employ different risk measurement processes for our wholesale and retail credit portfolios. The wholesale portfolio comprises businesses, sovereigns, public sector entities, banks and other financial institutions, and certain individuals and small businesses that are managed on an individual client basis. The retail portfolio is comprised of residential mortgages, personal, credit card, and small business loans, which are managed on a pooled basis. Credit risk rating systems are designed to assess and quantify the risk inherent in credit activities in an accurate and consistent manner.

In measuring credit risk and setting regulatory capital, two principal approaches are available: Internal Ratings Based Approach (IRB) and Standardized Approach. Most of our credit risk exposure is measured under the IRB.

Economic capital, which is our internal quantification of risks, is used extensively for performance measurement, limit setting and internal capital adequacy.

The key parameters that form the basis of our credit risk measures for both regulatory and economic capital are:

- Probability of default (PD): An estimated percentage that represents the likelihood of default within a given time period of an obligor for a specific rating grade or for a particular pool of exposure.
- Exposure at default (EAD): An amount expected to be owed by an obligor at the time of default.
- Loss given default (LGD): An estimated percentage of EAD that is not expected to be recovered during the collections and recovery process.

These parameters are determined based primarily on historical experience from internal credit risk rating systems in accordance with supervisory standards, and are independently validated and updated on a regular basis.

Under the Standardized Approach, used primarily for Investor Services and our Caribbean and U.S. banking operations, risk-weights prescribed by the Office of the Superintendent of Financial Institutions (OSFI) are used to calculate risk-weighted assets (RWA) for credit risk exposure.

Wholesale credit risk

The wholesale credit risk rating system is designed to measure the credit risk inherent in our wholesale credit activities.

Each obligor is assigned a borrower risk rating (BRR), reflecting an assessment of the credit quality of the obligor. Each BRR has a PD assigned to it. The BRR differentiates the riskiness of obligors and represents our evaluation of the obligor's ability and willingness to meet its contractual obligations on time over a three year time horizon. The assignment of BRRs is based on the evaluation of the obligor's business risk and financial risk and is based on fundamental credit analysis. The determination of the PD associated with each BRR relies primarily on internal default history since the early 2000s augmented where necessary with reference to external data. PD estimates are designed to be a conservative reflection of our experience across the economic cycle including periods of stress or economic downturn.

Our rating system is designed to stratify obligors into 22 grades, consistent with the external rating agencies. The following table aligns the relative rankings of our 22-grade internal risk ratings with the ratings used by S&P and Moody's.

Internal ratings map* **Table 43**

Ratings	BRR	S&P	Moody's	Description
1	1+	AAA	Aaa	Investment Grade
2	1H	AA+	Aa1	
3	1M	AA	Aa2	
4	1L	AA-	Aa3	
5	2+H	A+	A1	
6	2+M	A	A2	
7	2+L	A-	A3	
8	2H	BBB+	Baa1	
9	2M	BBB	Baa2	
10	2L	BBB-	Baa3	
11	2-H	BB+	Ba1	Non-investment Grade
12	2-M	BB	Ba2	
13	2-L	BB-	Ba3	
14	3+H	B+	B1	
15	3+M	B	B2	
16	3+L	B-	B3	
17	3H	CCC+	Caa1	
18	3M	CCC	Caa2	
19	3L	CCC-	Caa3	
20	4	CC	Ca	
21	5	C	C	Impaired
22	6	Bankruptcy	Bankruptcy	

* This table represents an integral part of our 2015 Annual Consolidated Financial Statements.

Each credit facility is assigned an LGD rate. LGD rates are largely driven by factors that will impact the extent of any losses in the event the obligor defaults including seniority of debt, collateral security, and the industry sector in which the obligor operates. Estimated LGD rates draw primarily on internal loss experience since the late 1990s. Where we have limited internal loss data we also look to external data to inform the estimation. LGD rates are estimated to reflect conditions that might be expected to prevail in a period of an economic downturn, with additional conservatism added to reflect data limitations and judgments made in the estimation process.

EAD is estimated based on the current exposure to the obligor and the possible future changes in that exposure driven by factors such as the nature of the credit commitment and the type of obligor. As with LGD, rates are estimated to reflect downturn conditions, with added conservatism to reflect data and modeling uncertainty.

Estimates of PD, LGD and EAD are updated, and then validated and back-tested by an independent team within the bank, on an annual basis. In addition, quarterly monitoring and back-testing is performed by the estimation team. These ratings and risk measurements are used in the determination of our expected losses as well as economic and regulatory capital, setting of risk limits, portfolio management and product pricing.

Counterparty credit risk

Counterparty credit risk is the risk that a party with whom the bank has entered into a financial or non-financial contract will fail to fulfill its contractual agreement and default on the obligation. It is measured not only by its current value, but also by how this value can move as market conditions change. Counterparty credit risk usually occurs in trading-related derivative and repo-style transactions.

Derivative transactions include financial (e.g. forwards, futures, swaps and options) and non-financial derivatives (e.g. precious metal and commodities). For further details on our derivative instruments and credit risk mitigation, refer to Note 8 of our 2015 Annual Consolidated Financial Statements.

Retail credit risk

Credit scoring is the primary risk rating system for assessing obligor and transaction risk for retail (scored) exposures. Credit scores along with decision strategies are employed in the acquisition of new clients and management of existing clients.

Retail exposures are managed on a pooled basis, with each pool consisting of a group or segment of exposures that possess similar homogeneous characteristics. Criteria used to pool exposures for risk quantification include behavioural score, product type (mortgages, credit cards, lines of credit and instalment loans), collateral type (chattel, liquid assets and real estate), utilization rate, loan-to-value, and the delinquency status (performing, delinquent and default) of the exposure. Regular monitoring and periodic adjustments & alignments are conducted to ensure that this process provides for a meaningful differentiation of risk.

The pools are also assessed based on credit risk parameters (PD and EAD) which consider borrower and transaction characteristics, including behavioural credit score, product type, utilization rate and delinquency status. LGD estimation is based on transaction specific factors, including product, loan-to-value and collateral types. All parameters are determined based on over 10 years of historical economic losses with the highest degree of granularity and sufficient margins of conservatism. Parameters are back-tested regularly and validated by an independent team within the bank.

The following table maps PD bands to various risk levels:

Internal ratings map* **Table 44**

PD bands	Description
0.000% – 1.718%	Low risk
1.719% – 6.430%	Medium risk
6.431% – 99.99%	High risk
100%	Impaired/Default

* This table represents an integral part of our 2015 Annual Consolidated Financial Statements.

Risk control – Credit risk

The Board of Directors and its committees, the GE, the GRC and other senior management risk committees work together to ensure a Credit Risk Management Framework and supporting policies, processes and procedures exist to manage credit risk and approve related credit risk limits. Reports are distributed to the Board of Directors, the GRC, and senior executives to keep them informed of our Risk Profile, including trending information and significant credit risk issues and shifts in exposures to ensure appropriate actions can be taken where necessary. Our enterprise-wide credit risk policies set out the minimum requirements for the management of credit risk in a variety of borrower, transactional and portfolio management contexts.

Credit policies are an integral component of our Credit Risk Management Framework and set out the minimum requirements for the management of credit risk as follows:

Credit risk assessment

- Mandatory use of credit risk rating and scoring systems.
- Consistent credit risk assessment criteria.
- Standard content requirements in credit application documents.

Credit risk mitigation

Structuring of transactions

- Specific credit policies and procedures set out the requirements for structuring transactions. Risk mitigants include the use of guarantees, collateral, seniority, loan-to-value requirements and covenants. Product-specific guidelines set out appropriate product structuring as well as client and guarantor criteria.

Collateral

- We often require obligors to pledge collateral as security when we advance credit. The extent of risk mitigation provided by collateral depends on the amount, type and quality of the collateral taken. Specific requirements relating to collateral valuation and management are documented in our credit risk management policies. The types of collateral used to secure credit or trading facilities within the bank are varied. For example, the majority of our Securities Finance and over-the-counter (OTC) derivatives activities are secured by cash and liquid Organisation for Economic Co-operation and Development (OECD) government securities. Wholesale lending is often secured by pledges of the assets of a business, such as accounts receivable, inventory, operating assets and commercial real estate. In our Canadian Banking business and Wealth Management segment, collateral typically consists of a pledge over a real estate property, or a portfolio of debt securities and equities trading on a recognized exchange.
- We are compliant with regulatory requirements that govern residential mortgage underwriting practices, including loan-to-value parameters and property valuation requirements. For further information regarding the quality of collateral used to secure residential mortgages, refer to table 53.

Credit derivatives

- Used as a tool to mitigate industry sector concentration and single-name exposure. For a more detailed description of the types of credit derivatives we enter into and how we manage related credit risk, refer to Note 8 of our 2015 Annual Consolidated Financial Statements.

Loan forbearance

In our overall management of borrower relationships, economic or legal reasons may necessitate forbearance to certain clients with respect to the original terms and conditions of their loans. We strive to identify borrowers in financial difficulty early and modify their loan terms in order to maximize collection and to avoid foreclosure, repossession, or other legal remedies. In these circumstances, a borrower may be granted concessions that would not otherwise be considered. We have specialized groups and formalized policies that direct the management of delinquent or defaulted borrowers. Examples of such concessions to retail borrowers may include rate reduction, principal forgiveness, and term extensions. Concessions to wholesale borrowers may include restructuring the agreements, modifying the original terms of the agreement and/or relaxation of covenants. For both retail and wholesale loans, the appropriate remediation techniques are based on the individual borrower's situation, the Bank's policy and the customer's willingness and capacity to meet the new arrangement. When a loan is restructured, the recorded investment in the loan is reduced as of the date of restructuring to the amount of the net cash flows receivable under the modified terms, discounted at the effective interest rate inherent in the loan (prior to restructuring). During 2015, the amount of loans restructured was not significant.

Product approval

- Proposals for credit products and services are comprehensively reviewed and approved under a risk assessment framework.

Credit portfolio management

- Concentration risk is defined as the risk arising from an over-concentration on single names, industry sectors, countries or credit products within the portfolio. Concentration risk results from large exposure to similar risks that are positively correlated such that their ability to meet contractual obligations could be similarly affected by changes in economic, political or other conditions.
- We manage credit exposures and limits to ensure alignment with Risk Appetite, to maintain our target business mix and to ensure that there is no undue risk concentration. Credit concentration limits are reviewed on a regular basis taking into account the business, economic, financial and regulatory environments.
- Our credit limits are established at the following levels: single name limits (notional and economic capital), underwriting risk limits, leveraged lending limits, geographic (country and region) limits (notional and economic capital), industry sector limits (notional and economic capital), and product and portfolio limits, where deemed necessary.

Gross credit risk exposure

Gross credit risk exposure is calculated based on the definitions provided under the Basel III framework. Under this method, risk exposure is calculated before taking into account any collateral and is inclusive of an estimate of potential future changes to that credit exposure. Gross credit risk is categorized into lending-related and other, and trading-related.

Lending-related and other includes:

- Loans and acceptances outstanding, undrawn commitments, and other exposures including contingent liabilities such as letters of credit and guarantees, available-for-sale (AFS) debt securities and deposits with financial institutions. Undrawn commitments represent an estimate of the contractual amount that may be drawn upon at the time of default of an obligor.

Trading-related credit includes:

- Repo-style transactions which include repurchase and reverse repurchase agreements and securities lending and borrowing transactions. For repo-style transactions, gross exposure represents the amount at which securities were initially financed, before taking into account collateral.
- Derivative amount which represents the credit equivalent amount, which is defined by OSFI as the replacement cost plus an add-on amount for potential future credit exposure.

Gross credit risk exposure by portfolio and sector* — **Table 45**

	As at											
	October 31 2015						October 31 2014					
	Lending-related and other			Trading-related			Lending-related and other			Trading-related		
	Loans and acceptances						Loans and acceptances					
(Millions of Canadian dollars)	Outstanding	Undrawn commitments (1)	Other (2)	Repo-style transactions	Derivatives (3)	Total exposure (4)	Outstanding	Undrawn commitments (1)	Other (2)	Repo-style transactions	Derivatives (3)	Total exposure (4)
Residential mortgages	$ 233,975	$ –	$ 206	$ –	$ –	$ 234,181	$ 219,257	$ –	$ 197	$ –	$ –	$ 219,454
Personal	94,346	78,885	154	–	–	173,385	96,021	83,965	154	–	–	180,140
Credit cards	15,859	24,827	–	–	–	40,686	14,924	21,689	–	–	–	36,613
Small business (5)	4,003	5,370	9	–	–	9,382	4,067	4,631	9	–	–	8,707
Retail	$ 348,183	$ 109,082	$ 369	$ –	$ –	$ 457,634	$ 334,269	$ 110,285	$ 360	$ –	$ –	$ 444,914
Business (5)												
Agriculture	$ 6,057	$ 1,279	$ 80	$ –	$ 86	$ 7,502	$ 5,694	$ 1,079	$ 55	$ –	$ 51	$ 6,879
Automotive	6,614	5,104	407	–	984	13,109	6,209	4,880	299	–	697	12,085
Consumer goods	7,146	7,093	594	–	470	15,303	7,172	6,189	547	–	281	14,189
Energy												
Oil & Gas	7,691	13,274	1,330	–	839	23,134	5,849	10,921	1,410	–	409	18,589
Utilities	5,162	13,389	3,149	60	1,482	23,242	3,766	11,240	1,943	–	1,169	18,118
Non-bank financial services	6,428	13,060	18,002	201,845	29,769	269,104	5,688	9,775	13,414	160,514	23,290	212,681
Forest products	1,169	535	108	–	40	1,852	979	452	108	–	18	1,557
Industrial products	4,725	5,418	513	–	538	11,194	4,665	4,753	441	–	462	10,321
Mining & metals	1,402	3,883	906	–	255	6,446	1,320	2,870	876	–	174	5,240
Real estate & related	33,802	9,210	1,910	63	373	45,358	30,387	7,791	1,699	22	286	40,185
Technology & media	6,599	14,182	574	6	1,703	23,064	4,822	8,705	511	2	955	14,995
Transportation & environment	5,907	4,300	2,960	–	1,474	14,641	5,432	3,624	1,702	–	810	11,568
Other	35,133	17,166	15,620	4,915	15,386	88,220	26,604	13,345	8,379	3,490	13,800	65,618
Sovereign (5)	9,887	5,614	57,413	30,871	10,162	113,947	4,628	5,303	47,798	25,863	8,170	91,762
Bank (5)	1,800	1,015	86,106	102,371	27,221	218,513	1,201	710	73,365	94,824	22,724	192,824
Wholesale	$ 139,522	$ 114,522	$ 189,672	$ 340,131	$ 90,782	$ 874,629	$ 114,416	$ 91,637	$ 152,547	$ 284,715	$ 73,296	$ 716,611
Total exposure	$ 487,705	$ 223,604	$ 190,041	$ 340,131	$ 90,782	$ 1,332,263	$ 448,685	$ 201,922	$ 152,907	$ 284,715	$ 73,296	$ 1,161,525

* This table represents an integral part of our 2015 audited Annual Consolidated Financial Statements.

(1) Undrawn commitments represent an estimate of the contractual amount that may be drawn upon at the time of default of an obligor.

(2) Includes credit equivalent amounts for contingent liabilities such as letters of credit and guarantees, outstanding amounts for AFS debt securities, deposits with financial institutions and other assets.

(3) Credit equivalent amount after factoring in master netting agreements.

(4) Gross credit risk exposure is before allowance for loan losses. Exposures under Basel III asset classes of qualifying revolving retail and other retail are largely included within Personal and Credit cards, while HELOC are included in Personal.

(5) Refer to Note 5 of our audited 2015 Annual Consolidated Financial Statements for the definitions of these terms.

2015 vs. 2014

Total gross credit risk exposure increased $171 billion or 15% from last year, primarily reflecting an increase in repo-style transactions and growth in loans and acceptances.

Retail exposure increased $13 billion or 3%, mainly due to volume growth in Canadian residential mortgages and credit cards, partly offset by a decrease in personal loans and acceptances. Wholesale exposure increased $158 billion or 22%, primarily attributable to an increase in repo-style transactions, higher loans and acceptances reflecting growth across various industry sectors, and an increase in Other exposure related to letters of credit and guarantees, AFS securities and deposits with central banks. The impact of foreign exchange translation also contributed to the increase. Wholesale loan utilization was 37% which remained unchanged from last year.

Gross credit risk exposure by geography* (1) **Table 46**

	As at											
	October 31 2015						October 31 2014					
	Lending-related and other			Trading-related			Lending-related and other			Trading-related		
	Loans and acceptances						Loans and acceptances					
(Millions of Canadian dollars)	Outstanding	Undrawn commitments	Other	Repo-style transactions	Derivatives	Total exposure	Outstanding	Undrawn commitments	Other	Repo-style transactions	Derivatives	Total exposure
Canada	$ 414,427	$ 144,352	$ 70,774	$ 64,855	$ 27,272	$ 721,680	$ 390,221	$ 142,841	$ 63,060	$ 56,308	$ 21,649	$ 674,079
U.S.	40,186	60,031	50,915	179,021	14,023	344,176	28,325	43,270	23,487	150,549	12,536	258,167
Europe	17,706	15,574	52,294	58,900	44,480	188,954	15,348	13,091	47,904	52,501	34,222	163,066
Other International	15,386	3,647	16,058	37,355	5,007	77,453	14,791	2,720	18,456	25,357	4,889	66,213
Total Exposure	$ 487,705	$ 223,604	$ 190,041	$ 340,131	$ 90,782	$ 1,332,263	$ 448,685	$ 201,922	$ 152,907	$ 284,715	$ 73,296	$ 1,161,525

* This table represents an integral part of our 2015 audited Annual Consolidated Financial Statements.
(1) Geographic profile is based on country of residence of the borrower.

2015 vs. 2014

Total gross credit risk exposure increased $171 billion or 15% from last year, primarily reflecting an increase in repo-style transactions and the impact of foreign exchange translation.

Canada exposure increased $48 billion or 7% compared to the prior year, primarily due to higher loans and acceptances and growth in repo-style transactions.

U.S. exposure increased $86 billion or 33% compared to the prior year, mainly due to growth in repo-style transactions, an increase in other exposure, and the impact of foreign exchange translation.

Europe exposure increased $26 billion or 16% compared to the prior year, mainly due to growth in derivatives, repo-style transactions, and the impact of foreign exchange translation.

Other International increased $11 billion or 17% compared to the prior year, mainly reflecting growth in repo-style transactions, and the impact of foreign exchange translation.

Loans and acceptances outstanding and undrawn commitments* (1), (2) **Table 47**

	As at									
	October 31 2015					October 31 2014				
(Millions of Canadian dollars)	Low risk	Medium risk	High risk	Impaired	Total	Low risk	Medium risk	High risk	Impaired	Total
Retail (3)										
Residential mortgages	$ 218,151	$ 13,080	$ 2,098	$ 646	$ 233,975	$ 206,699	$ 9,452	$ 2,428	$ 678	$ 219,257
Personal	157,996	12,020	2,916	299	173,231	158,530	17,309	3,847	300	179,986
Credit cards	34,547	4,772	1,367	–	40,686	29,900	5,403	1,310	–	36,613
Small business	6,878	1,047	1,403	45	9,373	6,542	1,519	1,308	47	9,416
Total	$ 417,572	$ 30,919	$ 7,784	$ 990	$ 457,265	$ 401,671	$ 33,683	$ 8,893	$ 1,025	$ 445,272

	As at							
	October 31 2015				October 31 2014			
(Millions of Canadian dollars)	Investment grade	Non-Investment grade	Impaired	Total	Investment grade	Non-investment grade	Impaired	Total
Wholesale (4)								
Business	$ 105,871	$ 128,564	$ 1,293	$ 235,728	$ 82,714	$ 109,829	$ 950	$193,493
Sovereign	14,704	797	–	15,501	9,476	455	–	9,931
Bank	2,475	338	2	2,815	1,440	469	2	1,911
Total	$ 123,050	$ 129,699	$ 1,295	$ 254,044	$ 93,630	$ 110,753	$ 952	$205,335

* This table represents an integral part of our audited 2015 Annual Consolidated Financial Statements.
(1) This table represents our retail and wholesale loans and acceptances outstanding and undrawn commitments by portfolio and risk category.
(2) The amounts in the table are before allowance for impaired loans.
(3) Includes undrawn commitments of $nil, $78.9 billion, $24.8 billion, and $5.4 billion for Residential mortgages, Personal, Credit cards and Small business, respectively.
(4) Includes undrawn commitments of $107.9 billion, $5.6 billion, and $1.0 billion for Business, Sovereign and Bank, respectively.

2015 vs. 2014

Growth in retail exposures was largely attributable to the low risk category primarily reflecting growth in residential mortgages and credit cards. Growth in wholesale exposures was mainly due to loan growth in both the investment grade and non-investment grade categories.

European exposure — Table 48

(Millions of Canadian dollars)	As at October 31 2015							As at October 31 2014
	Loans and acceptances		Other					
	Outstanding	Undrawn commitments (1)	Securities (2)	Letters of credit and guarantees	Repo-style transactions	Derivatives	Total European exposure	Total European exposure
Gross exposure to Europe	$ 17,706	$ 15,574	$ 24,480	$ 27,814	$ 58,900	$ 44,480	$ 188,954	$ 163,066
Less: Collateral held against repo-style transactions	–	–	–	–	57,674	–	57,674	51,386
Potential future credit exposure add-on amount	–	–	–	–	–	29,875	29,875	22,403
Undrawn commitments	–	15,574	–	27,814	–	–	43,388	38,079
Gross drawn exposure to Europe	$ 17,706	$ –	$ 24,480	$ –	$ 1,226	$ 14,605	$ 58,017	$ 51,198
Less: Collateral applied against derivatives	–	–	–	–	–	10,721	10,721	8,249
Add: Trading securities	–	–	12,797	–	–	–	12,797	15,471
Net exposure to Europe (3)	$ 17,706	$ –	$ 37,277	$ –	$ 1,226	$ 3,884	$ 60,093	$ 58,420

(1) These amounts are comprised of $12.3 billion to corporate entities, $2.6 billion to financial entities and $0.5 billion to sovereign entities. On a country basis, exposure is comprised of $7.0 billion to the U.K., $2.5 billion to France, $1.9 billion to Germany, $0.6 billion to Ireland, $0.3 billion to Spain, and $0.1 billion to Italy, with the remaining $3.1 billion related to Other Europe. Of the undrawn commitments, over 80% are to investment grade entities.
(2) Securities include $12.8 billion of trading securities (2014 – $15.5 billion), $11.5 billion of deposits (2014 – $11.9 billion), and $13.0 billion of AFS securities (2014 – $11.0 billion).
(3) Excludes $2.6 billion (2014 – $2.8 billion) of exposures to supranational agencies.

Our gross credit risk exposure is calculated based on the definitions provided under the Basel III framework whereby risk exposure is calculated before taking into account any collateral and inclusive of an estimate of potential future changes to that credit exposure. On that basis, our total European exposure as at October 31, 2015 was $189 billion. Our gross drawn exposure to Europe was $58 billion, after taking into account collateral held against repo-style transactions of $58 billion, letters of credit and guarantees, and undrawn commitments for loans of $43 billion and potential future credit exposure to derivatives of $30 billion. Our net exposure to Europe was $60 billion, after taking into account $11 billion of collateral, primarily in cash, we hold against derivatives and the addition of trading securities of $13 billion held in our trading book. Our net exposure to Europe also reflected $1.8 billion of mitigation through credit default swaps, which are largely used to hedge single name exposures and market risk.

Net European exposure by country (1) — Table 49

(Millions of Canadian dollars)	As at October 31 2015					As at October 31 2014
	Loans outstanding	Securities	Repo-style transactions	Derivatives	Total	Total
U.K.	$ 10,330	$ 8,372	$ 867	$ 1,395	$ 20,964	$ 24,033
Germany	1,142	7,789	4	561	9,496	10,172
France	446	3,426	56	605	4,533	4,284
Total U.K., Germany, France	$ 11,918	$ 19,587	$ 927	$ 2,561	$ 34,993	$ 38,489
Greece	$ –	$ –	$ –	$ –	$ –	$ –
Ireland	1,138	66	47	68	1,319	883
Italy	45	42	–	13	100	150
Portugal	8	1	–	–	9	9
Spain	337	60	–	42	439	476
Total Peripheral (2)	$ 1,528	$ 169	$ 47	$ 123	$ 1,867	$ 1,518
Luxembourg	$ 586	$ 4,250	$ 3	$ 51	$ 4,890	$ 1,909
Netherlands	1,014	3,211	30	728	4,983	4,260
Norway	427	4,431	–	28	4,886	3,011
Sweden	273	3,012	79	12	3,376	2,731
Switzerland	523	1,007	98	125	1,753	3,557
Other	1,437	1,610	42	256	3,345	2,945
Total Other Europe	$ 4,260	$ 17,521	$ 252	$ 1,200	$ 23,233	$ 18,413
Total exposure to Europe	$ 17,706	$ 37,277	$ 1,226	$ 3,884	$ 60,093	$ 58,420

(1) Geographic profile is based on country of risk, which reflects our assessment of the geographic risk associated with a given exposure. Typically, this is the residence of the borrower.
(2) Gross credit risk exposure to peripheral Europe is comprised of Greece $nil (2014 – $nil), Ireland $11.7 billion (2014 – $2.5 billion), Italy $0.3 billion (2014 – $0.2 billion), Portugal $nil (2014 – $nil), and Spain $1.2 billion (2014 – $0.9 billion).

2015 vs. 2014

Net credit risk exposure to Europe increased $1.7 billion from last year, largely driven by increased exposure in Luxembourg, Norway and the Netherlands, partially offset by a decrease in the U.K., Switzerland and Germany. Our net exposure to peripheral Europe, which includes Greece, Ireland, Italy, Portugal and Spain, remained minimal, with total outstanding exposure increasing $0.3 billion during the year to $1.9 billion.

Our exposure was predominantly investment grade. Our net exposure to larger European countries, including the U.K., Germany and France, was primarily related to our capital markets, wealth management, and investor services businesses, particularly in fixed income, treasury services, derivatives, and corporate and individual lending. These are predominantly client-driven businesses where we transact with a range of European financial institutions, corporations, and individuals. In addition, we engage in primary dealer activities in the U.K., where we participate in auctions of government debt and act as a market maker and provide liquidity to clients. Exposures to other European countries are largely related to securities which include trading securities, deposits, and AFS securities.

Our trading securities are related to both client market-making activities and our funding and liquidity management needs. All of our trading securities are marked-to-market on a daily basis. Deposits are primarily related to deposits with central banks or financial institutions and also included deposits related to our wealth management business in the Channel Islands. AFS securities are largely comprised of OECD government and corporate debt. Our European corporate loan book is managed on a global basis and the underwriting standards for this loan book reflect the same approach to the use of our balance sheet as we have applied in both Canada and the U.S. Our PCL on this portfolio was nominal for this year. The gross impaired loans ratio of this loan book was 0.6%, up from 0.12% from last year.

Net European exposure by client type — **Table 50**

	As at												
	October 31 2015												October 31 2014
(Millions of Canadian dollars)	U.K.	Germany	France	Total U.K., Germany, France	Greece	Ireland	Italy	Portugal	Spain	Total Peripheral	Other Europe	Total Europe	Total Europe
Financials	$ 7,453	$ 6,853	$ 813	$ 15,119	$ –	$ 148	$ 65	$ –	$ 31	$ 244	$ 12,472	$ 27,835	$ 24,641
Sovereign	4,347	837	3,125	8,309	–	3	–	–	103	106	6,400	14,815	17,527
Corporate	9,164	1,806	595	11,565	–	1,168	35	9	305	1,517	4,361	17.443	16,252
Total	$ 20,964	$ 9,496	$ 4,533	$ 34,993	$ –	$ 1,319	$ 100	$ 9	$ 439	$ 1,867	$ 23,233	$ 60,093	$ 58,420

2015 vs. 2014

Our net exposure to Financials increased $3.2 billion mainly due to increases in the U.K. and Other Europe, partially offset by a decrease in France. The net exposure to Sovereign decreased $2.7 billion, mainly due to decreases in U.K. and Germany, partially offset by increases in Other Europe and France. The increase in Corporate of $1.2 billion was largely in Other Europe and Ireland.

Residential mortgages and home equity lines of credit (insured vs. uninsured)
Residential mortgages and home equity lines of credit are secured by residential properties. The following table presents a breakdown by geographic region:

Residential mortgages and home equity lines of credit — **Table 51**

(Millions of Canadian dollars, except percentage amounts)	As at October 31, 2015						
	Residential mortgages (1)						Home equity lines of credit (2)
	Insured (3)		Uninsured		Total		Total
Region (4)							
Canada							
Atlantic provinces	$ 6,856	55%	$ 5,586	45%	$ 12,442		$ 2,060
Quebec	12,414	46	14,621	54	27,035		4,157
Ontario	36,555	39	58,036	61	94,591		16,785
Prairie provinces	27,562	53	24,597	47	52,159		9,940
B.C. and territories	15,755	36	27,555	64	43,310		9,085
Total Canada (5)	$ 99,142	43%	$ 130,395	57%	$ 229,537		$ 42,027
U.S.	(1)	–	773	100	772		334
Other International	14	–	3,202	100	3,216		3,107
Total International	$ 13	–%	$ 3,975	100%	$ 3,988		$ 3,441
Total	$ 99,155	42%	$ 134,370	58%	$ 233,525		$ 45,468

(Millions of Canadian dollars, except percentage amounts)	As at October 31, 2014						
	Residential mortgages (1)						Home equity lines of credit (2)
	Insured (3)		Uninsured		Total		Total
Region (4)							
Canada							
Atlantic provinces	$ 6,411	55%	$ 5,169	45%	$ 11,580		$ 2,068
Quebec	13,006	50	13,248	50	26,254		4,163
Ontario	35,354	40	51,974	60	87,328		17,104
Prairie provinces	25,813	53	22,826	47	48,639		10,310
B.C. and territories	15,585	38	25,887	62	41,472		9,768
Total Canada (5)	$ 96,169	45%	$ 119,104	55%	$ 215,273		$ 43,413
U.S.	4	1	535	99	539		332
Other International	13	–	3,081	100	3,094		2,691
Total International	$ 17	–%	$ 3,616	100%	$ 3,633		$ 3,023
Total	$ 96,186	44%	$ 122,720	56%	$ 218,906		$ 46,436

(1) The residential mortgages amounts exclude our third-party mortgage-backed securities (MBS) of $450 million (2014 – $351 million).
(2) Home equity lines of credit includes revolving and non-revolving loans.
(3) Insured residential mortgages are mortgages whereby our exposure to default is mitigated by insurance through the Canada Mortgage and Housing Corporation (CMHC) or other private mortgage default insurers.
(4) Region is based upon address of the property mortgaged. The Atlantic provinces are comprised of Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick, the Prairie provinces are comprised of Manitoba, Saskatchewan and Alberta, and B.C. and territories are comprised of British Columbia, Nunavut, Northwest Territories and Yukon.
(5) Total consolidated residential mortgages in Canada of $230 billion (2014 – $215 billion) is largely comprised of $205 billion (2014 – $192 billion) of residential mortgages and $5 billion (2014 – $5 billion) of mortgages with commercial clients of which $3 billion (2014 – $3 billion) are insured mortgages, both in Canadian Banking, and $19 billion (2014 – $18 billion) of residential mortgages in Capital Markets held for securitization purposes.

Home equity lines of credit are uninsured and reported within the personal loan category. As at October 31, 2015, home equity lines of credit in Canadian Banking were $42 billion (2014 – $43 billion). Approximately 98% of these home equity lines of credit (2014 – 97%) are secured by a first lien on real estate, and 8% (2014 – 8%) of the total homeline clients pay the scheduled interest payment only.

Residential mortgages portfolio by amortization period
The following table provides a summary of the percentage of residential mortgages that fall within the remaining amortization periods based upon current customer payment amounts, which incorporate payments larger than the minimum contractual amount and/or higher frequency of payments:

Residential mortgages portfolio by amortization period — **Table 52**

	As at					
	October 31 2015			October 31 2014		
	Canada	**U.S. and Other International**	**Total**	Canada	U.S. and Other International	Total
Amortization period						
≤ 25 years	**75%**	**77%**	**75%**	71%	74%	71%
> 25 years ≤ 30 years	**23**	**23**	**23**	23	26	23
> 30 years ≤ 35 years	**2**	**–**	**2**	5	–	5
> 35 years	**–**	**–**	**–**	1	–	1
Total	**100%**	**100%**	**100%**	100%	100%	100%

Average loan-to-value (LTV) ratio for newly originated and acquired uninsured residential mortgages and homeline products
The following table provides a summary of our average LTV ratio for newly originated and acquired uninsured residential mortgages and homeline products by geographic region:

Average LTV ratio — **Table 53**

	2015		2014	
	Uninsured		Uninsured	
	Residential mortgages (1)	**Homeline products** (2)	Residential mortgages (1)	Homeline products (2)
Region (3)				
Atlantic provinces	**74%**	**75%**	74%	74%
Quebec	**71**	**73**	71	73
Ontario	**70**	**70**	71	71
Prairie provinces	**73**	**74**	74	73
B.C. and territories	**69**	**66**	69	67
U.S.	**72**	**n.m.**	71	n.m.
Other International	**61**	**n.m.**	60	n.m.
Average of newly originated and acquired for the year (4), (5)	**71%**	**70%**	72%	71%
Total Canadian Banking residential mortgages portfolio	**55%**	**54%**	55%	55%

(1) Residential mortgages excludes residential mortgages within the homeline products.
(2) Homeline products are comprised of both residential mortgages and home equity lines of credit.
(3) Region is based upon address of the property mortgaged. The Atlantic provinces are comprised of Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick, the Prairie provinces are comprised of Manitoba, Saskatchewan and Alberta, and B.C. and territories are comprised of British Columbia, Nunavut, Northwest Territories and Yukon.
(4) The average LTV ratio for newly originated and acquired uninsured residential mortgages and homeline products is calculated on a weighted basis by mortgage amounts at origination.
(5) For newly originated mortgages and homeline products, LTV is calculated based on the total facility amount for the residential mortgage and homeline product divided by the value of the related residential property.
n.m. not meaningful

While the above table provides the LTV ratios for the current year originations, the LTV ratio on our outstanding balances of the entire Canadian Banking uninsured residential mortgages, including homeline products, is 54% as at October 31, 2015 (2014 – 55%). This calculation is weighted by mortgage balances and adjusted for property values based on the Teranet – National Bank National Composite House Price Index.

We employ a risk-based approach to property valuation. Property valuation methods include automated valuation models (AVM) and appraisals. An AVM is a tool that estimates the value of a property by reference to market data including sales of comparable properties and price trends specific to the Metropolitan Statistical Area in which the property being valued is located. Using a risk-based approach, we also employ appraisals which can include drive-by or full on-site appraisals.

We continue to actively manage our entire mortgage portfolio and perform stress testing, based on a combination of increasing unemployment, rising interest rates, and a downturn in real estate markets. Our stress test results indicate the vast majority of our residential mortgage and homeline clients have sufficient capacity to continue making payments in the event of a shock to one of the above noted parameters.

Credit quality performance

Provision for (recovery of) credit losses		Table 54
(Millions of Canadian dollars, except percentage amounts)	2015	2014
Personal & Commercial Banking	$ 984	$ 1,103
Wealth Management	46	19
Capital Markets	71	44
Corporate Support and Other (1)	(4)	(2)
Total PCL	$ 1,097	$ 1,164
Canada (2)		
Residential mortgages	$ 27	$ 27
Personal	393	393
Credit cards	371	345
Small business	32	44
Retail	823	809
Wholesale	116	123
PCL on impaired loans	939	932
U.S. (2)		
Retail	$ 1	$ 2
Wholesale	40	40
PCL on impaired loans	41	42
Other International (2)		
Retail	$ 21	$ 121
Wholesale	96	69
PCL on impaired loans	117	190
Total PCL	$ 1,097	$ 1,164
PCL ratio (3)		
Total PCL ratio	0.24%	0.27%
Personal & Commercial Banking	0.27%	0.31%
Canadian Banking	0.25%	0.27%
Caribbean Banking	0.85%	2.44%
Wealth Management	0.26%	0.12%
Capital Markets	0.09%	0.07%

(1) PCL in Corporate Support and Other primarily comprised of PCL for loans not yet identified as impaired. For further information, refer to the How we measure and report our business segments section.
(2) Geographic information is based on residence of borrower.
(3) PCL on impaired loans as a % of average net loans and acceptances.

2015 vs. 2014

Total PCL decreased $67 million, or 6%, from a year ago. The PCL ratio of 24 bps decreased 3 bps.

PCL in Personal & Commercial Banking decreased $119 million or 11%, and the PCL ratio of 27 bps decreased 4 bps, mainly due to lower provisions in our Caribbean portfolios partially due to provisions of $50 million in the prior year on our Caribbean impaired residential mortgage portfolio. Lower provisions in the current year related to our commercial lending portfolios also contributed to the decrease. These factors were partially offset by higher write-offs in our credit cards portfolio.

PCL in Wealth Management increased $27 million, mainly due to provisions related to our U.S. & International Wealth Management business.

PCL in Capital Markets increased $27 million or 61%, mainly due to provisions in the oil and gas, consumer goods, and utilities sectors.

Gross impaired loans (GIL)			Table 55
(Millions of Canadian dollars, except percentage amounts)		2015	2014
Personal & Commercial Banking	$	1,809	$ 1,913
Wealth Management		178	11
Capital Markets		296	50
Investor & Treasury Services		2	2
Corporate Support and Other		–	1
Total GIL	$	2,285	$ 1,977
Canada (1)			
Retail	$	624	$ 659
Wholesale		512	487
GIL		1,136	1,146
U.S. (1)			
Retail	$	10	$ 13
Wholesale		204	18
GIL		214	31
Other International (1)			
Retail	$	356	$ 353
Wholesale		579	447
GIL		935	800
Total GIL	$	2,285	$ 1,977
Impaired loans, beginning balance		1,977	2,201
Classified as impaired during the year (new impaired) (2)		1,709	1,317
Net repayments (2)		(158)	(228)
Amounts written off		(1,338)	(1,329)
Other (2), (3)		95	16
Impaired loans, balance at end of year		2,285	1,977
GIL ratio (4)			
Total GIL ratio		0.47%	0.44%
Personal & Commercial Banking		0.49%	0.55%
Canadian Banking		0.30%	0.33%
Caribbean Banking		9.13%	11.05%
Wealth Management		1.01%	0.07%
Capital Markets		0.37%	0.08%

(1) Geographic information is based on residence of borrower.
(2) Certain GIL movements for Canadian Banking retail and wholesale portfolios are generally allocated to New Impaired, as Return to performing status, Net repayments, Sold, and Exchange and other movements amounts are not reasonably determinable. Certain GIL movements for Caribbean Banking retail and wholesale portfolios are generally allocated to repayments and new Impaired, as Return to performing status, Sold, and Exchange and other movements amounts are not reasonably determinable.
(3) Includes Return to performing status during the year, Recoveries of loans and advances previously written off, Sold, and Exchange and other movements.
(4) GIL as a % of loans and acceptances.

2015 vs. 2014

Total GIL increased $308 million or 16% from a year ago. The GIL ratio of 47 bps increased 3 bps.

GIL in Personal & Commercial Banking decreased $104 million or 5%, mainly due to lower impaired loans in our commercial lending and residential mortgages portfolios.

GIL in Wealth Management increased $167 million, mainly due to higher impaired loans in the U.S. & International Wealth Management business.

GIL in Capital Markets increased $246 million, primarily due to higher impaired loans in the oil and gas, utilities, and consumer goods sectors.

Allowance for credit losses (ACL)		Table 56
(Millions of Canadian dollars)	2015	2014
Allowance for impaired loans		
Personal & Commercial Banking	$ 548	$ 602
Wealth Management	43	10
Capital Markets	61	18
Investor & Treasury Services	2	2
Total allowance for impaired loans	654	632
Canada (1)		
Retail	$ 142	$ 143
Wholesale	111	160
Allowance for impaired loans	253	303
U.S. (1)		
Retail	$ 1	$ 1
Wholesale	47	16
Allowance for impaired loans	48	17
Other International (1)		
Retail	$ 169	$ 172
Wholesale	184	140
Allowance for impaired loans	353	312
Total allowance for impaired loans	654	632
Allowance for loans not yet identified as impaired	1,466	1,453
Total ACL	$ 2,120	$ 2,085

(1) Geographic information is based on residence of borrower.

2015 vs. 2014
Total ACL increased $35 million or 2% from a year ago, mainly related to higher ACL in Capital Markets and Wealth Management consistent with higher PCL recorded in the current year. This was partially offset by lower ACL in Personal & Commercial Banking consistent with lower PCL recorded in the current year.

Market risk

Market risk is defined to be the impact of market prices upon our financial condition. This includes potential gains or losses due to changes in market determined variables such as interest rates, credit spreads, equity prices, commodity prices, foreign exchange rates and implied volatilities.

The measures of financial condition impacted by market risk are as follows:

1. Positions whose revaluation gains and losses are reported in Revenue, which includes:
   a) Changes in the fair value of instruments classified or designated as at fair value through profit and loss (FVTPL),
   b) Impairment on AFS securities, and
   c) Hedge ineffectiveness.
2. CET1 capital, which includes:
   a) All of the above, plus
   b) Changes in the fair value of AFS securities where revaluation gains and losses are reported as other comprehensive income,
   c) Changes in the Canadian dollar value of investments in foreign subsidiaries, net of hedges, due to foreign exchange translation, and
   d) Remeasurements of employee benefit plans, including pension fund assets underperforming in the market resulting in a deficit and volatility between the pension liabilities and the fund assets, and/or, estimated actuarial parameters not being realized such that pension liabilities exceed pension fund assets.
3. CET1 ratio, which includes:
   a) All of the above, plus
   b) Changes in risk-weighted assets (RWA) resulting from changes in traded market risk factors, and
   c) Changes in the Canadian dollar value of RWA due to foreign exchange translation.
4. The economic value of the Bank, which includes:
   a) Points 1 and 2 above, plus
   b) Changes in the value of other non-trading positions whose value is a function of market risk factors.

Market risk controls – FVTPL positions
As an element of the Enterprise Risk Appetite Framework, the Board of Directors approves the overall market risk constraints for RBC. GRM creates and manages the control structure for FVTPL positions that ensures that business is conducted consistent with Board requirements. The Market and Trading Credit Risk function within GRM is responsible for creating and managing the controls and governance procedures

that ensure that risk taken is consistent with risk appetite constraints set by the Board. These controls include limits on probabilistic measures of potential loss such as Value-at-Risk and Stressed Value-at-Risk as defined below:

Value-at-Risk (VaR) – is a statistical measure of potential loss for a financial portfolio computed at a given level of confidence and over a defined holding period. We measure VaR at the 99th percentile confidence level for price movements over a one day holding period using historic simulation of the last two years of equally weighted historic market data. These calculations are updated daily with current risk positions with the exception of certain positions which are updated weekly.

Stressed Value-at-Risk (SVaR) – is calculated in an identical manner as VaR with the exception that it is computed using a fixed historical one year period of extreme volatility and its inverse rather than the most recent two year history. The stress period used is the interval from September 2008 through August 2009. Stressed VaR is calculated weekly for all portfolios.

These measures are computed on all positions that are FVTPL for financial reporting purposes, with the exception of those in a designated hedging relationship and those in our insurance businesses.

Market risk measures – FVTPL positions

VaR and SVaR

The following table presents our Market risk VaR and Market risk SVaR figures for 2015 and 2014.

Market Risk VaR* — **Table 57**

	2015				2014			
		For the year ended October 31				For the year ended October 31		
(Millions of Canadian dollars)	As at Oct. 31	Average	High	Low	As at Oct. 31	Average	High	Low
Equity	$ 20	$ 12	$ 31	$ 6	$ 9	$ 10	$ 17	$ 4
Foreign exchange	4	4	8	3	3	2	5	1
Commodities	3	3	6	2	2	3	7	2
Interest rate	26	28	34	23	24	27	36	18
Credit specific (1)	6	8	9	6	8	9	11	6
Diversification (2)	(18)	(22)	(34)	(15)	(18)	(21)	(30)	(15)
Market risk VaR	$ 41	$ 33	$ 45	$ 26	$ 28	$ 30	$ 39	$ 19
Market risk Stressed VaR	$ 109	$ 104	$ 157	$ 73	$ 83	$ 92	$ 121	$ 69

* This table represents an integral part of our audited 2015 Annual Consolidated Financial Statements.
(1) General credit spread risk is measured under interest rate VaR while credit specific risk captures issuer-specific credit spread volatility.
(2) Market risk VaR is less than the sum of the individual risk factor VaR results due to portfolio diversification.

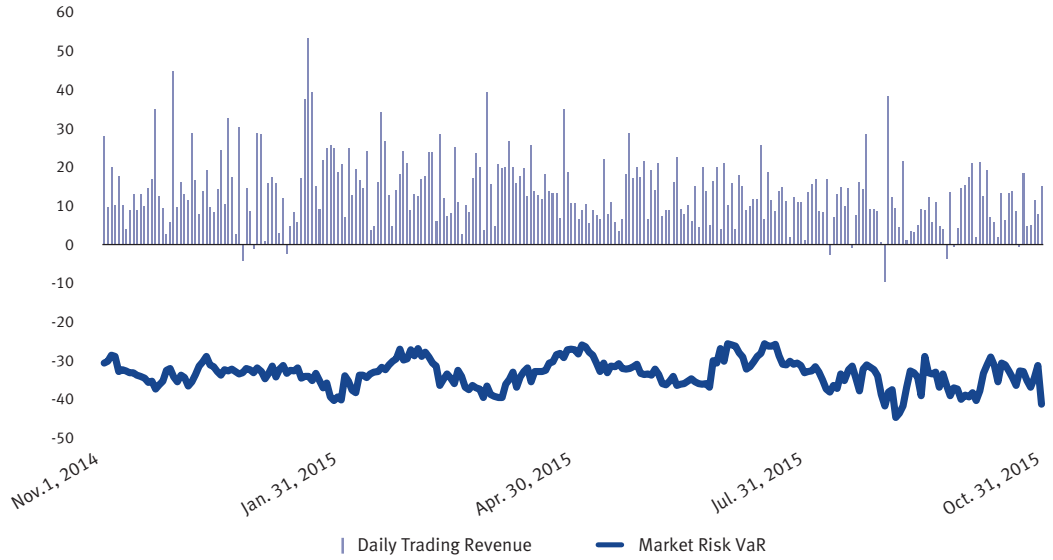
2015 vs. 2014

Average market risk VaR of $33 million was up $3 million compared to the prior year, mainly reflecting an increase due to the impact of foreign exchange translation and higher exposure to our credit risk resulting from the implementation of funding valuation adjustments at the end of the fourth quarter of 2014, and by higher equity market volatility.

Average SVaR of $104 million was up $12 million compared to the prior year, largely due to the implementation of funding valuation adjustments as noted above and the impact of foreign exchange translation.

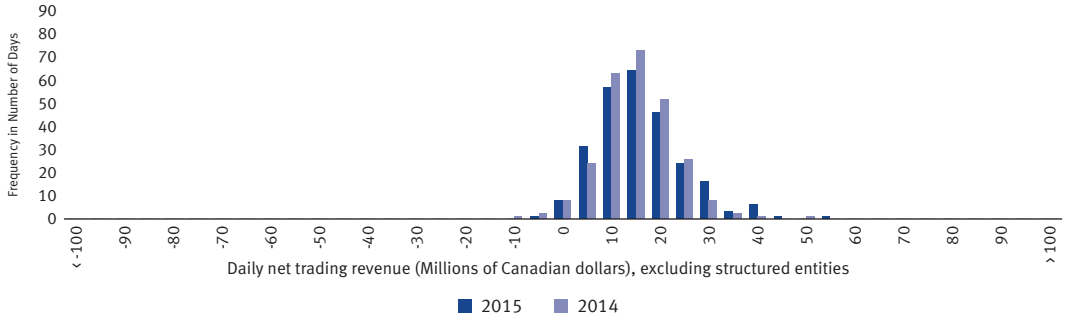
The following chart graphically displays a bar chart of our daily trading profit and loss and a line chart of our daily Market risk VaR. We incurred net trading losses on nine days in the year totalling $25 million, as compared to 11 days of losses totalling $46 million in 2014, with none of the losses exceeding VaR.

Trading Revenue and VaR (Millions of Canadian dollars)



The following chart displays the distribution of daily trading profit and loss in 2015. The largest daily reported loss of $9.4 million on September 1, 2015 was primarily driven by market volatility. Of the nine loss days in fiscal 2015, six occurred within Q4. These loss days were driven by market volatility as a result of uncertainty over China's economy and U.S. federal rate increases in the fourth quarter. The largest reported profit was $53.4 million with an average daily profit of $13.6 million.

Trading Revenue for the year ended October 31, 2015 (teb)



Market risk measures for other FVTPL positions – Assets and liabilities of RBC Insurance

We offer a range of insurance products to clients and hold investments to meet the future obligations to policyholders. The investments which support actuarial liabilities are predominantly fixed income assets designated as at FVTPL. Consequently, changes in the fair values of these assets are recorded in investment income in the consolidated statements of income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in insurance policyholder benefits and claims. As at October 31, 2015, we had liabilities with respect to insurance obligations of $9.1 billion and trading securities of $7.1 billion in support of the liabilities.

Market risk controls – Structural Interest Rate Risk (SIRR) positions (1)

The interest rate risk arising from non-trading positions is referred to as SIRR, and is subject to a separate set of limits and controls. Non-trading positions in the bank mostly include the Bank's personal and business lending and deposit activities. Factors contributing to SIRR include the mismatch between future asset and liability repricing dates, relative changes in asset and liability rates, and product features that could affect the expected timing of cash flows, such as options to pre-pay loans or redeem term deposits prior to contractual maturity.

The Board of Directors approves the risk appetite for SIRR, and the Asset Liability Committee (ALCO), along with GRM, provides ongoing oversight of SIRR through risk policies, limits, operating standards and other controls. SIRR reports are reviewed regularly by GRM, ALCO, the Group Risk Committee, the Risk Committee of the Board and the Board of Directors.

Details on the non-trading risks included in SIRR are outlined in Table 59.

Structural Interest Rate Risk measurement

To monitor and control SIRR, the Bank assesses two primary financial metrics, 12-month NII (NII risk) and Economic Value of Equity (EVE risk), under a range of market shocks and scenarios. Market scenarios include currency-specific parallel and non-parallel yield curve changes and interest rate volatility shocks.

In measuring NII risk, detailed non-trading balance sheets and income statements are dynamically simulated to determine the impact of market stress scenarios on projected NII. Assets, liabilities and off-balance sheet positions are simulated using monthly time steps over a one-year horizon. The simulations incorporate product maturities, renewals and growth along with prepayment and redemption behaviour. Product pricing and volumes are calibrated from past experience and projected consistent with expectations for a given market stress scenario. EVE risk captures the market value sensitivity of structural positions to changes in longer-term rates. In measuring EVE risk, deterministic (single-scenario) and stochastic (multiple-scenario) valuation techniques are applied to detailed spot position data. NII and EVE risks are measured for a range of market risk stress scenarios which include extreme but plausible market rate changes, across interest rate curves and interest rate volatilities.

The management of NII and EVE risks is complementary and supports efforts by the Bank to generate a sustainable high quality NII stream. NII and EVE risks are measured daily, weekly or monthly depending on the size, complexity and hedge strategy applicable to a balance sheet or business activity.

A number of assumptions affecting cash flows, product re-pricing and the administration of rates underlie the models used to measure NII and EVE risks. The key assumptions pertain to the expected funding profiles for retail mortgage rate commitments, prepayment behaviour for fixed-rate loans, term deposit redemption behaviour, and the treatment of non-maturity deposits. All assumptions are derived empirically from historical client and product experience and consider future product pricing and customer needs. All models and assumptions used to measure SIRR are subject to independent oversight by GRM.

Market risk measures – Structural Interest Rate Positions

The following table shows the potential before-tax impact of an immediate and sustained 100 bps and 200 bps increase or decrease in interest rates on projected 12-month NII and EVE for the Bank's non-trading balance sheet, assuming no subsequent hedging. Rate floors are applied within the declining rates scenarios, with floor levels set based on global rate movement experience. Interest rate risk measures are based upon interest rate exposures at a specific time and continuously change as a result of business activities and risk management actions.

(1) SIRR positions include impact of derivatives in hedge accounting relationships and AFS securities used for interest rate risk management.

Market risk measures – Non-trading banking activities* **Table 58**

(Millions of Canadian dollars)	2015						2014		2013	
	Economic value of equity risk			Net interest income risk (2)						
	Canadian dollar impact	U.S. dollar impact (1)	Total	Canadian dollar impact	U.S. dollar impact (1)	Total	Economic value of equity risk	Net interest income risk (2)	Economic value of equity risk	Net interest income risk (2)
Before-tax impact of:										
100bps increase in rates	$ (1,069)	$ (3)	$(1,072)	$ 280	$ 9	$ 289	$ (916)	$ 414	$ (540)	$ 391
100bps decrease in rates	836	(7)	829	(364)	(6)	(370)	754	(348)	446	(303)
Before-tax impact of:										
200bps increase in rates	(2,208)	(13)	(2,221)	451	21	472	(1,910)	763	(1,160)	758
200bps decrease in rates	929	(4)	925	(372)	(7)	(379)	1,259	(434)	799	(398)

* This table represents an integral part of our audited 2015 Annual Consolidated Financial Statements.
(1) Represents the impact on the non-trading portfolios held in our U.S. banking operations.
(2) Represents the 12-month Net interest income exposure to an instantaneous and sustained shift in interest rates.

At the end of fiscal 2015, an immediate and sustained -100 bps shock would have had a negative impact to the Bank's NII of $370 million, up from $348 million at the end of 2014. An immediate and sustained +100bps shock at the end of fiscal 2015 would have had a negative impact to the Bank's EVE of $1,072 million, up from $916 million in 2014. The year-over-year increases in NII and EVE risks are primarily attributed to balance sheet growth. A larger fixed-rate asset position contributed to higher EVE risk, but also dampened the increase in NII risk. During fiscal 2015, NII and EVE risks were maintained well within approved limits.

Market risk measures for other material non-trading portfolios

AFS securities

We held $48 billion of securities classified as AFS as at October 31, 2015, compared to $46 billion as at October 31, 2014. We hold debt securities designated as AFS primarily as investments and to manage liquidity and interest rate risk in our non-trading banking activity. Certain legacy debt portfolios are also classified as AFS. As at October 31, 2015, our portfolio of AFS securities exposes us to interest rate risk of a pre-tax loss of $5.4 million as measured by the change in the value of the securities for a one basis point parallel increase in yields. The portfolio also exposes us to credit spread risk of a pre-tax loss of $14.7 million, as measured by the change in value for a one basis point widening of credit spreads. Changes in the value of these securities are reported in other comprehensive income. The value of the AFS securities included in our Structural Interest Rate Risk measure as at October 31, 2015 was $34.9 billion. Our AFS securities also include equity exposures of $1.8 billion as at October 31, 2015, up from $1.7 billion as at October 31, 2014.

Derivatives related to non-trading activity

Derivatives are also used to hedge market risk exposures unrelated to our trading activity. In aggregate, derivative assets not related to trading activity of $6.4 billion as at October 31, 2015 were up from $3.4 billion as at October 31, 2014, and derivative liabilities of $4.5 billion as at October 31, 2015 were up from $1.8 billion as at October 31, 2014.

Non-trading derivatives in hedge accounting relationships

The derivative assets and liabilities described above include derivative assets in a designated hedge accounting relationship of $2.8 billion as at October 31, 2015, up from $2.0 billion as at October 31, 2014, and derivative liabilities of $2.0 billion as at October 31, 2015, up from $837 million last year. These derivative assets and liabilities are included in our Structural Interest Rate Risk measure and other internal non-trading market risk measures. We use interest rate swaps to manage our AFS securities and structural interest rate risk, as described above. To the extent these swaps are considered effective hedges, changes in their fair value are recognized in other comprehensive income. The interest rate risk for the designated cash flow hedges, measured as the change in the fair value of the derivatives for a one basis point parallel increase in yields, was $5.5 million as of October 31, 2015.

Interest rate swaps are also used to hedge changes in the fair value of certain fixed-rate instruments. Changes in fair value of the interest rate swaps and the hedged instruments that are related to interest rate movements are reflected in income.

We also use foreign exchange derivatives to manage our exposure to equity investments in subsidiaries that are denominated in foreign currencies, particularly the U.S. dollar and British pound. Changes in the fair value of these hedges and the cumulative translation adjustment related to our structural foreign exchange risk are reported in other comprehensive income.

Other non-trading derivatives

Derivatives including interest rate swaps and foreign exchange derivatives that are not in designated hedge accounting relationships are used to manage other non-trading exposures. These derivatives have been designated as fair value through profit and loss with changes in the fair value of these derivatives reflected in income. Derivative assets of $3.6 billion as at October 31, 2015 on these trades were up from $1.4 billion as at October 31, 2014, and derivative liabilities of $2.5 billion as at October 31, 2015 were up from $1.0 billion last year.

Non-trading foreign exchange rate risk

Foreign exchange rate risk is the potential adverse impact on earnings and economic value due to changes in foreign currency rates. Our revenue, expenses and income denominated in currencies other than the Canadian dollar are subject to fluctuations as a result of changes in the value of the average Canadian dollar relative to the average value of those currencies. Our most significant exposure is to the U.S. dollar, due to our level of operations in the U.S. and other activities conducted in U.S. dollars. Other significant exposures are to the British pound and the Euro, due to our activities conducted internationally in these currencies. A strengthening or weakening of the Canadian dollar compared to the U.S. dollar, British pound and the Euro could reduce or increase, as applicable, the translated value of our foreign currency denominated revenue, expenses and earnings and could have a significant effect on the results of our operations. We are also exposed to foreign exchange rate risk arising from our investments in foreign operations. For un-hedged equity investments, when the Canadian dollar appreciates against other currencies, the unrealized translation losses on net foreign investments decreases our shareholders' equity through the other components of equity and decreases the translated value of the RWA of the foreign currency-denominated asset. The reverse is true when the Canadian dollar depreciates against other currencies. Consequently, we consider these impacts in selecting an appropriate level of our investments in foreign operations to be hedged.

Our overall trading and non-trading market risk objectives, policies and methodologies have not changed significantly from 2014.

Linkage of market risk to selected balance sheet items

The following table provides the linkages between selected balance sheet items with positions included in our trading market risk and non-trading market risk disclosures, which illustrates how we manage market risk for our assets and liabilities through different risk measures.

Linkage of market risk to selected balance sheet items — **Table 59**

	As at October 31, 2015			
		Market risk measure		
(Millions of Canadian dollars)	Balance sheet amount	Traded risk (1)	Non-traded risk (2)	Non-traded risk primary risk sensitivity
Assets subject to market risk				
Cash and due from banks (3)	$ 12,452	$ 5,720	$ 6,732	Interest rate
Interest-bearing deposits with banks (4)	22,690	15,764	6,926	Interest rate
Securities				
Trading (5)	158,703	151,420	7,283	Interest rate, credit spread
Available-for-sale (6)	56,805	–	56,805	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed (7)	174,723	174,594	129	Interest rate
Loans				
Retail (8)	348,183	16,337	331,846	Interest rate
Wholesale (9)	126,069	140	125,929	Interest rate
Allowance for loan losses	(2,029)	–	(2,029)	Interest rate
Segregated fund net assets (10)	830	–	830	Interest rate
Derivatives	105,626	99,233	6,393	Interest rate, foreign exchange
Other assets (11)	64,082	24,578	39,504	Interest rate
Assets not subject to market risk (12)	6,074			
Total assets	$ 1,074,208	$ 487,786	$ 580,348	
Liabilities subject to market risk				
Deposits (13)	$ 697,227	$ 151,776	$ 545,451	Interest rate
Segregated fund liabilities (14)	830	–	830	Interest rate
Other				
Obligations related to securities sold short	47,658	47,658	–	
Obligations related to assets sold under repurchase agreements and securities loaned (15)	83,288	83,165	123	Interest rate
Derivatives	107,860	103,348	4,512	Interest rate, foreign exchange
Other liabilities (16)	58,184	19,757	38,427	Interest rate
Subordinated debentures	7,362	–	7,362	Interest rate
Liabilities not subject to market risk (17)	7,855			
Total liabilities	$ 1,010,264	$ 405,704	$ 596,705	
Total equity	$ 63,944			
Total liabilities and equity	$ 1,074,208			

(1) Traded risk includes FVTPL positions whose revaluation gains and losses are reported in revenue. Market risk measures of VaR, SVaR and Stress testing are used as risk controls for traded risk.

(2) Non-traded risk includes positions used in the management of the SIRR and other non-trading portfolios. Other material non-trading portfolios include positions from our Insurance business and AFS securities not included in SIRR.

The following footnotes provide additional information on the Non-traded risk amounts:

(3) Cash and due from banks includes $5,829 million included in SIRR. An additional $903 million is included in other risk controls.

(4) Interest-bearing deposits with banks of $6,926 million are included in SIRR.

(5) Trading securities include $7,283 million in securities used in the management of the SIRR of RBC Insurance, which is not included in our disclosed SIRR measure.

(6) Includes available-for-sale securities of $48,164 million and held-to-maturity securities of $8,641 million. $43,528 million of the total securities are included in SIRR. An additional $1,917 million are held by our insurance businesses that do not contribute to our disclosed SIRR measures. The remaining $11,360 million are captured in other internal non-trading market risk reporting.

(7) Assets purchased under reverse repurchase agreements include $129 million reflected in SIRR.

(8) Retail loans include $331,846 million reflected in SIRR.

(9) Wholesale loans include $124,701 million reflected in SIRR. An additional $1,228 million is used in the management of the SIRR of RBC Insurance.

(10) Investments for the account of segregated fund holders are included in the management of the SIRR of RBC Insurance.

(11) Other assets include $36,728 million reflected in SIRR. An additional $2,776 million is used in the management of the SIRR of RBC Insurance.

(12) Assets not subject to market risk include $6,074 million of physical and other assets.

(13) Deposits include $545,451 million reflected in SIRR.

(14) Insurance and investment contracts for the account of segregated fund holders are included in the management of the SIRR of RBC Insurance.

(15) Obligations related to assets sold under repurchase agreements include $123 million reflected in SIRR.

(16) Other liabilities include $28,408 million used in the management of the SIRR of RBC Insurance, and $10,019 million contribute to our SIRR measure.

(17) Liabilities not subject to market risk include $7,855 million of payroll related and other liabilities.

(Millions of Canadian dollars)	As at October 31, 2014			
		Market risk measure		
	Balance sheet amount	Traded risk (1)	Non-traded risk (2)	Non-traded risk primary risk sensitivity
Assets subject to market risk				
Cash and due from banks (3)	$ 17,421	$ 10,840	$ 6,581	Interest rate
Interest-bearing deposits with banks (4)	8,399	5,642	2,757	Interest rate
Securities				
Trading (5)	151,380	144,607	6,773	Interest rate, credit spread
Available-for-sale (6)	47,768	–	47,768	Interest rate, credit spread, equity
Assets purchased under reverse repurchase agreements and securities borrowed (7)	135,580	135,444	136	Interest rate
Loans				
Retail (8)	334,269	16,614	317,655	Interest rate
Wholesale (9)	102,954	427	102,527	Interest rate
Allowance for loan losses	(1,994)	–	(1,994)	Interest rate
Segregated fund net assets (10)	675	–	675	Interest rate
Derivatives	87,402	83,981	3,421	Interest rate, foreign exchange
Other assets (11)	49,878	14,098	35,780	Interest rate
Assets not subject to market risk (12)	6,818			
Total assets	$ 940,550	$ 411,653	$ 522,079	
Liabilities subject to market risk				
Deposits (13)	$ 614,100	$ 116,348	$ 497,752	Interest rate
Segregated fund liabilities (14)	675	–	675	Interest rate
Other				
Obligations related to securities sold short	50,345	50,345	–	
Obligations related to assets sold under repurchase agreements and securities loaned (15)	64,331	64,210	121	Interest rate
Derivatives	88,982	87,145	1,837	Interest rate, foreign exchange
Other liabilities (16)	51,190	14,756	36,434	Interest rate
Subordinated debentures	7,859	–	7,859	Interest rate
Liabilities not subject to market risk (17)	8,565			
Total liabilities	$ 886,047	$ 332,804	$ 544,678	
Total equity	$ 54,503			
Total liabilities and equity	$ 940,550			

(1) Traded risk includes FVTPL positions whose revaluation gains and losses are reported in revenue. Market risk measures of VaR, SVaR and Stress testing are used as risk controls for traded risk.
(2) Non-traded risk includes positions used in the management of the SIRR and other non-trading portfolios. Other material non-trading portfolios include positions from our Insurance business and AFS securities not included in SIRR.

The following footnotes provide additional information on the Non-traded risk amounts:

(3) Cash and due from banks includes $5,494 million included in SIRR. An additional $1,087 million is included in other risk controls.
(4) Interest-bearing deposits with banks of $2,757 million are included in SIRR.
(5) Trading securities include $6,761 million in securities used in the management of the SIRR of RBC Insurance, which is not included in our disclosed SIRR measure.
(6) Available-for-sale securities of $44,403 million are included in SIRR. An additional $3,365 million are held by our insurance businesses that do not contribute to our disclosed SIRR measures and certain legacy assets.
(7) Assets purchased under reverse repurchase agreements include $136 million reflected in SIRR.
(8) Retail loans include $317,655 million reflected in SIRR.
(9) Wholesale loans include $101,364 million reflected in SIRR. An additional $1,163 million is used in the management of the SIRR of RBC Insurance.
(10) Investments for the account of segregated fund holders are included in the management of the SIRR of RBC Insurance.
(11) Other assets include $33.309 million reflected in SIRR. An additional $2,471 million is used in the management of the SIRR of RBC Insurance.
(12) Assets not subject to market risk include $6,818 million of physical and other assets.
(13) Deposits include $497,747 million reflected in SIRR.
(14) Insurance and investment contracts for the account of segregated fund holders are included in the management of the SIRR of RBC Insurance.
(15) Obligations related to assets sold under repurchase agreements include $121 million reflected in SIRR.
(16) Other liabilities include $9,324 million used in the management of the SIRR of RBC Insurance, and $27,110 million contribute to our SIRR measure.
(17) Liabilities not subject to market risk include $8,565 million of payroll related and other liabilities.

Liquidity and funding risk

Liquidity and funding risk (liquidity risk) is the risk that we may be unable to generate sufficient cash or its equivalents in a timely and cost-effective manner to meet our commitments as they come due. Liquidity risk arises from mismatches in the timing and value of on-balance sheet and off-balance sheet cash flows that result from banking activities.

Our liquidity profile is structured to ensure that we have sufficient liquidity to satisfy our current and prospective commitments in normal business conditions and in stressed liquidity environments. To achieve these goals, we operate under a comprehensive Liquidity Risk Management Framework (LRMF) and employ several liquidity risk mitigation strategies that include:

- An appropriate balance between the level of exposure allowed under our risk appetite and the cost of risk mitigation;
- Broad funding access, including preserving and promoting a reliable base of core client deposits, ongoing access to diversified sources of wholesale funding and demonstrated capacities to monetize specific asset classes;
- A comprehensive enterprise-wide liquidity stress testing program, contingency planning and status monitoring process that is supported by unencumbered marketable securities;
- Timely and granular risk measurement information;
- Transparent liquidity transfer pricing and cost allocation; and,
- A rigorous first and second line of defense governance model.

Our liquidity management policies, practices and processes reinforce these risk mitigation strategies. In managing liquidity risk, we favour a centralized management approach to the extent possible given the various considerations outlined in this section.

Our liquidity risk objectives, policies and methodologies are regularly reviewed and modified to reflect changing market conditions and business mix, to align with local regulatory developments and to position ourselves for the phasing in of Basel III regulatory liquidity standards. We continue to maintain liquidity and funding that is appropriate for the execution of our strategy. Liquidity risk remains well within our risk appetite.

Regulatory environment

We continue to monitor and, as appropriate, modify our risk policies, practices and processes to align with regulatory developments and to position ourselves for prospective implementation of regulatory reforms in the jurisdictions we operate. In May 2014, OSFI issued the final version of the "Liquidity Adequacy Requirements (LAR)" guideline. OSFI's LAR guideline converts the Basel Committee on Banking Supervision's (BCBS) liquidity requirements, including the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) liquidity metrics together with monitoring tools, into OSFI guidance and formalizes the use of the OSFI-designed Net Cumulative Cash Flow (NCCF) as a supervisory monitoring tool. Consistent with these requirements, we are submitting monthly LCR and NCCF reports and quarterly NSFR results to OSFI as well as Quantitative Impact Study reports on LCR and NSFR for OSFI and BCBS twice a year.

In August 2014, the Government of Canada's Department of Finance released its bail-in consultation paper "Taxpayer Protection and Bank Recapitalization Regime". Bail-in regimes are being implemented in a number of jurisdictions following the 2008 financial crisis in an effort to limit taxpayer exposure to potential losses of a failing institution and ensure the institution's shareholders and creditors remain responsible for bearing such losses. The proposed Canadian regime applies only to domestic systemically important banks (D-SIBs) and focuses on a specific range of liabilities, which excludes deposits. In its April 21, 2015 Federal Budget announcement, the Government of Canada confirmed its intention to move forward with the Taxpayer Protection and Bank Recapitalization Regime, although no firm timeline was provided. For further details, refer to the Legal and regulatory environment risk section.

In October 2014, the BCBS issued the final standard for the NSFR and banks are required to meet the minimum standard by January 1, 2018. The final "Net stable funding ratio disclosure standard" was issued by the BCBS in June 2015 and banks will be required to comply from the date of the first reporting period after January 1, 2018.

Risk measurement

Liquidity risk is measured by applying scenario based assumptions against our assets and liabilities and off-balance sheet commitments to derive expected cash flow profiles over varying time horizons. For instance, government bonds can be quickly and reliably monetized to generate cash inflow prior to their contractual maturity, and similarly, relationship demand deposits can be deemed as having little short-term cash outflow although having the contractual right to redeem on demand. Risk methodologies and underlying assumptions such as these are periodically reviewed and validated to ensure alignment with our operating environment, expected economic and market conditions, rating agency preferences, regulatory requirements and accepted practices.

To control liquidity risk within our liquidity risk appetite, we set limits on various metrics reflecting a range of time horizons and severity of stress conditions. Our liquidity risk measurement and control activities are divided into three categories as follows:

Structural (longer-term) liquidity risk

We use an internal metric, derived from the cash capital methodology, which focuses on the structural alignment between long-term illiquid assets and longer-term funding sourced from wholesale investors and core relationship deposits. This metric informs our secured and unsecured wholesale term funding strategy.

Tactical (shorter-term) liquidity risk

We use net cash flow limits in conjunction with stress testing to contain risk within the risk appetite at branch, subsidiary and currency levels. Net cash flow positions are derived from the application of internally generated risk assumptions and parameters to known and anticipated cash flows for all material unencumbered assets, liabilities and off-balance sheet activities. Encumbered assets are not considered a source of available liquidity. We also control tactical liquidity by adhering to group-wide and unit-specific prescribed regulatory standards, such as LCR.

Contingency liquidity risk

Contingency liquidity risk planning assesses the impact of and our intended responses to sudden stressful events. Our Liquidity Contingency Plan, maintained and administered by Corporate Treasury, guides our actions and responses to liquidity crises. This plan establishes a Liquidity Crisis Team, consisting of senior representatives with relevant subject matter expertise from key business segments and Corporate Support. This team contributes to the development of stress tests and funding plans and meets regularly to assess our liquidity status, conduct stress tests and review liquidity contingency preparedness.

Our stress tests, which include elements of scenario and sensitivity analyses, measure our prospective exposure to global, country-specific and RBC-specific events over a period of several weeks. Different levels of severity are considered for each type of crisis with some scenarios reflecting multiple notch downgrades to our credit ratings.

The contingency liquidity risk planning process informs requirements for our earmarked contingent unencumbered liquid asset pools and identifies contingent funding needs (e.g. draws on committed credit and liquidity lines, demands for more collateral and deposit run-off) and sources (e.g. contingent liquid asset sales and incremental wholesale funding capacity) under various stress scenarios. As described in our Liquidity Contingency Plan, in a particularly acute short-term crisis or if a crisis was extended over a prolonged period, actions would be taken to supplement liquidity available from our earmarked contingency liquid asset pools by limiting cash and collateral outflows and by accessing new sources of liquidity and funding; for example, through sales of liquid assets and securitization and, in extraordinary circumstances, sales of core assets. As well, in light of our current credit ratings and well-developed market relationships and access, it is expected that even under extreme but plausible scenarios, we would continue to be able to access wholesale funding markets, albeit possibly at reduced overall capacity, higher costs and for shorter average maturities.

While we also have potential access to various normal course and emergency central bank lending facilities in Canada, the U.S. and Europe, such facilities are not considered a source of funding in our contingency planning for scenarios identified as extreme but plausible.

Our contingent liquid assets consist primarily of a diversified pool of highly rated and liquid marketable securities and include segregated portfolios (in both Canadian and U.S. dollars) of contingency liquidity assets to address potential on- and off-balance sheet liquidity exposures (such as deposit erosion, loan drawdowns and higher collateral demands), that have been sized through models we have developed or by the scenario analyses and stress tests we conduct periodically. These portfolios are subject to minimum asset quality levels and, as appropriate, other strict eligibility guidelines (e.g. maturity, diversification and eligibility for central bank advances) to maximize ready access to cash in emergencies. In addition to our pools of unencumbered contingent liquid assets, liquid securities held for daily management of short-term tactical cash management or other investment or trading activities, would also be available during times of crisis as sources of liquidity, either via outright sale or to obtain secured funding and meet pledging obligations.

Risk profile

As at October 31, 2015, relationship-based deposits as internally defined, which are the primary source of funding for retail loans and mortgages, were $422 billion or 51% of our total funding (October 31, 2014 – $394 billion or 54%). Highly liquid assets were funded primarily by short-term wholesale funding that reflects the expected monetization period of these assets. Wholesale funding is comprised of unsecured short-term liabilities of $110 billion and secured (repos and short sales) liabilities of $149 billion, and represented 13% and 18% of total funding as at October 31, 2015, respectively (October 31, 2014 – $74 billion and $126 billion or 10% and 17% of total funding, respectively). Long-term wholesale funding is mostly used to fund less liquid wholesale assets. Additional quantitative information is provided in the Funding section below.

As at October 31, 2015, we held earmarked contingency liquidity assets of $16 billion, of which $10 billion was in U.S. currency and $6 billion was in Canadian currency (October 31, 2014 – $12 billion of which $7 billion was in U.S. currency and $5 billion was in Canadian currency). During the year ended October 31, 2015, we held on average $13 billion, of which $8 billion was in U.S. currency and $5 billion was in Canadian currency (October 31, 2014 – $12 billion of which $7 billion was in U.S. currency and $5 billion was in Canadian currency). We also held a derivatives pledging liquid asset buffer of US$4 billion as at October 31, 2015 to mitigate the volatility of our net pledging requirements for derivatives trading (October 31, 2014 – US$4 billion). This buffer averaged US$4 billion during the year ended October 31, 2015 (October 31, 2014 – US$4 billion). These assets are included in our high-quality liquid asset (HQLA) pool, which is discussed below.

Liquidity Coverage Ratio

The Liquidity Coverage Ratio is a Basel III metric that measures the sufficiency of HQLA available to meet liquidity needs over a 30 day period in an acute stress scenario. The BCBS regulatory minimum coverage level for LCR is currently 60%, increasing each year to 100% by January 2019. In May 2014, OSFI released the final LAR guideline and adopted a minimum LCR requirement of 100% for Canadian banks, effective January 1, 2015.

In July 2014, OSFI released the final guideline on *"Public Disclosure Requirements for Domestic Systemically Important Banks on Liquidity Coverage Ratio (LCR)"*, implementing without change the BCBS LCR Disclosure Standards. OSFI required Canadian banks to disclose the LCR beginning in the second quarter of 2015. LCR is disclosed using the standard Basel disclosure template and is calculated using the average of month-end positions during the quarter.

Liquidity coverage ratio common disclosure template (1) **Table 60**

(Millions of Canadian dollars, except percentage amounts)	As at October 31 2015 Total unweighted value (average)	As at October 31 2015 Total weighted value (average)	As at July 31 2015 Total unweighted value (average)	As at July 31 2015 Total weighted value (average)
High-quality liquid assets				
Total high-quality liquid assets (HQLA)		194,785		176,928
Cash outflows				
Retail deposits and deposits from small business customers, of which: (2)	180,831	13,856	175,522	13,368
Stable deposits (3)	60,399	1,813	59,784	1,794
Less stable deposits	120,432	12,043	115,738	11,574
Unsecured wholesale funding, of which:	217,592	97,305	212,854	94,770
Operational deposits (all counterparties) and deposits (4) *in networks of cooperative banks*	97,255	23,342	93,469	22,417
Non-operational deposits	101,632	55,258	105,075	58,043
Unsecured debt	18,705	18,705	14,310	14,310
Secured wholesale funding		26,709		26,428
Additional requirements, of which:	195,694	51,288	173,249	40,123
Outflows related to derivative exposures and other collateral requirements	43,709	17,747	31,333	8,433
Outflows related to loss of funding on debt products	4,893	4,893	4,828	4,828
Credit and liquidity facilities	147,092	28,648	137,088	26,862
Other contractual funding obligations (5)	28,056	28,056	29,652	29,652
Other contingent funding obligations (6)	433,181	6,224	426,680	6,325
Total cash outflows		223,438		210,666
Cash inflows				
Secured lending (e.g. reverse repos)	119,274	32,982	114,680	31,963
Inflows from fully performing exposures	11,709	8,013	10,138	6,824
Other cash inflows	29,309	29,309	21,018	21,018
Total cash inflows		70,304		59,805
		Total adjusted value		Total adjusted value
Total HQLA		194,785		176,928
Total net cash outflows		153,134		150,861
Liquidity coverage ratio		127%		117%

(1) LCR is calculated using OSFI LAR and BCBS liquidity coverage ratio requirements.
(2) Excludes deposits with 0% cash outflow rates.
(3) As defined by BCBS, stable deposits from retail and small business customers are deposits that are insured and are either held in transactional accounts or the bank has an established relationship with the client making the withdrawal unlikely.
(4) Operational deposits from non-retail and non-small and medium-sized enterprise customers are deposits which clients need to keep with the bank in order to facilitate their access and ability to use payment and settlement systems primarily for clearing, custody and cash management activities.
(5) Other contractual funding obligations primarily include outflows from unsettled securities trades and outflows from obligations related to securities sold short.
(6) Other contingent funding obligations include outflows related to other off-balance sheet facilities that carry low LCR runoff factors (0% – 5%).

We manage our LCR position within a target range that reflects management's liquidity risk tolerance and takes into account business mix, asset composition and funding capabilities. The range is subject to periodic review in light of changes to internal requirements and external developments.

We maintain HQLAs in major currencies with dependable market depth and breadth. Our treasury management practices ensure that the levels of HQLA are actively managed, including contingency and cash management liquid assets, to meet our target LCR objectives. Our Level 1 assets, as calculated according to OSFI LAR and the BCBS LCR requirements, represent 78% of total HQLA. These assets consist of cash, placements with central banks and highly rated securities issued or guaranteed by governments, central banks and supra-national entities.

LCR captures cash flows from on- and off-balance sheet activities that are either expected or could potentially occur within 30 days in an acute stress scenario. Cash outflows result from application of withdrawal and non-renewal factors to demand and term deposits which are differentiated by client type (wholesale, retail and small- and medium-sized enterprises). Cash outflows also arise from business activities that create contingent funding and collateral requirements, such as repo funding, derivatives, short sales of securities and the extension of credit and liquidity commitments to client. Cash inflows arise primarily from maturing secured loans, interbank loans and non-HQLA securities.

LCR does not reflect any market funding capacity that management believes would be available to the Bank in a stress situation. All maturing wholesale debt is assigned 100% outflow in the LCR calculation.

Q4 2015 vs. Q3 2015

LCR of 127% increased from 117% in the prior quarter, primarily due to higher HQLA, and growth in client deposits and wholesale term funding.

Liquidity reserve and asset encumbrance

As recommended by the Enhanced Disclosure Task Force (EDTF), the following tables provide summaries of our liquidity reserve and asset encumbrance. In both tables, unencumbered assets represent, for the most part, a ready source of funding that can be accessed quickly, when required. For the purpose of constructing the following tables, encumbered assets include: (i) bank-owned liquid assets that are either pledged as collateral (e.g. repo financing and derivative pledging) or not freely available due to regulatory or internal policy requirements (e.g. earmarked to satisfy mandatory reserve or local capital adequacy requirements and to maintain continuous access to payment and settlement systems);

(ii) securities received as collateral from securities financing and derivative transactions which have either been re-hypothecated where permissible (e.g. to obtain financing through repos or to cover securities sold short) or have no liquidity value since re-hypothecation is prohibited; and (iii) illiquid assets that have been securitized and sold into the market or that have been pledged as collateral in support of structured term funding vehicles. We do not include encumbered assets as a source of available liquidity in measuring liquidity risk. Unencumbered assets are the difference between total and encumbered assets from both on- and off-balance sheet sources.

Liquidity reserve

In the liquidity reserve table, available liquid assets consist of on-balance sheet cash and securities holdings as well as securities received as collateral from securities financing (reverse repos and off-balance sheet collateral swaps) and derivative transactions and constitute the preferred source for quickly accessing liquidity. The other component of our liquidity reserve consists primarily of uncommitted and undrawn central bank credit facilities that could be accessed under exceptional circumstances provided certain pre-conditions could be met and where advances could be supported by eligible assets (e.g. certain unencumbered loans) not included in the liquid assets category.

Liquidity reserve (1) **Table 61**

	As at October 31, 2015				
(Millions of Canadian dollars)	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
Cash and holding at central banks	$ 25,075	$ –	$ 25,075	$ 1,719	$ 23,356
Deposits in other banks available overnight	2,298	–	2,298	1	2,297
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (2), (3)	257,338	21,216	278,554	127,702	150,852
Other (2)	142,713	31,751	174,464	80,349	94,115
Liquidity assets eligible at central banks (not included above) (4)	63	–	63	–	63
Undrawn credit lines granted by central banks (5)	11,844	–	11,844	–	11,844
Other assets eligible as collateral for discount (6)	128,401	–	128,401	–	128,401
Other liquid assets (7)	21,675	–	21,675	21,675	–
Total liquid assets	**$ 589,407**	**$ 52,967**	**$ 642,374**	**$ 231,446**	**$ 410,928**

	As at October 31, 2014				
(Millions of Canadian dollars)	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
Cash and holding at central banks	$ 18,656	$ –	$ 18,656	$ 1,054	$ 17,602
Deposits in other banks available overnight	3,855	–	3,855	333	3,522
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks (2), (3)	204,409	16,626	221,035	104,335	116,700
Other (2)	112,878	21,346	134,224	59,345	74,879
Liquidity assets eligible at central banks (not included above) (4)	62	–	62	–	62
Undrawn credit lines granted by central banks (5)	8,372	–	8,372	–	8,372
Other assets eligible as collateral for discount (6)	125,627	–	125,627	–	125,627
Other liquid assets (7)	11,887	–	11,887	11,887	–
Total liquid assets	$ 485,746	$ 37,972	$ 523,718	$ 176,954	$ 346,764

	As at	
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014
Royal Bank of Canada	**$ 252,052**	$ 221,007
Foreign branches	**64,684**	47,570
Subsidiaries	**94,192**	78,187
Total unencumbered liquid assets	**$ 410,928**	$ 346,764

(1) Information is provided from an enterprise-wide perspective and amounts shown are based on face value. In managing liquidity risk, we consider legal, regulatory, tax and other constraints that may impede transferability of liquidity among RBC units.
(2) The Bank-owned liquid assets amount includes securities owned outright by the Bank or acquired via on-balance sheet securities finance transactions.
(3) Includes liquid securities issued by provincial governments and U.S. government sponsored entities working under U.S. Federal government's conservatorship (e.g. Federal National Mortgage Association and Federal Home Loan Mortgage Corporation).
(4) Includes Auction Rate Securities.
(5) Includes loans that qualify as eligible collateral for the discount window facility available to us at the Federal Reserve Bank of New York. Amounts are face value and would be subject to collateral margin requirements applied by the Federal Reserve Bank to determine collateral value/borrowing capacity. Access to the discount window borrowing program is conditional on meeting requirements set by the Federal Reserve Bank and borrowings are typically expected to be infrequent and due to uncommon occurrences requiring temporary accommodation.
(6) Represents our unencumbered Canadian dollar non-mortgage loan book (at face value) that could, subject to satisfying conditions precedent to borrowing and application of prescribed collateral margin requirements, be pledged to the Bank of Canada for advances under its Emergency Lending Assistance (ELA) program. ELA and other central bank facilities are not considered sources of available liquidity in our normal liquidity risk profile but could in extraordinary circumstances, where normal market liquidity is seriously impaired, allow us and other banks to monetize assets eligible as central bank collateral to meet requirements and mitigate further market liquidity disruption.
(7) Represents pledges related to OTC and exchange-traded derivative transactions.

2015 vs. 2014

Total liquid assets increased $119 billion or 23%, reflecting growth in our balance sheet, mainly due to an increase in reverse repo style transactions and securities lending, as well as the impact of foreign exchange translation due to the weaker Canadian dollar.

Asset encumbrance

The Asset encumbrance table provides a comprehensive view of the assets available to the Bank, not just the liquidity reserve, and identifies assets already pledged as well as those available for use as collateral (including unencumbered assets from the Liquidity reserve table) for secured funding purposes. Less liquid assets such as mortgages and credit card receivables can in part be monetized although require more lead time relative to liquid assets. As at October 31, 2015, our assets available as collateral comprised 64% of our total liquid assets.

Asset encumbrance (1) **Table 62**

	As at									
	October 31, 2015					October 31, 2014				
	Encumbered		Unencumbered			Encumbered		Unencumbered		
(Millions of Canadian dollars)	Pledged as collateral	Other (2)	Available as collateral (3)	Other (4)	Total (5)	Pledged as collateral	Other (2)	Available as collateral (3)	Other (4)	Total (5)
Cash and due from banks	$ –	$1,719	$ 10,733	$ –	$ 12,452	$ 243	$1,054	$ 15,839	$ 285	$ 17,421
Interest-bearing deposits with banks	1	–	22,689	–	22,690	90	–	8,309	–	8,399
Securities										
Trading	66,752	–	90,551	1,400	158,703	64,467	–	85,698	1,215	151,380
Available-for-sale	7,800	669	45,548	2,788	56,805	7,781	57	37,802	2,128	47,768
Assets purchased under reverse repurchase agreements and securities borrowed	148,117	–	89,929	18,398	256,444	111,056	–	68,044	8,432	187,532
Loans										
Retail										
Mortgage securities (6)	35,889	–	33,921	–	69,810	37,441	–	29,042	–	66,483
Mortgage loans (6)	36,422	–	–	127,743	164,165	26,589	–	–	126,185	152,774
Non-mortgage loans	8,314	–	100,040	5,854	114,208	8,915	–	97,223	8,874	115,012
Wholesale	3,376	–	40,867	81,826	126,069	–	–	36,777	66,177	102,954
Allowance for loan losses	–	–	–	(2,029)	(2,029)	–	–	–	(1,994)	(1,994)
Segregated fund net assets	–	–	–	830	830	–	–	–	675	675
Other – Derivatives	–	–	–	105,626	105,626	–	–	–	87,402	87,402
– Others (7)	22,286	–	–	47,870	70,156	11,887	–	–	44,809	56,696
Total assets	$328,957	$2,388	$ 434,278	$390,306	$1,155,929	$268,469	$1,111	$ 378,734	$344,188	$992,502

(1) Information is provided from an enterprise-wide perspective and amounts shown are based on face value. In managing liquidity risk, we consider legal, regulatory, tax and other constraints that may impede transferability of liquidity among RBC units.
(2) Includes assets restricted from use to generate secured funding due to legal or other constraints.
(3) Includes loans that could be used to collateralize central bank advances. Our unencumbered Canadian dollar non-mortgage loan book (at face value) could, subject to satisfying conditions precedent to borrowing and application of prescribed collateral margin requirements, be pledged to the Bank of Canada for advances under its ELA program. We also lodge loans that qualify as eligible collateral for the discount window facility available to us at the Federal Reserve Bank of New York. ELA and other central bank facilities are not considered sources of available liquidity in our normal liquidity risk profile but could in extraordinary circumstances, where normal market liquidity is seriously disrupted, allow us and other banks to monetize assets eligible as central bank collateral to meet requirements and mitigate market liquidity dislocations.
(4) Other unencumbered assets are not subject to any restrictions on their use to secure funding or as collateral but would not be considered readily available since they may not be acceptable at central banks or for other lending programs.
(5) Includes bank-owned liquid assets and securities received as collateral from off-balance sheet securities financing and derivative transactions.
(6) Amounts have been revised from those previously disclosed.
(7) The Pledged as collateral amounts relate to OTC and exchange traded derivative transactions.

Other sources of liquidity that could be available to mitigate stressed conditions include: (i) our unused wholesale funding capacity, which is regularly assessed using an established methodology that is periodically reviewed and, as necessary, revised, and (ii) central bank borrowing facilities if, in extraordinary circumstances, market sources were not sufficient to allow us to monetize our assets available as collateral to meet our requirements (e.g. Bank of Canada, Federal Reserve Bank, Bank of England, and Bank of France).

Risk control

The Board of Directors annually approves the delegation of liquidity risk authorities to senior management. The Risk Committee of the Board annually approves the LRMF and the Pledging Policy and is responsible for their oversight. The Board of Directors, the Risk Committee, GRC and ALCO review, on a regular basis, reporting on our enterprise-wide liquidity position and status. The GRC, the Policy Review Committee (PRC) and/or ALCO also review liquidity documents prepared for the Board of Directors or its committees.

The PRC under GRM annually approves the Liquidity Risk Policy (LRP), which establishes minimum risk control elements in accordance with the Board-approved risk appetite and LRMF.

The ALCO annually approves the Liquidity Contingency Plan and provides strategic direction and oversight to Corporate Treasury, other functions, and business segments on the management of liquidity.

The LRMF and LRP are supported by operational, desk and product-level policies that implement risk control elements, such as parameters, methodologies, management limits and authorities that govern the measurement and management of liquidity. Stress testing is also employed to assess the robustness of the control framework and inform liquidity contingency plans.

Funding

Funding strategy

Core funding, comprising capital, longer-term wholesale liabilities and a diversified pool of personal and, to a lesser extent, commercial and institutional deposits, is the foundation of our structural liquidity position.

Deposit profile

During 2015, we continued to focus on building our core deposit base. Our relationship-based deposits, including our personal deposit franchise and our commercial and institutional client groups, maintain balances with relatively low volatility profiles and constitute our principal source of reliable funding. Reflecting deposit insurance and at times, exclusive relationships with us, these balances represent a highly stable source of core deposits in most circumstances as they are typically less reactive to market developments than those from transactional lenders and investors. Core deposits consist of our own statistically derived liquidity adjusted estimates of the highly stable portions of our relationship-based balances (demand, notice and fixed-term) together with wholesale funds maturing beyond one year and as at October 31, 2015 represented 64% of our total deposits (2014 – 69%). Over the past year, core deposit balances grew by approximately $28 billion or 7%. This increase was mainly attributable to growth in relationship-based personal and business and commercial deposits of $21 billion, of which $9 billion is due to changes in foreign exchange rates, and to a lesser degree by issuance of longer-term wholesale funding. For further details on the gross dollar amounts of our relationship-based deposits and our wholesale funding maturity schedule, refer to the Risk profile section and the following Composition of wholesale funding table, respectively.

Long-term debt issuance

During 2015, we continued to experience more favourable unsecured wholesale funding access and pricing compared to many of our global peers. As demonstrated in the following table, we also continued to expand our unsecured long-term funding base by selectively issuing, either directly or through our subsidiaries, $29 billion of term funding in various currencies and markets. Total unsecured long-term funding outstanding increased by $20 billion.

We primarily use residential mortgage and credit card securitization programs as alternative sources of funding and for liquidity and asset/liability management purposes. Our total secured long-term funding includes outstanding mortgage-backed securities (MBS) sold, covered bonds that are collateralized with residential mortgages, and securities backed by credit card and auto receivables.

Compared to 2014, our outstanding MBS sold decreased $642 million. Our covered bonds and securitized credit card receivables increased $10.7 billion and $556 million, respectively, while auto receivables decreased $408 million. Notes backed by auto receivables were fully repaid as at October 31, 2015.

For further details, refer to the Off-balance sheet arrangements section.

Long-term funding sources* — **Table 63**

(Millions of Canadian dollars)	As at October 31 2015	As at October 31 2014
Unsecured long-term funding	$ 102,081	$ 82,033
Secured long-term funding	68,228	57,996
Commercial mortgage-backed securities sold	1,080	1,330
Subordinated debentures	7,227	7,832
	$ 178,616	$ 149,191

* This table represents an integral part of our 2015 Annual Consolidated Financial Statements.

Our wholesale funding activities are well-diversified by geography, investor segment, instrument, currency, structure and maturity. We maintain an ongoing presence in different funding markets, which allows us to continuously monitor market developments and trends, identify opportunities and risks, and take appropriate and timely actions. We operate longer-term debt issuance registered programs. The following table summarizes these programs with their authorized limits by geography.

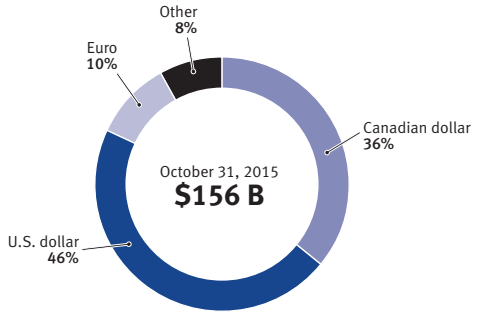
Programs by geography — **Table 64**

Canada	U.S.	Europe/Asia
• Canadian Shelf – $15 billion	• SEC Registered Medium Term Note Program – US$40 billion • SEC Registered Covered Bond Program – US$15 billion (1)	• European Debt Issuance Program– US$40 billion • Global Covered Bond Program– €32 billion • Japanese Issuance Programs – ¥1 trillion

(1) Subject to the €32 billion Global Covered Bond Program limit.

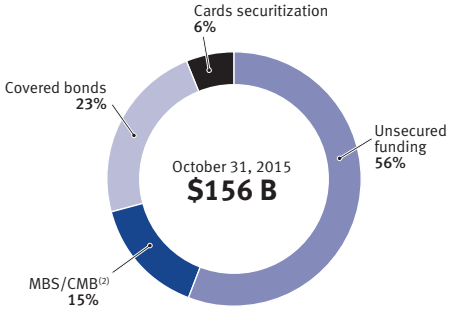
We also raise long-term funding using Canadian Deposit Notes, Canadian NHA MBS, Canada Mortgage Bonds, credit card receivable-backed securities, Kangaroo Bonds (issued in the Australian domestic market by foreign firms) and Yankee Certificates of Deposit (issued in the U.S. domestic market by foreign firms). We continuously evaluate expansion into new markets and untapped investor segments against relative issuance costs since diversification expands our wholesale funding flexibility and minimizes funding concentration and dependency, and generally reduces financing costs. As presented in the following charts, our current long-term debt profile is well diversified by currency as well as by type of long-term funding products. Maintaining competitive credit ratings is also critical to cost-effective funding.

Long-term debt(1) – funding mix by currency of issuance



(1) Based on original term to maturity greater than 1 year.

Long-term debt(1) – funding mix by product



(1) Based on original term to maturity greater than 1 year.
(2) Mortgage-backed securities and Canada Mortgage Bonds.

The following table provides our composition of wholesale funding based on remaining term to maturity and represents our enhanced disclosure in response to EDTF recommendations.

Composition of wholesale funding (1) **Table 65**

(Millions of Canadian dollars)	As at October 31, 2015							
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Less than 1 year sub-total	1 year to 2 years	2 years and greater	Total
Deposits from banks (2)	$ 5,107	$ 62	$ 13	$ 30	$ 5,212	$ –	$ –	$ 5,212
Certificates of deposit and commercial paper	9,355	9,648	18,591	10,071	47,665	451	207	48,323
Asset-backed commercial paper (3)	883	2,317	6,989	1,572	11,761	–	–	11,761
Senior unsecured medium-term notes (4)	944	6,403	4,165	11,348	22,860	17,670	42,520	83,050
Senior unsecured structured notes (5)	151	535	376	577	1,639	679	6,070	8,388
Mortgage securitization	41	1,088	673	2,139	3,941	2,656	16,049	22,646
Covered bonds/asset-backed securities (6)	–	1,490	509	4,799	6,798	5,999	28,707	41,504
Subordinated liabilities	1,500	–	–	–	1,500	108	5,619	7,227
Other (7)	4,126	3,283	252	1,318	8,979	12	4,408	13,399
Total	**$ 22,107**	**$ 24,826**	**$ 31,568**	**$ 31,854**	**$110,355**	**$ 27,575**	**$103,580**	**$ 241,510**
Of which:								
– Secured	$ 4,952	$ 7,035	$ 8,171	$ 8,510	$ 28,668	$ 8,655	$ 44,756	$ 82,079
– Unsecured	17,155	17,791	23,397	23,344	81,687	18,920	58,824	159,431

(Millions of Canadian dollars)	As at October 31, 2014							
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 12 months	Less than 1 year sub-total	1 year to 2 years	2 years and greater	Total
Deposits from banks (2)	$ 3,034	$ 277	$ 11	$ 19	$ 3,341	$ –	$ –	$ 3,341
Certificates of deposit and commercial paper	859	4,411	10,880	12,873	29,023	2,746	–	31,769
Asset-backed commercial paper (3)	518	1,320	1,835	4,114	7,787	–	–	7,787
Senior unsecured medium-term notes (4)	592	4,573	3,341	3,970	12,476	16,809	38,254	67,539
Senior unsecured structured notes (5)	336	578	458	1,058	2,430	597	4,729	7,756
Mortgage securitization	58	699	950	1,435	3,142	3,751	16,395	23,288
Covered bonds/asset-backed securities (6)	761	22	2,391	2,635	5,809	6,934	20,246	32,989
Subordinated liabilities	200	–	–	1,500	1,700	1,500	4,632	7,832
Other (7)	3,203	51	596	1,111	4,961	42	3,963	8,966
Total	$ 9,561	$ 11,931	$ 20,462	$ 28,715	$ 70,669	$ 32,379	$ 88,219	$ 191,267
Of which:								
– Secured	$ 4,455	$ 2,041	$ 5,176	$ 8,184	$ 19,856	$ 10,685	$ 36,641	$ 67,182
– Unsecured	5,106	9,890	15,286	20,531	50,813	21,694	51,578	124,085

(1) Excludes bankers' acceptances.
(2) Only includes deposits raised by treasury. Excludes deposits associated with services we provide to these banks (e.g. custody, cash management).
(3) Only includes consolidated liabilities, including our collateralized commercial paper program.
(4) Includes deposit notes.
(5) Includes notes where the payout is tied to movements in foreign exchange, commodities and equities.
(6) Includes credit card, auto and mortgage loans.
(7) Includes tender option bonds (secured) of $6,088 million (October 31, 2014 – $3,118 million), bearer deposit notes (unsecured) of $3,186 million (October 31, 2014 – $2,215 million) and other long-term structured deposits (unsecured) of $4,125 million (October 31, 2014 – $3,633 million).

2015 vs. 2014

Wholesale funding increased $50.2 billion or 26%. During the year, we issued certificates of deposit and commercial paper, unsecured medium-term notes, and covered bonds in various currencies and markets. The impact of foreign exchange translation as a result of the weaker Canadian dollar also contributed to the increase in wholesale funding.

Contractual maturities of financial assets, financial liabilities and off-balance sheet items

The following tables provide remaining contractual maturity profiles of all our assets, liabilities, and off-balance sheet items at their carrying value (e.g. amortized cost or fair value) at the balance sheet date and have been enhanced in response to EDTF recommendations. Off-balance sheet items are allocated based on the expiry date of the contract.

Details of contractual maturities and commitments to extend funds are a source of information for the management of liquidity risk. Among other purposes, these details form a basis for modelling a behavioural balance sheet with effective maturities to calculate liquidity risk measures. For further details, refer to the Risk measurement section.

Contractual maturities of financial assets, financial liabilities and off-balance sheet items — **Table 66**

	As at October 31, 2015									
(Millions of Canadian dollars)	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 2 years	2 years to 5 years	5 years and greater	With no specific maturity	Total
Assets										
Cash and deposits with banks	$ 31,355	$ 56	$ 17	$ 530	$ –	$ –	$ –	$ –	$ 3,184	$ 35,142
Securities										
Trading (1)	103,718	21	26	77	51	188	552	5,580	48,490	158,703
Available-for-sale	2,947	3,682	1,345	3,259	988	4,778	20,154	17,802	1,850	56,805
Assets purchased under reverse repurchase agreements and securities borrowed	82,017	30,851	27,871	16,570	7,320	2,601	–	–	7,493	174,723
Loans (net of allowance for loan losses)	15,020	11,828	23,196	22,295	18,234	89,179	184,249	22,833	85,389	472,223
Other										
Customers' liability under acceptances	10,343	3,032	71	–	–	6	1	–	–	13,453
Derivatives	7,492	8,129	3,747	3,074	2,479	10,639	25,244	44,811	11	105,626
Other financial assets	29,187	624	711	169	33	83	26	525	966	32,324
Total financial assets	$ 282,079	$ 58,223	$ 56,984	$ 45,974	$ 29,105	$107,474	$ 230,226	$ 91,551	$ 147,383	$ 1,048,999
Other non-financial assets	1,792	1,506	526	374	60	866	1,573	2,425	16,087	25,209
Total assets	$ 283,871	$ 59,729	$ 57,510	$ 46,348	$ 29,165	$108,340	$ 231,799	$ 93,976	$ 163,470	$ 1,074,208
Liabilities and equity										
Deposits (2)										
Unsecured borrowing	$ 40,992	$ 29,994	$ 41,298	$ 20,175	$ 27,220	$ 30,697	$ 53,403	$ 14,479	$ 338,378	$ 596,636
Secured borrowing	970	4,818	8,602	7,567	2,676	9,708	19,318	9,736	–	63,395
Covered bonds	–	1,961	–	2,293	1,165	3,269	24,064	4,444	–	37,196
Other										
Acceptances	10,343	3,032	71	–	–	6	1	–	–	13,453
Obligations related to securities sold short	47,658	–	–	–	–	–	–	–	–	47,658
Obligations related to assets sold under repurchase agreements and securities loaned	66,099	7,580	1,419	422	800	780	10	–	6,178	83,288
Derivatives	5,376	8,481	4,146	4,205	3,884	12,240	28,140	41,383	5	107,860
Other financial liabilities	23,210	1,236	391	120	198	72	239	4,188	349	30,003
Subordinated debentures	–	–	–	–	–	–	–	7,362	–	7,362
Total financial liabilities	$ 194,648	$ 57,102	$ 55,927	$ 34,782	$ 35,943	$ 56,772	$ 125,175	$ 81,592	$ 344,910	$ 986,851
Other non-financial liabilities	990	3,291	170	142	169	894	2,564	8,522	6,671	23,413
Equity	–	–	–	–	–	–	–	–	63,944	63,944
Total liabilities and equity	$ 195,638	$ 60,393	$ 56,097	$ 34,924	$ 36,112	$ 57,666	$ 127,739	$ 90,114	$ 415,525	$ 1,074,208
Off-balance sheet items										
Financial guarantees	$ 828	$ 2,798	$ 1,348	$ 2,115	$ 1,552	$ 2,861	$ 5,813	$ 147	$ 32	$ 17,494
Lease commitments	62	123	180	175	177	602	1,293	1,808	–	4,420
Commitments to extend credit	3,801	6,005	9,854	10,976	8,281	32,971	127,747	14,127	3,113	216,875
Other credit-related commitments	623	828	1,172	1,169	1,014	343	834	272	74,247	80,502
Other commitments	353	–	–	–	–	–	–	–	–	353
Total off-balance sheet items	$ 5,667	$ 9,754	$ 12,554	$ 14,435	$ 11,024	$ 36,777	$ 135,687	$ 16,354	$ 77,392	$ 319,644

(1) Trading debt securities classified as fair value through profit or loss have been included in the less than 1 month category as there is no expectation to hold these assets to their contractual maturity.

(2) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base, as explained in the preceding Deposit profile section, for our operations and liquidity needs.

(Millions of Canadian dollars)	As at October 31, 2014									
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 2 years	2 years to 5 years	5 years and greater	With no specific maturity	Total
Assets										
Cash and deposits with banks	$ 22,871	$ 218	$ –	$ –	$ –	$ –	$ –	$ –	$ 2,731	$ 25,820
Securities										
Trading (1)	94,025	13	65	55	48	229	558	5,236	51,151	151,380
Available-for-sale	4,450	3,739	2,528	433	1,113	3,417	18,307	11,959	1,822	47,768
Assets purchased under reverse repurchase agreements and securities borrowed	54,860	24,728	28,241	8,261	10,361	2,142	–	–	6,987	135,580
Loans (net of allowance for loan losses) (2)	15,445	10,483	15,242	16,794	18,975	99,098	156,873	17,767	84,552	435,229
Other										
Customers' liability under acceptances	8,812	2,498	88	49	9	–	6	–	–	11,462
Derivatives	4,145	7,275	3,483	2,673	1,909	8,507	21,331	38,071	8	87,402
Other financial assets	18,729	672	585	169	106	245	281	828	828	22,443
Total financial assets	$ 223,337	$ 49,626	$ 50,232	$ 28,434	$ 32,521	$ 113,638	$ 197,356	$ 73,861	$ 148,079	$ 917,084
Other non-financial assets	1,847	779	679	409	52	589	1,637	2,302	15,172	23,466
Total assets	$ 225,184	$ 50,405	$ 50,911	$ 28,843	$ 32,573	$ 114,227	$ 198,993	$ 76,163	$ 163,251	$ 940,550
Liabilities and equity										
Deposits (3)										
Unsecured borrowing	$ 31,190	$ 22,626	$ 27,372	$ 18,602	$ 21,581	$ 39,693	$ 49,523	$ 9,727	$ 310,045	$ 530,359
Secured borrowing	561	2,715	2,950	5,331	4,786	9,753	21,099	10,135	–	57,330
Covered bonds	748	–	2,558	–	–	4,908	14,556	3,641	–	26,411
Other										
Acceptances	8,812	2,498	88	49	9	–	6	–	–	11,462
Obligations related to securities sold short	50,345	–	–	–	–	–	–	–	–	50,345
Obligations related to assets sold under repurchase agreements and securities loaned	58,208	1,252	1,306	1,051	574	–	–	–	1,940	64,331
Derivatives	3,745	6,997	3,845	3,351	2,042	10,345	22,295	36,359	3	88,982
Other financial liabilities	18,094	1,121	492	170	298	309	530	4,033	357	25,404
Subordinated debentures	200	–	–	–	–	–	–	7,659	–	7,859
Total financial liabilities	$ 171,903	$ 37,209	$ 38,611	$ 28,554	$ 29,290	$ 65,008	$ 108,009	$ 71,554	$ 312,345	$ 862,483
Other non-financial liabilities	1,454	2,970	674	57	78	917	2,456	7,956	7,002	23,564
Equity	–	–	–	–	–	–	–	–	54,503	54,503
Total liabilities and equity	$ 173,357	$ 40,179	$ 39,285	$ 28,611	$ 29,368	$ 65,925	$ 110,465	$ 79,510	$ 373,850	$ 940,550
Off-balance sheet items										
Financial guarantees (2)	$ 705	$ 2,638	$ 2,590	$ 2,064	$ 2,151	$ 1,345	$ 5,410	$ 244	$ 61	$ 17,208
Lease commitments	58	114	167	165	161	634	1,220	1,291	–	3,810
Commitments to extend credit	1,670	6,345	7,336	6,779	8,562	19,942	107,868	11,708	2,306	172,516
Other credit-related commitments	503	782	966	1,232	1,183	315	996	242	62,325	68,544
Other commitments	246	450	413	–	–	–	–	–	–	1,109
Total off-balance sheet items	$ 3,182	$ 10,329	$ 11,472	$ 10,240	$ 12,057	$ 22,236	$ 115,494	$ 13,485	$ 64,692	$ 263,187

(1) Trading debt securities classified as fair value through profit or loss have been included in the less than 1 month category as there is no expectation to hold these assets to their contractual maturity.
(2) Amounts have been revised from those previously presented.
(3) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base, as explained in the preceding Deposit profile section, for our operations and liquidity needs.

Contractual maturities of financial liabilities and off-balance sheet items – undiscounted basis

The following tables provide remaining contractual maturity analysis of our financial liabilities and off-balance sheet items. The amounts disclosed in the following table are the contractual undiscounted cash flows of all financial liabilities (e.g. par value or amount payable upon maturity). The amounts do not reconcile directly with those in our consolidated balance sheets as the table only incorporates cash flows relating to payments on maturity of the instrument and do not recognize premiums, discounts or mark-to-market adjustments recognized in the instruments' carrying value as at the balance sheet date. Financial liabilities are based upon the earliest period in which they are required to be paid. For off-balance sheet items, the undiscounted cash flows potentially payable under financial guarantees and commitments to extend credit are classified on the basis of the earliest date they can be called.

Contractual maturities of financial liabilities and off-balance sheet items – undiscounted basis *

Table 67

(Millions of Canadian dollars)	As at October 31, 2015 On demand	Within 1 year	1 year to 2 years	2 years to 5 years	5 years and greater	Total
Financial liabilities						
Deposits (1)	$ 311,743	$ 216,876	$ 43,631	$ 96,104	$ 28,539	$ 696,893
Other						
Acceptances	–	13,446	6	1	–	13,453
Obligations related to securities sold short	–	47,658	–	–	–	47,658
Obligations related to assets sold under repurchase agreements and securities loaned	6,179	76,320	780	10	–	83,289
Other liabilities	334	25,174	72	237	4,139	29,956
Subordinated debentures	–	–	–	–	7,227	7,227
	318,256	379,474	44,489	96,352	39,905	878,476
Off-balance sheet items						
Financial guarantees (2)	7,079	10,399	11	4	1	17,494
Operating leases	–	717	602	1,293	1,808	4,420
Commitments to extend credit (2)	172,927	43,929	4	2	13	216,875
	180,006	55,045	617	1,299	1,822	238,789
Total financial liabilities and off-balance sheet items	$ 498,262	$ 434,519	$ 45,106	$ 97,651	$ 41,727	$ 1,117,265

(Millions of Canadian dollars)	As at October 31, 2014 On demand	Within 1 year	1 year to 2 years	2 years to 5 years	5 years and greater	Total
Financial liabilities						
Deposits (1)	$ 289,204	$ 161,953	$ 54,385	$ 84,609	$ 22,967	$ 613,118
Other						
Acceptances	–	11,456	–	6	–	11,462
Obligations related to securities sold short	–	50,345	–	–	–	50,345
Obligations related to assets sold under repurchase agreements and securities loaned	1,941	62,391	–	–	–	64,332
Other liabilities	358	20,174	309	530	4,013	25,384
Subordinated debentures	–	200	–	–	7,632	7,832
	291,503	306,519	54,694	85,145	34,612	772,473
Off-balance sheet items						
Financial guarantees (2)	5,883	11,206	111	7	1	17,208
Operating leases	–	665	634	1,220	1,291	3,810
Commitments to extend credit (2)	137,696	34,819	1	–	–	172,516
	143,579	46,690	746	1,227	1,292	193,534
Total financial liabilities and off-balance sheet items	$ 435,082	$ 353,209	$ 55,440	$ 86,372	$ 35,904	$ 966,007

* This table represents an integral part of our 2015 Annual Consolidated Financial Statements.

(1) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base, as explained in the preceding Deposit profile section, for our operations and liquidity needs.

(2) We believe that it is highly unlikely that all or substantially all of these guarantees and commitments will be drawn or settled within one year, and contracts may expire without being drawn or settled. The management of the liquidity risk associated with potential extensions of funds is outlined in the preceding Risk measurement section.

Credit ratings

Our ability to access unsecured funding markets and to engage in certain collateralized business activities on a cost-effective basis are primarily dependent upon maintaining competitive credit ratings. Credit ratings and outlooks provided by rating agencies reflect their views and are based on their methodologies. Ratings are subject to change from time to time, based on a number of factors including, but not limited to, our financial strength, competitive position and liquidity and other factors not completely within our control.

On January 23, 2015, Fitch Ratings affirmed our ratings with a stable outlook along with the ratings of the other five largest Canadian banks.

On May 20, 2015, Dominion Bond Rating Services (DBRS) revised the outlook on our senior and subordinated debt ratings from stable to negative, along with the outlook of the other five largest Canadian banks. The outlook revision is linked to DBRS' view that expected changes in Canadian legislation and regulation imply that the potential for timely systemic support for D-SIBs is declining.

On July 16, 2015, DBRS affirmed our ratings with a negative outlook along with the ratings of the other five largest Canadian banks.

On October 9, 2015, Standard & Poor's affirmed our ratings with a negative outlook.

On November 3, 2015, Moody's affirmed our ratings with a negative outlook along with the ratings of the other five largest Canadian banks.

The following table presents our major credit ratings[1] and outlooks as at December 1, 2015:

Credit ratings — **Table 68**

	As at December 1, 2015		
	Short-term debt	Senior long-term debt	Outlook
Moody's	P-1	Aa3	negative
Standard & Poor's	A-1+	AA-	negative
Fitch Ratings	F1+	AA	stable
Dominion Bond Rating Services	R-1(high)	AA	negative

(1) Credit ratings are not recommendations to purchase, sell or hold a financial obligation inasmuch as they do not comment on market price or suitability for a particular investor. Ratings are determined by the rating agencies based on criteria established from time to time by them, and are subject to revision or withdrawal at any time by the rating organization.

Additional contractual obligations for rating downgrades

A lowering of our credit rating may have potentially adverse consequences for our funding capacity or access to the capital markets, may also affect our ability, and the cost, to enter into normal course derivative or hedging transactions and may require us to post additional collateral under certain contracts. However, we estimate, based on periodic reviews of ratings triggers embedded in our existing businesses and of our funding capacity sensitivity, that a minor downgrade would not significantly influence our liability composition, funding access, collateral usage and associated costs. The following table presents the additional collateral obligations required at the reporting date in the event of a one-, two- or three-notch downgrade to our credit ratings. These additional collateral obligations are incremental requirements for each successive downgrade and do not represent the cumulative impact of multiple downgrades. The amounts reported change periodically as a result of several factors, including the transfer of trading activity to centrally cleared financial market infrastructures and exchanges, the expiration of transactions with downgrade triggers, the imposition of internal limitations on new agreements to exclude downgrade triggers, as well as normal course mark to market of positions with collateralized counterparties moving from a negative to a positive position. There is no outstanding senior debt issued in the market that contains rating triggers which would lead to early prepayment of principal.

Additional contractual obligations for rating downgrades — **Table 69**

	As at					
	October 31 2015			October 31 2014		
(Millions of Canadian dollars)	One-notch downgrade	Two-notch downgrade	Three-notch downgrade	One-notch downgrade	Two-notch downgrade	Three-notch downgrade
Contractual derivatives funding or margin requirements	$ 760	$ 132	$ 972	$ 518	$ 143	$ 790
Other contractual funding or margin requirements (1)	421	88	–	396	62	–

(1) Includes GICs issued by our municipal markets business out of New York and London.

Insurance risk

Insurance risk refers to the potential financial loss that may arise where the amount, timing and/or frequency of benefit payments under insurance and reinsurance contracts are different than expected. Insurance risk is distinct from those risks covered by other parts of our risk management framework (e.g. credit, market and operational risk) where those risks are ancillary to, or accompany the risk transfer.

We have implemented an Insurance Risk Framework that provides an overview of our processes and tools for identifying, assessing, managing and reporting on the insurance risks that face the organization. Key insurance-specific processes and tools include: risk appetite, delegated authorities and risk limits, capital management, Own Risk and Solvency Assessment (ORSA), Comprehensive Identification and Assessment of Risk (CIAR) process, stress testing, insurance product and project risk review and approval, insurance product pricing, reinsurance, insurance underwriting, insurance claims management, experience study analysis, actuarial liabilities, and embedded value.

Operational risk

Operational risk is the risk of loss or harm resulting from inadequate or failed internal processes, people and systems or from external events.

Operational risk is embedded in all our activities, including the practices and controls used to manage other risks. Failure to manage operational risk can result in direct or indirect financial loss, reputational impact, regulatory censure, or failure in the management of other risks such as credit or market risk.

Three Lines of Defence

Operational risk follows our established Three Lines of Defence governance model. This model encompasses the organizational roles and responsibilities for a co-ordinated enterprise-wide approach for the management of operational risk. For further details, refer to the Risk management – Enterprise risk management section.

Operational Risk Framework

We have put in place an Operational Risk Framework which is founded on the principles of our Enterprise Risk Management Framework and sets out the processes to identify, assess and monitor operational risk. The processes are established through the following core programs:

- Internal events – Internal events are specific instances where operational risk leads to or could have led to an unintended, identifiable impact. The internal events program provides a structured and consistent approach for collecting and analyzing internal event data to facilitate the analysis of the operational risk events affecting RBC.
- External events – External events are operational risk events that affect institutions other than RBC. External event monitoring and analysis is critical to gain awareness of operational risk experience within the industry and to identify emerging industry trends.

- Business Environment and Internal Control Factors (BEICF) Assessments – BEICF Assessments are conducted to improve business decision-making by gaining awareness of the key risks and the strengths and vulnerabilities of internal controls. Key BEICF Assessment processes include: Risk and Control Assessments conducted at both enterprise and business levels; and Change Initiatives and New/Amended Product Assessments conducted to ensure understanding of the risk and reward trade-off for business initiatives (e.g. new products, acquisitions, changes in business processes, implementation of new technology, etc.).
- Scenario analysis – Scenario analysis is a structured and disciplined process for making reasonable assessments of infrequent, yet plausible, severe operational risk events. Understanding how vulnerable RBC is to such "tail risks" identifies mitigating actions and informs the determination of related operational risk thresholds as part of the articulation of operational risk appetite.
- BEICF monitoring – BEICF monitoring is conducted on an ongoing basis through Key Risk Indicators (KRIs) and other assurance/monitoring programs (e.g. Business Unit monitoring, Second line of Defence monitoring, audit results, etc.).

Conclusions from the operational risk programs enable learning based on "what has happened to us, could it happen again elsewhere in RBC and what controls do we need to amend or implement", support the articulation of operational risk appetite and are used to inform the overall level of exposure to operational risk, which defines our operational risk profile. The profile includes significant operational risk exposures, potential new and emerging exposures and trends, and overall conclusions on the control environment and risk outlook. We proactively identify and investigate corporate insurance opportunities to mitigate and reduce potential future impacts of operational risk.

We consider risk/reward decisions in striking the balance between accepting potential losses versus incurring costs of mitigation, the expression of which is in the form of our operational risk appetite. Our operational risk appetite is established at the board level and cascaded throughout each of our business segments.

Management reports have been implemented at various levels of RBC in order to support proactive management of operational risk and transparency of risk exposures. Reports are provided on a regular basis and provide detail on the main drivers of the risk status and trend for each of our business segments and RBC overall. In addition, changes to the operational risk profile that are not aligned to our business strategy or operational risk appetite are identified and discussed.

Our operations expose us to many different risks, which may adversely affect our businesses and financial results. The following list is not exhaustive, as other factors could also adversely affect our results.

Ability to attract and to retain employees
Competition for qualified employees is intense within the financial services industry and from non-financial industries looking to recruit. Although our goal is to attract and retain qualified employees, there is no assurance that we will be able to do so.

Accuracy and completeness of information on clients and counterparties
When deciding to extend credit or enter into other transactions with clients and counterparties, we may rely on information provided by or on behalf of clients and counterparties, including audited financial statements and other financial information. We may also rely on representations of clients and counterparties as to the completeness and accuracy of that information. Our financial results could be adversely impacted if the financial statements and other financial information relating to clients and counterparties on whom we rely do not comply with GAAP or are materially misleading.

Development and integration of our distribution networks
We regularly explore opportunities to expand our distribution networks, either through acquisitions or organically by adding, for example, new bank branches, insurance offices, online savings accounts and ATMs in high-growth, receptive markets. However, if we are not able to develop or integrate these distribution networks effectively, our results of operations and financial condition may be negatively affected.

Model risk
The use of models plays an important role in many of our business activities. We use a variety of models for many purposes, including the valuation of financial products, risk measurement and management of different types of risk. Model risk is the risk of error in the design, development, implementation or subsequent use of models. We have established an enterprise-wide Model Risk Management Framework, including principles, policies and procedures, roles and responsibilities to manage model risk. One of the key factors in the framework to mitigate model risk is independent validation.

Information technology risk
We use information technology for business operations and the enablement of strategic business goals and objectives. Information technology risk is the risk to our business associated with the use, ownership, operation, involvement, influence and adoption of information technology within the enterprise. It consists of information technology related events (e.g. cybersecurity incidents) that could potentially have an adverse impact on our business. Such events could result in business interruption, service disruptions, theft of intellectual property and confidential information, additional regulatory scrutiny, litigation and reputational damage. To manage our information technology risk, we have established an enterprise-wide Information Technology Risk Management Framework.

Information management risk
Information management risk is the risk of loss or harm resulting from the failure to manage information appropriately throughout its lifecycle. Exposure to this risk exists when information is acquired or created, processed, used, shared, accessed, retained or disposed. With respect to personal information, the failure to manage information appropriately can result in the misuse of personal information or privacy breaches. With respect to client information, the inability to process information accurately and on a timely basis can result in service disruptions. With respect to corporate and proprietary information, the mismanagement of information can result in the disclosure of confidential information, the unavailability of information when it is required and the reliance on inaccurate information for decision-making purposes. Such events could lead to legal and regulatory consequences, reputational damage and financial loss.

Processing and execution risk
Processing and execution risk is the risk of failure to effectively design, implement and execute a process. Exposure to this risk is global, existing in every RBC location and operation, and in every RBC employee's actions. Examples of processing and execution events range from selecting the wrong interest rates, duplicating wire payment instructions, transposing figures, processing a foreign exchange transaction incorrectly, underinsuring a property and incorrectly investing funds. The potential impacts of such events include financial loss, legal and regulatory consequences and reputational damage. When identified, these situations are assessed, analyzed and mitigating actions are undertaken.

Social media risk
The scale and profile of social media has grown to present a number of risks. These risks include brand and reputational damage, information leaks, non-compliance with regulatory requirements and governance risk. To manage the risks associated with social media, we have implemented an enterprise-wide policy as well as business unit policies on the usage of external social media, which sets out the requirements for the business and corporate use of social media and is part of our larger Social Media Governance Framework.

Third party and outsourcing risk
Failing to effectively manage our service providers may expose RBC to service disruptions, regulatory action, financial loss, litigation or reputational damage. Third party and outsourcing risk has received increased oversight from regulators and attention from the media. We formalized and standardized our expectations of our suppliers with a principles-based Supplier Code of Conduct to ensure their behaviour aligns with our standards in the following key areas: business integrity, responsible business practices, responsible treatment of individuals, and the environment.

Operational risk capital
We currently use the Standardized Approach to calculate operational risk capital requirements and the allocation of capital amongst our business units. We are in the process of attaining accreditation towards the Basel II Advanced Measurement Approach (AMA) as the approved regulatory capital methodology. We have submitted our full AMA Application to the OSFI and, until approval is received, we are performing parallel runs of the capital model. Output from capital modeling will provide further transparency around the materiality of key risks by quantifying the expected losses and unexpected losses.

Operational risk loss events
During 2015, we did not experience any material operational risk loss event. For further details on our contingencies, including litigation, refer to Notes 26 and 27 of our 2015 Annual Consolidated Financial Statements.

Regulatory compliance risk

Regulatory compliance risk is the risk of potential non-conformance with laws, rules, regulations and prescribed practices in any jurisdiction in which we operate. Issues regarding compliance with laws and regulations can arise in a number of areas in a large complex financial institution such as RBC, and are often the result of inadequate or failed internal processes, people or systems.

Laws and regulations are in place to protect the financial and other interests of our clients, investors and the public. As a large-scale global financial institution, we are subject to numerous laws and to extensive and evolving regulation by governmental agencies, supervisory authorities and self-regulatory organizations in Canada, the U.S., Europe and other jurisdictions in which we operate. In recent years, such regulation has become increasingly extensive and complex. In addition, the enforcement of regulatory matters has intensified. Recent resolution of such matters involving other global financial institutions have involved the payment of substantial penalties, agreements with respect to future operation of their business, actions with respect to relevant personnel and guilty pleas with respect to criminal charges.

Operating in this increasingly complex regulatory environment and intense regulatory enforcement environment, we are and have been subject to a variety of legal proceedings, including civil claims and lawsuits, criminal charges, regulatory examinations, investigations, audits and requests for information by various governmental regulatory agencies and law enforcement authorities in various jurisdictions, and we anticipate that our ongoing business activities will give rise to such matters in the future. Changes to laws, including tax laws, regulations or regulatory policies, as well as the changes in how they are interpreted, implemented or enforced, could adversely affect us, for example, by lowering barriers to entry in the businesses in which we operate, increasing our costs of compliance or limiting our activities and ability to execute our strategic plans. Further, there is no assurance that we always will be or will be deemed to be in compliance with laws, regulations or regulatory policies. Accordingly, it is possible that we could receive a judicial or regulatory judgment or decision that results in fines, damages, penalties, and other costs or injunctions, criminal convictions or loss of licences or registrations that would damage our reputation and negatively impact our earnings. In addition, we are subject to litigation arising in the ordinary course of our business and the adverse resolution of any litigation could have a significant adverse effect on our results or could give rise to significant reputational damage, which in turn could impact our future business prospects.

Global compliance has developed a Regulatory Compliance Management Framework consistent with regulatory expectations from OSFI and other regulators. The framework is designed to manage and mitigate the regulatory compliance risks associated with failing to comply with, or adapt to, current and changing laws and regulations in the jurisdictions in which we operate.

Regulatory compliance risk has been further defined as risks associated with financial crime (which includes, but is not limited to, money laundering, bribery and sanctions), privacy, market conduct, consumer protection, business conduct and prudential requirements. Specific compliance policies, procedures and supporting frameworks have been developed to support the minimum requirements for the prudent management of regulatory compliance risk. Within the framework there are five elements that form a cycle by which all regulatory compliance risk management programs are developed, implemented and maintained.

- The first element is intended to ensure our regulatory compliance programs evolve alongside our business activities and operations.
- The second element is intended to ensure regulatory compliance risks are identified and assessed appropriately so regulatory compliance programs are designed in a manner to most effectively meet regulatory requirements.
- The third element relates to the design and implementation of specific controls.
- The fourth element is intended to ensure appropriate monitoring and oversight of the effectiveness of the controls.
- Lastly, the fifth element is intended to ensure the timely escalation and resolution of issues, and clear and transparent reporting. This is a critical step in enabling senior management and the Board of Directors to effectively perform their management and oversight responsibilities.

Strategic risk

Strategic risk is the risk that the enterprise or particular business areas will make inappropriate strategic choices, or will be unable to successfully implement selected strategies or related plans and decisions. Business strategy is the major driver of our risk profile and consequently the strategic choices we make in terms of business mix determine how our risk profile changes.

Responsibility for selecting and successfully implementing business strategies is mandated to the individual heads of the businesses. Oversight of strategic risk is the responsibility of the heads of the business segments and their operating committees, the Enterprise Strategy Office, Group Executive, and the Board of Directors. The Enterprise Strategy group supports the management of strategic risk through the strategic planning process (articulated within our Enterprise Strategic Planning Policy) ensuring alignment across our business, financial, capital and risk planning.

For details on the key strategic priorities for our business segments, refer to the Business segment results section.

Reputation risk

Reputation risk is the risk that an activity undertaken by an organization or its representatives will impair its image in the community or lower public confidence in it, resulting in the loss of business, legal action or increased regulatory oversight.

Reputation risk can arise from a number of events and primarily occurs in connection with credit risk, regulatory, legal and operational risks and failure to maintain strong risk conduct. Operational failures and non-compliance with laws and regulations can have a significant reputational impact on us.

We have put in place a Reputation Risk Framework which provides an overview of our approach to the management of this risk. It focuses on our organizational responsibilities, and controls in place to mitigate reputation risks.

The following principles guide our management of reputation risk:

- We must operate with integrity at all times in order to sustain a strong and positive reputation.
- Protecting our reputation is the responsibility of all our employees, including senior management, and extends to all members of the Board of Directors.

Legal and regulatory environment risk

Certain regulatory reforms will impact the way in which we operate, both in Canada and abroad, and the full impact of some of these reforms on our business will not be known until final rules are implemented and market practices have developed in response. We continue to respond to these and other developments and are working to minimize any potential adverse business or economic impact. The following regulatory reforms have potential to increase our operational, compliance, and technology costs and adversely affect our profitability.

Basel Committee on Banking Supervision global standards for capital and liquidity

The Basel Committee's standards for capital and liquidity (commonly referred to as "Basel III") establish minimum requirements for common equity, increased capital requirements for counterparty credit exposures, a new global leverage ratio and measures to promote the build-up of capital that can be drawn down in periods of stress. Banks around the world continue to adopt the new standards in accordance with domestic implementation.

In January 2013, the BCBS released final rules for the short-term liquidity standard, the LCR, with implementation commencing in 2015. Subsequently in October 2014, the BCBS released final rules for the long-term liquidity standard, the NSFR, with implementation commencing in 2018. For further details on how our business may be impacted, refer to the Liquidity and funding risk section.

In January 2014, the BCBS released final rules for the global leverage requirement, which takes effect as a 3% minimum supplemental capital requirement on January 1, 2018. For further details on how our business may be impacted, refer to the Capital management section.

In September 2014, U.S. regulators approved final rules to apply a U.S.-based supplemental leverage requirement and LCR requirement to large banking organizations operating in the U.S. The Fed has indicated that future rulemakings likely will establish single counterparty credit limits, early remediation requirements, and an LCR for U.S. Intermediate Holding Companies (IHCs) as well as Foreign Banking Organization branches and agencies. IHCs may be subject in whole or in part to additional rules regarding capital, liquidity, and other enhanced standards, including the NSFR.

Basel III requirements have been implemented in the European Union (EU) through a revised Capital Requirements Directive (CRD IV) and accompanying Capital Requirements Regulation (CRR), both of which became effective January 1, 2014 and are to be phased-in gradually through 2019. CRD IV/CRR also introduces improvements to the transparency of activities of banks and investment funds in different countries, adds a host of governance standards (including standards for executive compensation and bonuses, board oversight of risk and board diversity), and implements a common reporting framework for regulatory reporting. These changes have not had a significant impact on capital requirements for our European subsidiaries. The LCR has now been implemented in the EU, while the reporting phase of the Basel III leverage ratio is due to begin on January 1, 2016.

Dodd-Frank – Enhanced Supervision of Foreign Banking Organizations

On February 18, 2014, the U.S. Federal Reserve (Fed) finalized a new oversight regime for non-U.S. banks with subsidiaries, affiliates and branches operating in the U.S. (*Enhanced Prudential Standards for Bank Holding Companies and Foreign Banking Organizations*), intended to address the perceived systemic risk that large foreign banks could pose to U.S. financial markets.

As a Foreign Banking Organization with more than US$50 billion in U.S. non-branch assets, RBC is required to establish a separately capitalized U.S. IHC, into which all of our U.S. legal entities must be placed and for which certain U.S.-based requirements will apply. The IHC will be subject to Fed oversight comparable to U.S. bank holding companies. As a result, changes to our existing practices will be required to provide the governance and infrastructure needed to support these U.S.-specific requirements in areas of financial reporting, capital and liquidity, risk management, and stress testing. In addition, there will be limitations on capital distributions from the IHC to RBC, and such distributions will be subject to supervisory approval. The requirements will be phased-in between 2015 and 2018, with RBC needing to form its IHC by July 1, 2016. An implementation plan outlining our approach for meeting these requirements including forming the IHC was filed with the Fed initially on December 22, 2014. A modified implementation plan was subsequently filed on April 30, 2015 to reflect the planned integration of City National into the IHC. The Fed has stated that it plans to issue, at a later date, separate rules to apply early remediation requirements, and limits on exposures to single counterparties to the IHC. The final rule also deferred application of U.S.-based liquidity and leverage requirements. On October 7, 2015, the Fed approved our request for one-year extensions for the IHC to comply with the Fed's capital plan and stress test requirements. Specifically, the IHC will now be required to comply with the Fed's capital plan requirement beginning January 1, 2017, and with the Fed's stress test requirement beginning January 1, 2018. This extension was granted in consideration of the Fed's October 7, 2015 approval of our acquisition of City National. The Fed agreed with our view that the extension will allow for a more complete integration of City National into our capital plan and stress test development efforts, and that the extension is unlikely to present an undue risk to financial stability. RBC has incurred, and will continue to incur, costs to comply with these additional U.S.-based financial reporting, risk management and governance requirements and we may have less flexibility in our capital and liquidity planning which historically has been managed on a global basis. These impacts are not expected to materially affect our overall results.

Canadian bail-in regime
Bail-in regimes are being implemented in a number of jurisdictions following the 2008 financial crisis in an effort to limit taxpayer exposure to potential losses of a failing institution and ensure the institution's shareholders and creditors remain responsible for bearing such losses. The former Federal government under the Conservative party had proposed a "bail-in" regime for the six D-SIBs which would have granted the Federal government the power to permanently cancel a D-SIB's existing common shares and/or convert their long-term senior debt into common shares once the institution was no longer viable. Higher Loss Absorbency requirements would have also applied to ensure affected banks maintained sufficient capital to absorb the proposed conversions. It is unclear at this time whether the recently elected Liberal government will reinstate the Conservative government's proposal and what impact any proposed changes might have on our cost of funding.

Total loss-absorbing capacity (TLAC)
On November 9, 2015, the Financial Stability Board (FSB) finalized minimum common international standards related to the total loss-absorbing capacity (TLAC) of global systemically important banks (G-SIBs). The standards are intended to address the sufficiency of G-SIBs' capital to absorb losses in a resolution situation in a manner that minimizes impact on financial stability and ensures continuity of critical and long-term debt functions. Under the final standards, G-SIBs would be expected to meet a 16% Risk Weighted Asset (RWA) requirement by 2019, increasing to 18% by 2022. In addition, G-SIBs would be expected by 2019 to maintain a TLAC leverage ratio exposure of 6% of the Basel III leverage ratio denominator, increasing to 6.75% by 2022. RBC would become subject to these enhanced requirements if we are designated as a G-SIB by the FSB in the future. To date, neither RBC nor any other Canadian bank has been designated as a G-SIB. It is also uncertain how these standards will be integrated into any bail-in regime that could potentially be introduced in Canada.

On October 30, 2015, the Fed proposed rules establishing TLAC, long-term debt, and "clean holding company" requirements for U.S. G-SIBs and the IHCs of non-U.S. G-SIBs. RBC is not covered at this time by the proposal, but our U.S. IHC would become subject to these U.S. requirements should we be designated as a G-SIB in the future.

Over-the-counter derivatives reform
Reforms to over-the-counter (OTC) derivatives markets continue on a global basis, with the governments of the G20 nations proceeding with plans to transform the capital regimes, national regulatory frameworks and infrastructures in which we and other market participants operate. We, along with other Canadian banks, are experiencing changes in our wholesale banking business, some of which impacts our client- and trading-related derivatives revenue in Capital Markets. Certain of the rules that impact RBC include:

On January 30, 2015 OSFI issued revised Guideline B-7 Derivatives Sound Practices, translating the G20 reforms into its expectations for Federally Regulated Financial Institutions (FRFIs), including Canadian banks.

In March 2015, the BCBS and the International Organization of Securities Commissions (IOSCO) established minimum standards for margin requirements for non-centrally cleared derivatives requiring non-exempt financial entities and systemically important non-financial entities to exchange initial and variation margin on bilateral OTC derivatives. Throughout 2014 and 2015, regulators around the globe proposed domestic rules based on these guidelines. The BCBS/IOSCO framework will be phased-in from September 1, 2016. RBC expects it will be required to comply from this date and will work with national authorities to prepare for compliance.

To avoid the imposition of duplicative prudential and other regulatory requirements and mitigate some of the related compliance and operating costs, the U.S. Commodity Futures Trading Commission (CFTC) has issued guidance that permits RBC and other Canadian banks who registered as swaps dealers in the U.S. to substitute compliance with a limited subset of CFTC swap dealers rules by complying with Canadian rules in several areas. We continue to work with Canadian and U.S. authorities to encourage further reliance on the Canadian framework in this regard. Pending the issuance of expanded CFTC substituted compliance determinations, we, along with other Canadian swap dealers continue to engage with the CFTC to ensure the continued availability of no-action relief in connection with certain U.S. rules that are beyond the scope of the existing substituted compliance determinations and guidance.

In Europe, OTC reforms are being implemented through the European Market Infrastructure Regulation (EMIR) and the review of Markets in Financial Instruments Directive and accompanying Regulation (together, MiFID II/MiFIR). EMIR requires firms to clear certain OTC standardized derivative contracts through central counterparties, establish risk mitigation controls for non-cleared OTC derivatives transactions, and report both cleared and non-cleared contracts to trade repositories. MiFID II/MiFIR is expected to take effect in January 2017 and will introduce an on-venue trading obligation, subject to a determination of sufficient liquidity by the European Securities and Markets Authority (ESMA), for certain OTC derivatives that ESMA has deemed to be subject to the clearing obligation under EMIR.

Consumer protection
On September 19, 2014, the Supreme Court of Canada rendered its judgment in the 2003 Quebec class action lawsuit, *Marcotte v. Bank of Montreal*. The Court found that certain provisions of Quebec's *Consumer Protection Act* apply to credit cards issued by federally-chartered banks. The extent to which provincial/territorial regulation of other banking activities will be upheld is yet to be determined.

Common reporting standard
In April 2013, in an effort to combat international tax evasion, the G20 countries committed to introduce a global standard for the automatic exchange of financial information. In July 2014, the Organisation for Economic Co-operation and Development published the Standard for Automatic Exchange of Financial Account Information in Tax Matters, which consists of a Model Competent Authority Agreement to be used by governments to enter into agreements with jurisdictions with which they will automatically exchange financial account information (Reportable Jurisdictions), and a Common Reporting Standard (CRS) that provides standard procedures to be followed by financial institutions globally to identify reportable accounts. Information related to such accounts will be submitted by financial institutions to their local governments on an annual basis, who will then automatically exchange that information with the appropriate Reportable Jurisdictions.

As of November 1, 2015, over 90 countries have committed to introduce the requirements of CRS into local law, effective in either 2016 or 2017, with the first exchanges of information to begin in the year following implementation. The majority of jurisdictions in which RBC operates have committed to implement CRS, with a notable exception being the U.S.

RBC businesses operating in CRS jurisdictions will be required to make changes to existing business processes in order to comply with CRS due diligence requirements related to the identification and reporting of reportable accounts. In addition to changes to new account opening procedures, a review of pre-existing accounts in accordance with defined procedures will also be required and may require contacting certain pre-existing clients to request additional information and/or documentation. We will also incur additional costs in order to comply with these due diligence requirements.

U.K. and European regulatory reform

Effective March 2016, certain RBC U.K. subsidiaries and branches will become subject to enhanced requirements under the Senior Managers and Certification Regime, including prescribed responsibilities, a statutory duty on senior managers to take reasonable steps to prevent regulatory breaches in their areas of responsibility, and new remuneration rules for senior managers. A certification regime will apply to employees performing 'significant harm' roles. Additionally, new conduct rules will apply to all in-scope employees from March 2017.

In July 2015, a revised Deposit Guarantee Scheme Directive (DGSD) took effect. DGSD strengthens depositor protection across the EU through harmonization of the amount protected (€100,000/GBP 75,000) and related disclosure requirements. In the U.K., further obligations relating to Single Customer View reporting and continuous access to funds will come into effect in late 2016. The requirements impact our deposit-taking businesses in Europe by requiring changes to current reporting and disclosure requirements, as well as revisions to current procedures and processes.

MiFID II/MiFIR will have a significant impact across all RBC businesses operating in the EU given the wide-ranging nature of the reforms, which will introduce changes with respect to pre- and post-trade transparency; market structure; trade and transaction reporting; algorithmic and high frequency trading; and conduct of business. Final technical standards are expected in early 2016. The complexity of MiFID II/MiFIR implementation for RBC businesses operating in the EU will be increased by the need to address obligations arising under other overlapping regulatory initiatives. This will include the reporting obligations to be implemented under the recast Transparency Directive (effective November 2015) and Securities Financing Transaction Regulation (expected to come into force in 2016); the EMIR clearing obligation (to be phased-in over the course of 2016); and the Market Abuse Regulation (effective July 2016), which is intended to increase market integrity and investor protection across the EU.

Competitive risk

The competition for clients among financial services companies in the markets in which we operate is intense. Client loyalty and retention can be influenced by a number of factors, including new technology used or services offered by our competitors, relative service levels, relative prices, product and service attributes, our reputation, actions taken by our competitors, and adherence with competition and anti-trust laws. Other companies, such as insurance companies and non-financial companies, are increasingly offering services traditionally provided by banks. For example, our payments business is facing intense competition from emerging non-traditional competitors. This competition could also reduce net interest income, fee revenue and adversely affect our results.

Systemic risk

Systemic risk is the risk that the financial system as a whole, or a major part of it – either in an individual country, a region, or globally – is put in real and immediate danger of collapse or serious damage with the likelihood of material damage to the real economy, and that this will result in financial, reputation or other risks for RBC.

Systemic risk is considered to be the least controllable risk facing RBC. Our ability to mitigate this risk when undertaking business activities is limited, other than through collaborative mechanisms between key industry participants, and, as appropriate, the public sector, to reduce the frequency and impact of these risks. The two most significant measures in mitigating the impact of systemic risk are diversification and stress testing.

Our diversified business portfolios, products, activities and funding sources help mitigate the potential impacts from systemic risk. We also mitigate systemic risk by establishing risk limits to ensure our portfolio is well diversified, and concentration risk is reduced and remains within our Risk Appetite.

Stress testing involves consideration of the simultaneous movements in a number of risk factors. It is used to ensure our business strategies and capital planning are robust by measuring the potential impacts of credit, market, liquidity and funding and operational risks on us, under adverse economic conditions. Our enterprise-wide stress testing program uses stress scenarios featuring a range of severities based on plausible adverse economic and financial market events. These stress scenarios are evaluated across the organization, and results are integrated to develop an enterprise-wide view of the impacts on our financial results and capital requirements. For further details on our stress testing, refer to the Risk management – Enterprise risk management section.

Overview of other risks

In addition to the risks described in the Risk management section, there are other risk factors, described below, which may adversely affect our businesses and financial results. The following discussion is not exhaustive as other factors could also adversely affect our results.

Business and economic conditions

Our earnings are significantly affected by the general business and economic conditions in the geographic regions in which we operate. These conditions include consumer saving and spending habits as well as consumer borrowing and repayment patterns, business investment, government spending, exchange rates, sovereign debt risks, the level of activity and volatility of the capital markets, strength of the economy and inflation. For example, an extended economic downturn may result in high unemployment and lower family income, corporate earnings, business investment and consumer spending, and could adversely affect the demand for our loan and other products and result in higher provisions for credit losses. Given the importance of our Canadian operations, an economic downturn in Canada or in the U.S. impacting Canada would largely affect our personal and business lending activities in our Canadian banking businesses, including cards, and could significantly impact our results of operations.

Our earnings are also sensitive to changes in interest rates. A continuing low interest rate environment in Canada, the U.S. and globally would result in net interest income being unfavourably impacted by spread compression largely in Personal & Commercial Banking and Wealth Management. While an increase in interest rates would benefit our businesses that are currently impacted by spread compression, a significant increase in interest rates could also adversely impact household balance sheets. This could result in credit deterioration which might negatively impact our financial results, particularly in some of our personal and commercial banking and Wealth Management businesses.

Capital Markets and Investor & Treasury Services would be negatively impacted if global capital markets deteriorate resulting in lower average fee-based client assets and transaction volumes and trading volatility. In Wealth Management, weaker market conditions would lead to lower average fee-based client assets and transaction volumes. Worsening of financial and credit market conditions may adversely affect our

ability to access capital markets on favourable terms and could negatively affect our liquidity, resulting in increased funding costs and lower transaction volumes in Capital Markets and Investor & Treasury Services. For further details on economic and market factors which may impact our financial performance, refer to the Wealth Management, Investor & Treasury Services and Capital Markets sections.

Government fiscal, monetary and other policies

Our businesses and earnings are affected by the fiscal, monetary or other policies that are adopted by the Bank of Canada and various other Canadian regulatory authorities, the Board of Governors of the Federal Reserve System in the U.S. and other U.S. government authorities, as well as those adopted by international regulatory authorities and agencies in jurisdictions in which we operate. Such policies can also adversely affect our clients and counterparties in Canada, the U.S. and internationally, which may increase the risk of default by such clients and counterparties.

Tax risk and transparency

Tax risk refers to the risk of loss related to unexpected tax liabilities. The tax laws and systems that are applicable to RBC are complex and wide ranging. As a result, we ensure that any decisions or actions related to tax always reflect our assessment of the long-term costs and risks involved, including their impact on our relationship with clients, shareholders, and regulators, and our reputation.

Our approach to tax is governed by our Taxation Policy and Risk Management Framework, and reflects the fundamentals of our Risk Pyramid. Oversight of our tax policy and the management of tax risk is the responsibility of the CAO & CFO and the Senior Vice President, Taxation. We report our tax position to the Audit Committee on a regular basis and discuss our tax strategy with the Audit and Risk Committees as well as with GE.

Our tax strategy is designed to ensure transparency and support our business strategy, and is aligned with our corporate vision and values. We seek to maximize shareholder value by ensuring that our businesses are structured in a tax-efficient manner while considering reputational risk by being in compliance with all laws and regulations. Our framework seeks to ensure that we:

- Act with integrity and in a straightforward, open and honest manner in all tax matters;
- Ensure tax strategy is aligned with our business strategy supporting only bona fide transactions with a business purpose and economic substance;
- Ensure our full compliance and full disclosure to tax authorities of our statutory obligations; and
- Endeavour to work with the tax authorities to build positive long-term relationships and where disputes occur, address them constructively.

With respect to assessing the needs of our clients, we consider a number of factors including the purposes of the transaction. We seek to ensure that we only support bona fide client transactions with a business purpose and economic substance. Should we become aware of client transactions that are aimed at evading their tax obligations, we will not proceed with the transaction.

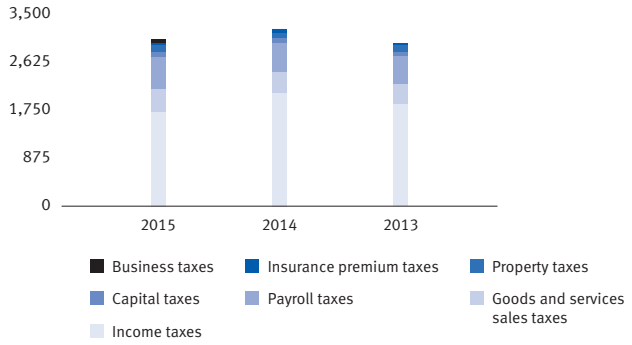
RBC operates in 39 countries worldwide. Our activities in these countries are subject to both Canadian and international tax legislation and other regulation, and are fully disclosed to the relevant tax authorities. The Taxation group and GRM both regularly review the activities of all entities to ensure compliance with tax requirements and other regulations.

Given that we operate globally, complex tax legislation and accounting principles can result in differing legal interpretations between the respective tax authorities we deal with and ourselves, and we are at risk of tax authorities disagreeing with prior positions we have taken for tax purposes. Should this occur, we are committed to an open and transparent dialogue with the tax authorities to ensure a quick assessment and prompt resolution of the issues. Failure to adequately manage tax risk and resolve issues with tax authorities in a satisfactory manner could adversely impact our results, potentially to a material extent in a particular period, and/or significantly impact our reputation.

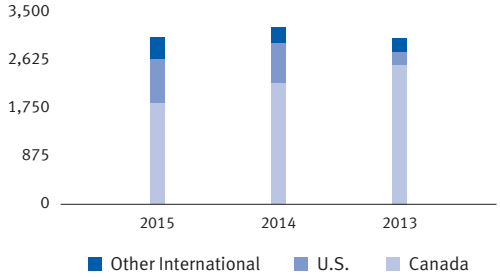
Tax Contribution

In 2015, total income and other tax expense to various levels of governments globally totalled $3.1 billion (2014 – $3.2 billion; 2013 – $3 billion). In Canada, total income and other tax expense for the year ended October 31, 2015 to various levels of government totalled $1.9 billion (2014 – $2.2 billion; 2013 – $2.6 billion).

Income and other tax expense – by category
(Millions of Canadian dollars)



Income and other tax expense – by geography
(Millions of Canadian dollars)



For further details on income and other tax expense, refer to the Financial performance section.

Environmental risk
Environmental risk is the risk of loss to financial, operational or reputational value resulting from the impact of environmental issues. It arises from the business activities and operations of both us and our clients. For example, the environmental issues associated with our clients' purchase and sale of contaminated property or development of large-scale projects may give rise to credit, regulatory and reputation risk. Operational and legal risks may arise from environmental issues at our branches, offices or data processing centres.

Corporate Sustainability (CS) sets enterprise-wide policy requirements for the identification, assessment, control, monitoring and reporting of environmental risk. Oversight is provided by GE and the Governance Committee of the Board of Directors. Business segments and corporate functions are responsible for incorporating environmental risk management requirements and controls within their operations. The CS Group also provides advisory services and support to business segments on the management of specific environmental risks in business transactions.

Periodically, we verify that our environmental risk management policies and processes are operating as intended. On an annual basis, and more frequently as required, environmental risk management activities, issues and trends are reported to GE and to the Governance Committee of the Board of Directors. Failure to adequately manage environmental risk could adversely impact our results and/or significantly impact our reputation.

We report on the full extent of environmental management annually in the Corporate Responsibility Report and Public Accountability Statements.

Other factors
Other factors that may affect actual results include changes in government trade policy, changes in accounting standards, including their effect on our accounting policies, estimates and judgments, currency and interest rate movements in Canada, the U.S., and other jurisdictions in which we operate, changes to our credit ratings, the timely and successful development of new products and services, our ability to cross-sell more products to customers, technological changes, effective design, implementation and execution of processes and their associated controls, fraud by internal and external parties, the possible impact on our business from disease or illness that affects local, national or global economies, disruptions to public infrastructure, including transportation, communication, power and water, international conflicts and other political developments including those relating to the war on terrorism, and our success in anticipating and managing the associated risks.

We caution that the foregoing discussion of risk factors, many of which are beyond our control, is not exhaustive and other factors could also affect our results.

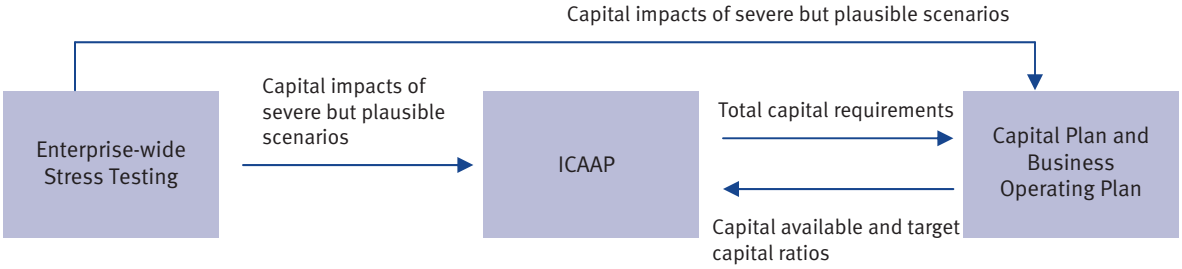
Capital management

We actively manage our capital to maintain strong capital ratios and high ratings while providing strong returns to our shareholders. In addition to the regulatory requirements, we consider the expectations of credit rating agencies, depositors and shareholders, as well as our business plans, stress tests, peer comparisons and our internal capital ratio targets. Our goal is to optimize our capital usage and structure, and provide support for our business segments and clients and better returns for our shareholders, while protecting depositors and senior creditors.

Capital management framework
Our capital management framework provides the policies and processes for defining, measuring, raising and investing all types of capital in a co-ordinated and consistent manner. It includes our overall approach to capital management, including guiding principles as well as roles and responsibilities relating to capital adequacy and transactions, dividends, solo capital and management of risk-weighted assets (RWA) and leverage ratio exposures. We manage and monitor capital from several perspectives, including regulatory capital, economic capital and subsidiary capital.

Our capital planning is a dynamic process which involves various teams including Finance, Corporate Treasury, GRM, Economics and our businesses, and covers internal capital ratio targets, potential capital transactions as well as projected dividend payouts and share repurchases. The integral parts of our capital planning are comprised of our business operating plans, enterprise-wide stress testing and Internal Capital Adequacy Assessment Process (ICAAP), along with the considerations of regulatory capital requirements and accounting changes, internal capital requirements, rating agency metrics and solo capital.

Our capital plan is established on an annual basis and is aligned with the management actions included in the annual business operating plan, which includes forecast growth in assets and earnings taking into account our business strategies, projected market and economic environment and peer positioning. This includes incorporating potential capital transactions based on our projected internal capital generation, business forecasts, market conditions and other developments, such as accounting and regulatory changes that may impact capital requirements. All of the components in the capital plan are monitored throughout the year and are revised as deemed appropriate.



Our Enterprise-wide stress testing and ICAAP provide key inputs for capital planning, including setting the appropriate internal capital ratio targets. The stress scenarios are evaluated across the organization, and results are integrated to develop an enterprise-wide view of financial impacts and capital requirements, which in turn facilitate the planning of mitigating actions to absorb exceptional adverse events. ICAAP is an OSFI mandated annual process to assess capital adequacy and requirements to cover all material risks, with a cushion to cover severe but plausible contingencies. In accordance with the OSFI guideline, the major components of our ICAAP process include comprehensive risk assessment, stress testing, capital assessment and planning (both economic and regulatory capital), board and senior management oversight, monitoring and reporting and internal control review.

Our internal capital targets are established to maintain robust capital positions in excess of OSFI's Basel III "all-in" regulatory targets, which include minimum capital requirements plus a capital conservation buffer, and effective January 1, 2016, a D-SIBs surcharge that can absorb losses during periods of stress. The "all-in" methodology includes all regulatory adjustments that will be required by 2019, while retaining the phase-out rules for non-qualifying capital instruments, as per OSFI's Basel III Capital Adequacy Requirements (CAR) guideline. The stress test

results of our Enterprise-wide stress testing and ICAAP are incorporated into the OSFI capital conservation buffer and D-SIBs surcharge, with a view to ensuring the bank has adequate capital to underpin risks and absorb losses under all plausible stress scenarios given our risk profile and appetite. In addition, we include a discretionary cushion on top of the OSFI regulatory targets to maintain capital strength for forthcoming regulatory and accounting changes, peer comparatives, rating agencies sensitivities and solo capital level.

The Board of Directors is responsible for ultimate oversight of capital management, including the annual review and approval of the Capital Plan. ALCO and GE share responsibility for capital management and receive regular reports detailing our compliance with established limits and guidelines. The Risk Committee annually approves the Capital Management Framework. The Audit and Risk Committees jointly approve the ICAAP process. The Audit Committee is also responsible for the ongoing review of internal controls over capital management.

Basel III

Our regulatory capital requirements are determined on a Basel III "all-in" basis as per OSFI guidelines. The top corporate entity to which Basel III applies at the consolidated level is Royal Bank of Canada.

Under Basel III, banks select from among alternative approaches to calculate their minimum regulatory capital required to underpin credit, market and operational risks.

We adopted the Basel III IRB approach to calculate credit risk capital for consolidated regulatory reporting purposes. While the majority of our credit risk exposures are reported under the Basel III IRB approach for regulatory capital purposes, certain portfolios considered non-material from a consolidated perspective continue to use the Basel III Standardized approach for credit risk (for example, our Caribbean banking operations). For consolidated regulatory reporting of operational risk capital, we currently use the Standardized approach. We have applied to OSFI for approval for the use of AMA for operational risk capital measurement and will commence reflecting operational risk capital under the AMA approach once approved. For consolidated regulatory reporting of market risk capital, we use both Internal Models-based and Standardized approaches.

In December 2010, the BCBS issued "Basel III: A global regulatory framework for more resilient banks and banking systems", which outlines the capital and liquidity requirements for global banks, with the objective of promoting financial stability and is intended to ensure sustainable economic growth. The BCBS sets out the Basel III transitional requirements for Common Equity Tier 1 (CET1), Tier 1 and Total capital ratios at 4.5%, 6.0% and 8%, respectively for 2015, which will be fully phased-in to 7%, 8.0% and 10.5%, respectively (including minimums plus capital conservation buffer of 2.5%) by January 1, 2019. The BCBS also released the NVCC requirements in January 2011 with an effort to ensure the loss absorbency of regulatory capital instruments at the point of non-viability. In August 2011, OSFI issued an advisory outlining the NVCC principles and requirements, including a full and permanent conversion of non-common capital instruments into common shares upon a trigger event, effective the first quarter of 2013.

OSFI expects Canadian banks to currently meet the Basel III "all-in" targets (BCBS January 1, 2019 requirements – minimum ratios plus the capital conservation buffer) for CET1 ratio, Tier 1 and Total capital. To ensure consistent implementation similar to that in other countries, effective January 1, 2014, OSFI allowed Canadian banks to phase in the Basel III CVA capital charge over a five-year period ending December 31, 2018. In accordance with OSFI guidance, there are two possible options to phase in the CVA capital charge. Under the option selected by RBC in 2015, Option 1, Basel III CVA is reflected in risk-weighted assets based on a scalar of 64%, 71%, and 77% for CET1, Tier 1 and Total Capital, respectively. In 2016, the scalars will remain unchanged, and will reach 100% for each tier of capital by 2019.

Commencing January 1, 2016, RBC will be required to include an additional 1% risk-weighted capital surcharge given our designation as a D-SIB by OSFI in 2013 (along with five other Canadian banks).

In October 2014, OSFI issued its final "Leverage Requirements (LR) Guideline", which replaced the OSFI Assets-to-Capital Multiple (ACM) with the Basel III Leverage ratio, beginning in the first quarter of 2015. The leverage ratio is defined as Tier 1 capital divided by leverage ratio exposure. The leverage ratio exposure is the sum of (a) on-balance sheet exposures; (b) derivative exposures; (c) securities financing transaction exposures and (d) off-balance sheet items. Canadian banks are expected to maintain a leverage ratio that meets or exceeds 3% at all times.

Pursuant to the BCBS publication "Global systemically important banks (G-SIB): updated assessment methodology and the higher loss absorbency requirement", issued in July 2013 and the OSFI advisory "Global systemically important banks (G-SIBs) – Public disclosure requirements", published in March 2014 and revised in September 2015, all federally regulated banks with a Basel III leverage ratio total exposure exceeding €200 billion at their financial year-end are required, at a minimum, to publicly disclose in the first quarter following their year-end, the twelve indicators used in the G-SIB assessment methodology, with the goal of enhancing the transparency of the relative scale of banks' potential global systemic importance and data quality. In the first quarter of 2015, we were not designated as a G-SIB. However, as we met the BCBS size threshold, we disclosed the 12 indicators using the OSFI prescribed template for the financial years ended 2013 and 2014 in our first quarter of 2015 report to shareholders.

In November 2015, the FSB and BCBS published an updated list of G-SIBs. We were not designated as a G-SIB as of November 2015.

In December 2013, BCBS issued the final standard related to the capital requirements for banks' equity investment in funds, with an effective date of January 2017, which aims to provide three approaches to measuring the risk sensitivity of banking book investments in funds. In December 2014, BCBS issued the final standards on the revised securitization framework, which aims to strengthen the capital standards for securitization exposures held in the banking book, with an effective date of January 2018. We are reviewing these two standards and have commenced work to ensure implementation of these standards by the respective effective dates.

In January 2015, BCBS issued the final standard on Pillar 3 which requires disclosure of standard templates to provide comparability and consistency of capital disclosure amongst banks. BCBS requires all banks to provide the revised Pillar 3 disclosures by the end of fiscal 2016. The implementation date for Pillar III for Canadian banks is expected to be no earlier than the fourth quarter of 2017.

The BCBS also issued two consultative papers in December 2014 "Capital floor: the design of a framework based on Standardized approaches" and "Revisions to the Standardized approach for credit risk". The capital floor consultative document focuses on the design of a capital floor framework based on the Standardized approach, with the objective to mitigate model risk and measurement error stemming from internal models and enhance comparability of capital across banks. This framework will replace the current transitional floor, which is based on the Basel I standard. The revisions to the Standardized approach for credit risk document is designed to strengthen the existing regulatory capital framework, with the objective of reducing reliance on external credit ratings, increasing risk sensitivity, and increasing comparability of capital requirements to the IRB approach. These revisions are expected to increase the comparability of capital requirements between banks using the Standardized approach.

We will continue to monitor and assess the capital impact of these regulatory developments.

The following table provides a summary of OSFI regulatory target ratios under Basel III.

OSFI regulatory target ratios under Basel III — Table 70

Basel III Capital ratios and leverage	OSFI regulatory target requirements for large banks under Basel III					RBC capital and leverage ratios as at October 31, 2015	Meet or exceed OSFI regulatory target ratios
	Minimum	Capital Conservation Buffer	Minimum including Capital Conservation Buffer	D-SIBs Surcharge (1)	Minimum including Capital Conservation Buffer and D-SIBs surcharge (1)		
Common Equity Tier 1	› 4.5%	2.5%	› 7.0%	1.0%	› 8.0%	10.6%	✓
Tier 1 capital	› 6.0%	2.5%	› 8.5%	1.0%	› 9.5%	12.2%	✓
Total capital	› 8.0%	2.5%	› 10.5%	1.0%	› 11.5%	14.0%	✓
Leverage ratio	› 3.0%	n.a.	› 3.0%	n.a.	› 3.0%	4.3%	✓

(1) The D-SIBs surcharge will be applicable to risk-weighted capital commencing January 1, 2016.

Regulatory capital, RWA and capital ratios

The following table provides details on our regulatory capital, RWA and capital ratios. Our capital position remained strong during the year and our capital ratios remain well above OSFI regulatory targets.

Regulatory capital, RWA and capital ratios — Table 71

(Millions of Canadian dollars, except percentage and multiple amounts and as otherwise noted)	As at October 31 2015	As at October 31 2014
Capital (1)		
CET1 capital	$ 43,715	$ 36,406
Tier 1 capital	50,541	42,202
Total capital	58,004	50,020
RWA used in calculation of capital ratios (1), (2)		
CET1 capital RWA	411,756	368,594
Tier 1 capital RWA	412,941	369,976
Total capital RWA	413,957	372,050
Total capital RWA consisting of: (1)		
Credit risk	$ 323,870	$ 286,327
Market risk	39,786	38,460
Operational risk	50,301	47,263
Total capital RWA	$ 413,957	$ 372,050
Capital ratios, Leverage ratio and multiples (1), (3)		
CET1 ratio	10.6%	9.9%
Tier 1 capital ratio	12.2%	11.4%
Total capital ratio	14.0%	13.4%
Assets-to-capital multiple (4)	n.a.	17.0X
Gross-adjusted assets (GAA) (4) (billions)	n.a.	$ 885.0
Leverage ratio	4.3%	n.a.
Leverage ratio exposure (billions)	$ 1,170.2	n.a.

(1) Capital, RWA, capital ratios and multiples are calculated using OSFI Capital Adequacy Requirements based on the Basel III framework. Leverage ratios are calculated using OSFI Leverage Requirements Guideline based on the Basel III framework. Effective the first quarter of 2015, the leverage ratio has replaced the ACM. The leverage ratio is a regulatory measure under the Basel III framework and is not applicable (n.a.) for periods prior to Q1 2015. Capital ratios presented above are on an "all-in" basis.

(2) Effective Q3 2014, different scalars were applied to the CVA included in each of the three tiers of capital. In 2014, the CVA scalars 57%, 65% and 77% were applied to CET 1, Tier 1 and Total Capital, respectively. In fiscal 2015, the CVA scalars were 64%, 71% and 77%, respectively. In fiscal 2016, the scalars will remain unchanged.

(3) To enhance comparability among other global financial institutions, our transitional CET1, Tier 1, Total capital and leverage ratios as at October 31, 2015 were 12.0%, 12.2%, 13.9% and 4.5%, respectively. Transitional is defined as capital calculated according to the current year's phase-in of regulatory adjustments and phase-out of non-qualifying capital instruments.

(4) Assets-to-capital multiples and GAA were calculated on a transitional basis in the prior period.

Basel III regulatory capital and capital ratios

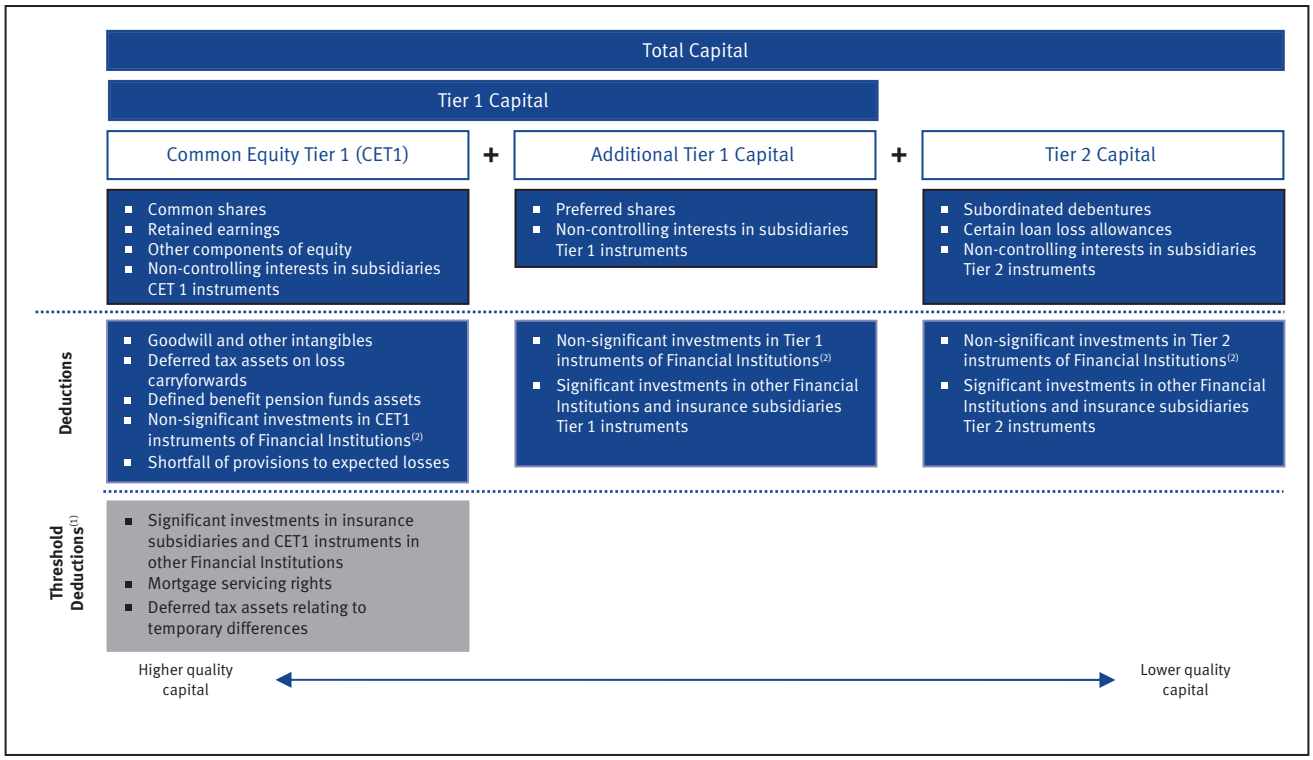
Under Basel III, regulatory capital consists of CET1, Additional Tier 1 and Tier 2 capital.

CET1 capital comprises the highest quality of capital. Regulatory adjustments under Basel III include full deductions of certain items and additional capital components that are subject to threshold deductions.

Tier 1 capital comprises predominantly CET1 and Additional Tier 1 items including non-cumulative preferred shares. Tier 2 capital includes subordinated debentures that meet certain criteria, certain loan loss allowances and non-controlling interests in subsidiaries Tier 2 instruments. Total capital is defined as the sum of Tier 1 and Tier 2 capital. Preferred shares and subordinated debentures issued after January 1, 2013 require NVCC features to be included into regulatory capital. For further details on NVCC, refer to the discussion above.

Regulatory capital ratios are calculated by dividing CET1, Tier 1 and Total capital by their respective RWA.

The following chart provides a summary of the major components of CET1, Additional Tier 1 and Tier 2 capital.



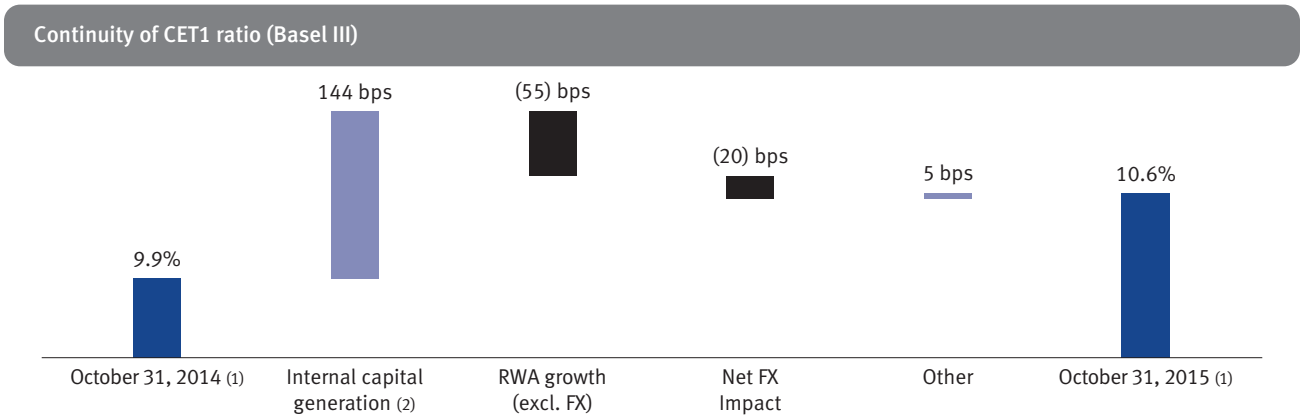
(1) First level: The amount by which each of the items exceeds a 10% threshold of CET1 capital (after all deductions but before threshold deductions) will be deducted from CET1 capital. Second level: The aggregate amount of the three items not deducted from the first level above and in excess of 15% of CET1 capital after regulatory adjustments will be deducted from capital, and the remaining balance not deducted will be risk-weighted at 250%.

(2) Non-significant investments are subject to certain CAR criteria that drive the amount eligible for deduction.

Regulatory Capital — **Table 72**

	All-in basis	
(Millions of Canadian dollars)	2015	2014
CET1 capital: instruments and reserves and regulatory adjustments		
Directly issued qualifying common share capital (and equivalent for non-joint stock companies) plus related stock surplus	$ 14,739	$ 14,684
Retained earnings	37,645	31,442
Accumulated other comprehensive income (and other reserves)	4,626	2,418
Directly issued capital subject to phase out from CET1 (only applicable to non-joint stock companies)	–	–
Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	13	12
Regulatory adjustments applied to CET1 under Basel III	(13,308)	(12,150)
Common Equity Tier 1 capital (CET1)	$ 43,715	$ 36,406
Additional Tier 1 capital: instruments and regulatory adjustments		
Directly issued qualifying Additional Tier 1 instruments plus related stock surplus	2,350	1,000
Directly issued capital instruments to phase out from Additional Tier 1	4,473	4,794
Additional Tier 1 instruments issued by subsidiaries and held by third parties (amount allowed in group AT1)	3	2
Regulatory adjustments applied to Additional Tier 1 under Basel III	–	–
Additional Tier 1 capital (AT1)	6,826	5,796
Tier 1 capital (T1=CET1+AT1)	$ 50,541	$ 42,202
Tier 2 capital: instruments and provisions and regulatory adjustments		
Directly issued qualifying Tier 2 instruments plus related stock surplus	3,073	2,010
Directly issued capital instruments subject to phase out from Tier 2	4,227	5,595
Tier 2 instruments issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	29	31
Collective allowance	134	182
Regulatory adjustments applied to Tier 2 under Basel III	–	–
Tier 2 capital (T2)	$ 7,463	$ 7,818
Total capital (TC=T1+T2)	$ 58,004	$ 50,020

2015 vs. 2014



(1) Represents rounded figures.
(2) Internal capital generation includes $5.3 billion which represents Net income available to shareholders less common and preferred shares dividends.

Our CET1 ratio was 10.6%, up 70 bps from last year, mainly due to strong internal capital generation. This factor was partially offset by higher RWA reflecting business growth, and the net impact of foreign exchange translation.

Our Tier 1 capital ratio of 12.2% was up 80 bps, mainly due to the factors noted under CET1 ratio, and the net issuance of preferred shares.

Our Total capital ratio of 14.0% was up 60 bps, mainly due to the factors noted under Tier 1 capital ratio, partially offset by the net redemption of subordinated debentures.

Basel III RWA

OSFI requires banks to meet minimum risk-based capital requirements for exposures to credit risk, operational risk, and, where they have significant trading activity, market risk. RWA is calculated for each of these risk types and added together to determine total RWA. In addition, OSFI requires the minimum risk-based capital to be no less than 90% of the capital requirements as calculated under the Basel I standards. If the capital requirement is less than 90%, a transitional adjustment to RWA must be applied as prescribed by OSFI CAR guidelines.

Total capital risk-weighted assets — Table 73

As at October 31 (Millions of Canadian dollars, except percentage amounts)	2015						2014
			Risk-weighted assets				
	Exposure (1)	Average of risk weights (2)	Standardized approach	Advanced approach	Other	Total	Total
Credit risk							
Lending-related and other							
Residential mortgages	$ 207,393	6%	$ 1,344	$ 11,453	$ –	$ 12,797	$ 10,573
Other retail	226,661	23%	4,771	46,386	–	51,157	48,976
Business	282,261	54%	15,064	136,501	–	151,565	126,948
Sovereign	75,636	12%	2,370	6,805	–	9,175	7,683
Bank	97,961	8%	578	7,117	–	7,695	7,079
Total lending-related and other	$ 889,912	26%	$ 24,127	$ 208,262	$ –	$ 232,389	$ 201,259
Trading-related							
Repo-style transactions	$ 340,131	2%	$ 15	$ 6,637	$ 28	$ 6,680	$ 4,912
Derivatives – including CVA – CET1 phase-in adjustment	90,782	32%	1,300	16,581	11,451	29,332	26,875
Total trading-related	$ 430,913	8%	$ 1,315	$ 23,218	$ 11,479	$ 36,012	$ 31,787
Total lending-related and other and trading-related	$ 1,320,825	20%	$ 25,442	$ 231,480	$ 11,479	$ 268,401	$ 233,046
Bank book equities	2,057	99%	–	2,045	–	2,045	2,025
Securitization exposures	55,932	13%	310	7,053	–	7,363	5,830
Regulatory scaling factor	n.a.	n.a.	n.a.	14,400	–	14,400	11,938
Other assets	45,818	64%	n.a.	n.a.	29,460	29,460	30,032
Total credit risk	$ 1,424,632	23%	$ 25,752	$ 254,978	$ 40,939	$ 321,669	$ 282,871
Market risk							
Interest rate			$ 1,339	$ 6,835	$ –	$ 8,174	$ 6,326
Equity			1,616	2,115	–	3,731	1,621
Foreign exchange			927	61	–	988	1,274
Commodities			943	13	–	956	2,030
Specific risk			8,716	3,084	–	11,800	14,980
Incremental risk charge			–	14,137	–	14,137	12,229
Total market risk			$ 13,541	$ 26,245	$ –	$ 39,786	$ 38,460
Operational risk			$ 50,301	n.a.	n.a.	$ 50,301	$ 47,263
CET1 capital risk-weighted assets (3)			$ 89,594	$ 281,223	$ 40,939	$ 411,756	$ 368,594
Additional CVA adjustment, prescribed by OSFI, for Tier 1 capital			–	–	1,185	1,185	1,382
Tier 1 capital risk-weighted assets (3)			$ 89,594	$ 281,223	$ 42,124	$ 412,941	$ 369,976
Additional CVA adjustment, prescribed by OSFI, for Total capital			–	–	1,016	1,016	2,074
Total capital risk-weighted assets (3)	$ 1,424,632		$ 89,594	$ 281,223	$ 43,140	$ 413,957	$ 372,050

(1) Total exposure represents exposure at default which is the expected gross exposure upon the default of an obligor. This amount is before any allowance against impaired loans or partial write-offs and does not reflect the impact of credit risk mitigation and collateral held.

(2) Represents the average of counterparty risk weights within a particular category.

(3) Effective Q3 2014, different scalars were applied to the CVA included in each of the three tiers of capital. In Q3 and Q4, 2014, the CVA scalars 57%, 65% and 77% were applied to CET 1, Tier 1 and Total Capital, respectively. In fiscal 2015, the CVA scalars were 64%, 71% and 77%, respectively. In 2016, the scalars will remain unchanged.

2015 vs. 2014

During the year, CET1 RWA was up $43 billion, mainly reflecting the impact of foreign exchange translation and business growth largely in our wholesale lending portfolio and repo-style transactions.

Selected capital management activity

The following table provides our selected capital management activity for the year ended October 31, 2015.

Selected capital management activity — **Table 74**

(Millions of Canadian dollars, except number of shares)	2015 Issuance or redemption date	2015 Number of shares (000s)	2015 Amount
Tier 1 capital			
Common shares issued			
Stock options exercised (1)		1,190	$ 62
Issuance of preferred shares Series BD (2), (3), (4)	January 30, 2015	24,000	600
Issuance of preferred shares Series BF (2), (3), (4)	March 13, 2015	12,000	300
Issuance of preferred shares Series BH (2), (3), (4)	June 5, 2015	6,000	150
Issuance of preferred shares Series BI (2), (3), (4)	July 22, 2015	6,000	150
Issuance of preferred shares Series BJ (2), (3), (4)	October 2, 2015	6,000	150
Redemption of preferred shares Series AX	November 24, 2014	(13,000)	(325)
Tier 2 capital			
Issuance of June 4, 2025 subordinated debentures (2), (4)	June 4, 2015		1,000
Maturity of November 14, 2014 subordinated debentures (2)	November 14, 2014		(200)
Redemption of June 15, 2020 subordinated debentures (2)	June 15, 2015		(1,500)

(1) Amounts include cash received for stock options exercised during the period and the fair value adjustments to stock options.
(2) For further details, refer to Notes 19 and 21 of our audited 2015 Annual Consolidated Financial Statements.
(3) Based on gross amount.
(4) NVCC capital instruments.

Dividends

Our common share dividend policy reflects our earnings outlook, payout ratio objective and the need to maintain adequate levels of capital to fund business opportunities. In 2015, our dividend payout ratio was 46%, which met our dividend payout ratio target of 40% to 50%. Common share dividends paid during the year were $4.4 billion.

Selected share data (1) **Table 75**

(Millions of Canadian dollars, except number of and per share amounts)	2015 Number of shares (000s)	2015 Amount	2015 Dividends declared per share	2014 Number of shares (000s)	2014 Amount	2014 Dividends declared per share	2013 Number of shares (000s)	2013 Amount	2013 Dividends declared per share
Common shares outstanding	**1,443,423**	**$14,573**	**$ 3.08**	1,442,233	$14,511	$ 2.84	1,441,056	$14,377	$ 2.53
First preferred shares outstanding									
Non-cumulative Series W (2)	**12,000**	**300**	**1.23**	12,000	300	1.23	12,000	300	1.23
Non-cumulative Series AA	**12,000**	**300**	**1.11**	12,000	300	1.11	12,000	300	1.11
Non-cumulative Series AB	**12,000**	**300**	**1.18**	12,000	300	1.18	12,000	300	1.18
Non-cumulative Series AC	**8,000**	**200**	**1.15**	8,000	200	1.15	8,000	200	1.15
Non-cumulative Series AD	**10,000**	**250**	**1.13**	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AE	**10,000**	**250**	**1.13**	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AF	**8,000**	**200**	**1.11**	8,000	200	1.11	8,000	200	1.11
Non-cumulative Series AG	**10,000**	**250**	**1.13**	10,000	250	1.13	10,000	250	1.13
Non-cumulative Series AH	**–**	**–**	**–**	–	–	–	–	–	0.86
Non-cumulative Series AJ (3)	**13,579**	**339**	**0.88**	13,579	339	0.97	16,000	400	1.25
Non-cumulative Series AK (3)	**2,421**	**61**	**0.67**	2,421	61	0.53	–	–	–
Non-cumulative Series AL (3)	**12,000**	**300**	**1.07**	12,000	300	1.15	12,000	300	1.40
Non-cumulative Series AN (3)	**–**	**–**	**–**	–	–	0.39	9,000	225	1.56
Non-cumulative Series AP (3)	**–**	**–**	**–**	–	–	0.39	11,000	275	1.56
Non-cumulative Series AR (3)	**–**	**–**	**–**	–	–	0.39	14,000	350	1.56
Non-cumulative Series AT (3)	**–**	**–**	**–**	–	–	1.17	11,000	275	1.56
Non-cumulative Series AV (3)	**–**	**–**	**–**	–	–	1.17	16,000	400	1.56
Non-cumulative Series AX (3)	**–**	**–**	**–**	13,000	325	1.53	13,000	325	1.53
Non-cumulative Series AZ (3), (4)	**20,000**	**500**	**1.00**	20,000	500	0.50	–	–	–
Non-cumulative Series BB (3), (4)	**20,000**	**500**	**0.98**	20,000	500	0.46	–	–	–
Non-cumulative Series BD (3), (4)	**24,000**	**600**	**0.73**	–	–	–	–	–	–
Non-cumulative Series BF (3), (4)	**12,000**	**300**	**0.63**	–	–	–	–	–	–
Non-cumulative Series BH (4)	**6,000**	**150**	**0.58**	–	–	–	–	–	–
Non-cumulative Series BI (4)	**6,000**	**150**	**0.42**	–	–	–	–	–	–
Non-cumulative Series BJ (4)	**6,000**	**150**	**–**	–	–	–	–	–	–
Treasury shares held – preferred	**(63)**	**(2)**		1	–		47	1	
Treasury shares held – common	**532**	**38**		892	71		666	41	
Stock options									
Outstanding	**8,182**			8,579			10,604		
Exercisable	**5,231**			4,987			5,711		
Dividends									
Common		**4,443**			4,097			3,651	
Preferred		**191**			213			253	

(1) For further details about our capital management activity, refer to Note 21 of our audited 2015 Annual Consolidated Financial Statements.
(2) Effective February 24, 2010, we have the right to convert into common shares at our option, subject to certain restrictions.
(3) Dividend rate will reset every five years.
(4) NVCC capital instruments.

Our normal course issuer bid (NCIB) commenced on November 1, 2014 and expired on October 31, 2015. Over the term of the previous bid, we did not purchase any common shares.

On November 2, 2015, we completed the acquisition of City National, whereby we issued 41.6 million RBC common shares. In addition, we issued RBC first preferred shares (Series C-1 and Series C-2) with a par value of US$275 million upon the cancellation of all outstanding City National preferred stock.

On November 2, 2015, we redeemed all $1.5 billion outstanding 3.18% subordinated debentures due on November 2, 2015 for 100% of their principal amount plus accrued interest to the redemption date.

On November 16, 2015, we announced our intention to redeem all issued and outstanding $1.2 billion principal amount of RBC TruCS 2015 for cash at a redemption price of $1,000 per unit. The redemption is expected to be completed on December 31, 2015.

As at November 27, 2015, the number of outstanding common shares and stock options and awards was 1,485,401,829 and 14,675,359, respectively, and the number of Treasury shares – preferred and Treasury shares – common was (9,137) and 291,505, respectively.

NVCC provisions require the conversion of our capital instruments into a variable number of common shares in the event that OSFI deems the Bank to be non-viable or a federal or provincial government in Canada publicly announces that the Bank has accepted or agreed to accept a capital injection. If a NVCC trigger event were to occur, our NVCC capital instruments preferred shares Series AZ, preferred shares Series BB, preferred shares Series BD, preferred shares Series BF, preferred shares Series BH, preferred shares Series BI, preferred shares Series BJ, subordinated debentures due on July 17, 2024, subordinated debentures due on September 29, 2026 and subordinated debentures due on June 4, 2025 would be converted into RBC common shares pursuant to an automatic conversion formula with a conversion price based on the greater of: (i) a floor price of $5.00, and (ii) the current market price of our common shares at the time of the trigger event (10-day weighted average). Based on a floor price of $5.00 and including an estimate for accrued dividends and interest, these NVCC capital instruments would convert into a maximum of 1,388 million RBC common shares, in aggregate, which would represent a dilution impact of 49% based on the number of RBC common shares outstanding as at October 31, 2015.

Attributed capital

Our methodology for allocating capital to our business segments is based on the higher of fully diversified economic capital and the Basel III regulatory capital requirements. Risk-based capital attribution provides a uniform base for performance measurement among business segments, which compares to our overall corporate return objective and facilitates management decisions in resource allocation in conjunction with other factors.

Attributed capital is calculated and attributed on a wider-array of risks compared to Basel III regulatory capital requirements, which are calibrated predominantly to target credit, market (trading) and operational risk measures. Economic capital is our internal quantification of risks associated with business activities which is the capital required to remain solvent under extreme market conditions, reflecting our objective to maintain strong credit ratings. Economic capital is calculated based on credit, market (trading and non-trading), operational, business and fixed asset, and insurance risks, along with capital attribution for goodwill and other intangibles. The common risks between the two frameworks are aligned to reflect increased regulatory requirements.

- Business risk is the risk of loss or harm due to variances in volumes, prices and costs caused by competitive forces, regulatory changes, reputation and strategic risks.
- Fixed asset risk is defined as the risk that the value of fixed assets will be less than their book value at a future date.

For further discussion on Credit, Market, Operational and Insurance risks, refer to the Risk management section.

Attributed capital is also used to assess the adequacy of our capital base. Our policy is to maintain a level of available capital, defined as common equity and other capital instruments with equity-like loss absorption features such as preferred shares that exceed Economic capital with a comfortable cushion.

The calculation and attribution of capital involves a number of assumptions and judgments by management which are monitored to ensure that the economic capital framework remains comprehensive and consistent. The models are benchmarked to leading industry practices via participation in surveys, reviews of methodologies and ongoing interaction with external risk management industry professionals.

The following outlines our attributed capital.

Attributed capital — **Table 76**

(Millions of Canadian dollars)	2015	2014
Credit risk	$ 16,400	$ 13,800
Market risk (trading and non-trading)	3,900	3,900
Operational risk	4,600	4,300
Business and fixed asset risk	2,900	2,750
Insurance risk	550	500
Goodwill and other intangibles	11,900	11,350
Regulatory capital allocation	5,400	4,150
Attributed capital	$ 45,650	$ 40,750
Under attribution of capital	6,650	4,950
Average common equity	$ 52,300	$ 45,700

2015 vs. 2014

Attributed capital increased $5 billion largely due to higher credit risk reflecting business growth and the impact of foreign exchange translation, and higher regulatory capital allocation. The increase in operational and business risks reflected higher revenue. Goodwill and other intangibles risk increased mainly as a result of the impact of foreign exchange translation.

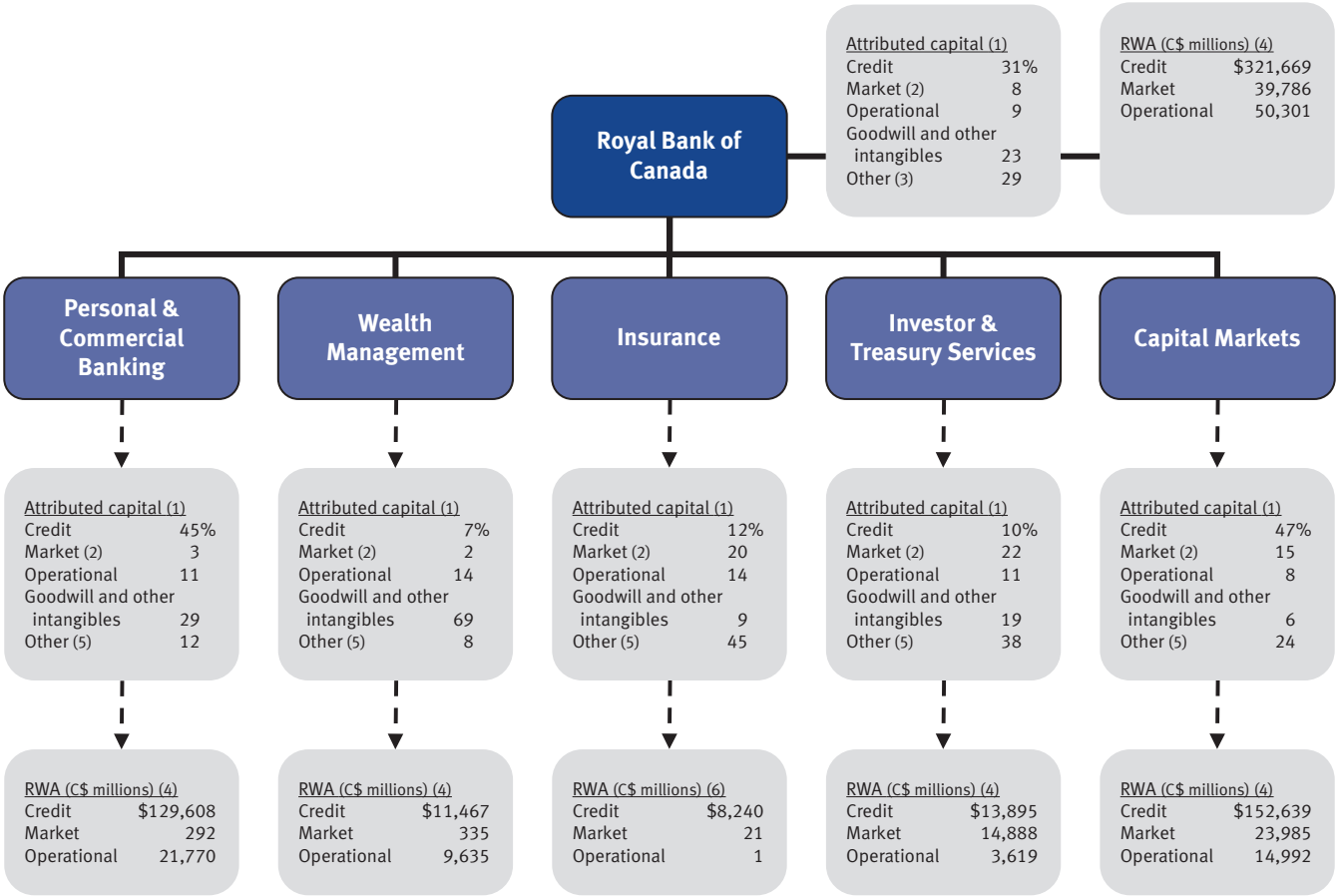
We remain well capitalized with current levels of available capital exceeding the attributed capital required to underpin all of our material risks.

Attributed capital in the context of our business activities

In carrying out our business activities, we are exposed to a range of risks. The following chart provides a high level view of risks within our business segments, which includes credit, market and operational risks. We have used attributed capital to illustrate the relative size of the risks in each of our businesses. The attributed capital distribution reflects the diversified nature of our business activities. RWA represents our exposure to credit, market and operational risk for regulatory capital requirements.

Within Personal & Commercial Banking, credit risk is the most significant risk, largely related to our personal financial services, business financial services and cards businesses. The primary risks within Wealth Management, which provides services to institutional and individual clients, are operational risk and credit risk. Risks within our Insurance operations are primarily related to insurance risk in our life, health, home and auto businesses followed by market risk and operational risk. The largest risk within Investor & Treasury Services is market risk, followed by credit risk and operational risk. The most significant risk within Capital Markets is credit risk, followed by market risk.

For additional information on the risks highlighted below, refer to the Risk management section.



(1) Attributed capital: An estimate of the amount of equity capital required to underpin risks. It is calculated by estimating the level of capital that is necessary to support our various business, given their risks, consistent with our desired solvency standard and credit ratings.
(2) Market risk attributed capital: An estimate of the amount of equity capital required to underpin trading market risk and interest rate risk.
(3) Other – RBC: Includes (a) an estimate of the amount of equity capital required to underpin risks associated with business, fixed assets and insurance risks; (b) a regulatory capital adjustment since attributed capital is determined at the higher of regulatory or economic capital; and (c) unattributed capital reported representing common equity in excess of common equity attributed to our business segments which is reported in the Corporate Support segment only.
(4) RWA amount above represents RWA for CET1.
(5) Other – Business segments: Includes (a) an estimate of the amount of equity capital required to underpin risks associated with business, fixed assets and insurance risks; and (b) a regulatory capital adjustment since attributed capital is determined at the business segment level as the greater of regulatory or economic capital.
(6) Insurance RWA amount above represents our investments in the insurance subsidiaries capitalized at the regulatory prescribed rate as required under Basel CAR filing.

Subsidiary capital

Our capital management framework includes the management of our subsidiaries' capital. We invest capital across the enterprise to meet any local regulators' capital adequacy requirements and maximize returns to our shareholders. We invest in our subsidiaries as appropriate during the year. We set guidelines for defining capital investments in our subsidiaries and manage the relationship between capital invested in subsidiaries and our consolidated capital base to ensure that we can access capital recognized in our consolidated regulatory capital measurements.

Each of our subsidiaries has responsibility for maintaining its compliance with any local regulatory capital adequacy requirements, which may include restrictions on the transfer of assets in the form of cash, dividends, loans or advances. Concurrently, Corporate Treasury provides centralized oversight of capital adequacy across all subsidiary entities.

Other considerations affecting capital

Capital treatment for equity investments in other entities is determined by a combination of accounting and regulatory guidelines based on the size or nature of the investment. Three broad approaches apply as follows:

- Consolidation: entities which we control are consolidated on our Consolidated Balance Sheets.
- Deduction: certain holdings are deducted in full from our regulatory capital. These include all unconsolidated "substantial investments," as defined by the Bank Act (Canada) in the capital of financial institutions, as well as all investments in insurance subsidiaries.
- Risk weighting: unconsolidated equity investments that are not deducted from capital are risk weighted at a prescribed rate for determination of capital charges.

Regulatory capital approach for securitization exposures

For our securitization exposures, we use an internal assessment approach (IAA) for exposures related to our ABCP business, and for other securitization exposures we use a combination of approaches including a ratings-based approach and the standardized approach.

While our IAA rating methodologies are based in large part on criteria that are published by External Credit Assessment Institutions (ECAIs) such as S&P and therefore are similar to the methodologies used by these institutions, they are not identical. Our ratings process includes a comparison of the available credit enhancement in a securitization structure to a stressed level of projected losses. The stress level used is determined by the desired risk profile of the transaction. As a result, we stress the cash flows of a given transaction at a higher level in order to achieve a higher rating. Conversely, transactions that only pass lower stress levels achieve lower ratings.

Most of the other securitization exposures (non-ABCP) carry external ratings and we use the lower of our own rating or the lowest external rating for determining the proper capital allocation for these positions. We periodically compare our own ratings to ECAIs ratings to ensure that the ratings provided by ECAIs are reasonable.

GRM has responsibility for providing risk assessments for capital purposes in respect of all our banking book exposures. GRM is independent of the business originating the securitization exposures and performs its own analysis, sometimes in conjunction with but always independent of the applicable business. GRM has developed asset class specific criteria guidelines which provide the rating methodologies for each asset class. The guidelines are reviewed periodically and are subject to the ratings replication process mandated by Pillar I of the Basel rules.

Additional financial information

Exposure to U.S. subprime and Alt-A through RMBS, CDOs and mortgages

Certain activities and transactions we enter into expose us to the risk of default of U.S. subprime and Alt-A residential mortgages. Our exposures to U.S. subprime and Alt-A residential mortgages of $423 million represented less than 0.1% of our total assets as at October 31, 2015, compared to $396 million or less than 0.1% last year. The increase of $27 million was primarily due to the impact of foreign exchange translation.

Commercial mortgage-backed securities

The fair value of our total direct holdings of Canadian and U.S. commercial mortgage-backed securities was $379 million as at October 31, 2015.

Assets and liabilities measured at fair value

Our financial instruments carried at fair value are classified as Level 1, 2 or 3, in accordance with the fair value hierarchy set out in IFRS 13 Fair Value Measurement. For further details on the fair value of our financial instruments and transfers between levels of the fair value hierarchy, refer to Note 3 of our audited 2015 Annual Consolidated Financial Statements.

The following table presents the total fair value of each major class of financial assets and financial liabilities measured at fair value and the percentage of the fair value of each class categorized as Level 1, 2 or 3 as at October 31, 2015.

Assets and liabilities measured at fair value — Table 77

	As at October 31, 2015				
(Millions of Canadian dollars, except percentage amounts)	Fair value (1)	Level 1 (1)	Level 2 (1)	Level 3 (1)	Total
Financial assets					
Securities at FVTPL	$ 158,703	39%	61%	0%	100%
Available-for-sale	48,149	12	80	8	100
Assets purchased under reverse repurchase agreements and securities borrowed	114,692	0	100	0	100
Loans	2,773	0	83	17	100
Derivatives	193,153	2	97	1	100
Financial liabilities					
Deposits	$ 115,592	0%	100%	0%	100%
Obligations related to securities sold short	47,658	67	33	0	100
Obligations related to assets sold under repurchase agreements and securities loaned	73,362	0	100	0	100
Derivatives	195,820	2	97	1	100

(1) The derivative assets and liabilities presented in the table above do not reflect the impact of netting.

Accounting and control matters

Critical accounting policies and estimates

Application of critical accounting policies, judgments, estimates and assumptions

Our significant accounting policies are described in Note 2 to our audited 2015 Annual Consolidated Financial Statements. Certain of these policies, as well as estimates made by management in applying such policies, are recognized as critical because they require us to make particularly subjective or complex judgments about matters that are inherently uncertain and because of the likelihood that significantly different amounts could be reported under different conditions or using different assumptions. Our critical accounting judgments, estimates and assumptions relate to the fair value of financial instruments, allowance for credit losses, goodwill and other intangible assets, employee benefits, consolidation, derecognition of financial assets, securities impairment, application of the effective interest method, provisions, insurance claims and policy benefit liabilities and income taxes. Our critical accounting policies and estimates have been reviewed and approved by our Audit Committee, in consultation with management, as part of their review and approval of our significant accounting policies, judgments, estimates and assumptions.

Fair value of financial instruments and securities impairment

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. We determine fair value by incorporating all factors that market participants would consider in setting a price, including commonly accepted valuation approaches.

The Board of Directors provides oversight on valuation of financial instruments, primarily through the Audit Committee and Risk Committee. The Audit Committee reviews the presentation and disclosure of financial instruments that are measured at fair value, while the Risk Committee assesses adequacy of governance structures and control processes for valuation of these instruments.

We have established policies, procedures and controls for valuation methodologies and techniques to ensure fair value is reasonably estimated. Major valuation processes and controls include, but are not limited to, profit and loss decomposition, independent price verification (IPV) and model validation standards. These control processes are managed by either Finance or GRM and are independent of the relevant businesses and their trading functions. Profit and loss decomposition is a process to explain the fair value changes of certain positions and is performed daily for trading portfolios. All fair value instruments are subject to IPV, a process whereby trading function valuations are verified against external market prices and other relevant market data. Market data sources include traded prices, brokers and price vendors. We give priority to those third-party pricing services and prices having the highest and most consistent accuracy. The level of accuracy is determined over time by comparing third-party price values to traders' or system values, to other pricing service values and, when available, to actual trade data. Other valuation techniques are used when a price or quote is not available. Some valuation processes use models to determine fair value. We have a systematic and consistent approach to control model use. Valuation models are approved for use within our model risk management framework. The framework addresses, among other things, model development standards, validation processes and procedures, and approval authorities. Model validation ensures that a model is suitable for its intended use and sets parameters for its use. All models are revalidated regularly by qualified personnel who are independent of the model design and development. Annually our model risk profile is reported to the Board of Directors.

In determining fair value, a hierarchy is used which prioritizes the inputs to valuation techniques. The fair value hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). Determination of fair value based on this hierarchy requires the use of observable market data whenever available. Level 1 inputs are unadjusted quoted prices in active markets for identical assets or liabilities that we have the ability to access at the measurement date. Level 2 inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and model inputs that are either observable, or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Level 3 inputs are one or more inputs that are unobservable and significant to the fair value of the asset or liability. Unobservable inputs are used to measure fair value to the extent that observable inputs are not available at the measurement date. The availability of inputs for valuation may affect the selection of valuation techniques. The classification of a financial instrument in the hierarchy for disclosure purposes is based upon the lowest level of input that is significant to the measurement of fair value.

Where observable prices or inputs are not available, management judgment is required to determine fair values by assessing other relevant sources of information such as historical data, proxy information from similar transactions, and through extrapolation and interpolation techniques. For more complex or illiquid instruments, significant judgment is required in the determination of the model used, the selection of model inputs, and in some cases the application of valuation adjustments to the model value or quoted price for inactively traded financial instruments, as the selection of model inputs may be subjective and the inputs may be unobservable. Unobservable inputs are inherently uncertain as there is little or no market data available from which to determine the level at which the transaction would occur under normal business circumstances. Appropriate parameter uncertainty and market risk valuation adjustments for such inputs and other model risk valuation adjustments are assessed in all such instances.

We record valuation adjustments to appropriately reflect counterparty credit quality of our derivative portfolio, differences between the overnight index swap (OIS) curve and London Interbank Offered Rates (LIBOR) for collateralized derivatives, funding valuation adjustments (FVA) for uncollateralized and under-collateralized OTC derivatives, unrealized gains or losses at inception of the transaction, bid-offer spreads, unobservable parameters and model limitations. These adjustments may be subjective as they require significant judgment in the input selection, such as probability of default and recovery rate, and are intended to arrive at fair value that is determined based on assumptions that market participants would use in pricing the financial instrument. The realized price for a transaction may be different from its recorded value that is previously estimated using management judgment, and may therefore impact unrealized gains and losses recognized in Non-interest income – Trading revenue or Other.

Valuation adjustments are recorded for the credit risk of our derivative portfolios in order to arrive at their fair values. CVA take into account our counterparties' creditworthiness, the current and potential future mark-to-market of the transactions, and the effects of credit mitigants such as master netting and collateral agreements. CVA amounts are derived from estimates of exposure at default, probability of default, recovery rates on a counterparty basis, and market and credit factor correlations. Exposure at default is the amount of expected derivative related assets and liabilities at the time of default, estimated through modeling using underlying risk factors. Probability of default and recovery rate are generally implied from the market prices for credit protection and credit ratings of the counterparty. Correlation is the statistical measure of how credit and market factors may move in relation to one another. Correlation is estimated using historical data and market data where available. CVA is calculated daily and changes are recorded in Non-interest income – Trading revenue.

In the determination of fair value of collateralized OTC derivatives using the OIS curve, our valuation approach accounts for the difference between certain OIS rates and LIBOR for derivatives valuation as valuation adjustments.

FVA are also calculated to incorporate cost and benefit of funding in the valuation of uncollateralized and under-collateralized OTC derivatives. Future expected cash flows of these derivatives are discounted to reflect the cost and benefit of funding the derivatives by using a funding curve, implied volatilities and correlations as inputs.

Where required, a valuation adjustment is made to reflect the unrealized gain or loss at inception of a financial instrument contract where the fair value of that financial instrument is not obtained from a quoted market price or cannot be evidenced by other observable market transactions based on a valuation technique incorporating observable market data.

A bid-offer valuation adjustment is required when a financial instrument is valued at the mid-market price, instead of the bid or offer price for asset or liability positions, respectively. The valuation adjustment takes into account the spread from the mid to either the bid or offer price.

Some valuation models require parameter calibration from such factors as market observed option prices. The calibration of parameters may be sensitive to factors such as the choice of instruments or optimization methodology. A valuation adjustment is also estimated to mitigate the uncertainties of parameter calibration and model limitations.

We classify our financial instruments measured at fair value on a recurring basis into three levels based on the transparency of the inputs used to measure the fair values of the instruments. As at October 31, 2015, Level 2 instruments, whose fair values are based on observable inputs, include $456 billion of financial assets (October 31, 2014 – $355 billion) and $394 billion of financial liabilities (October 31, 2014 – $296 billion). These amounts represent 85% of our total financial assets at fair value (October 31, 2014 – 81%) and 91% of our total financial liabilities at fair value (October 31, 2014 – 89%), respectively. Level 3 instruments, whose valuations include significant unobservable inputs, include $6 billion of financial assets (October 31, 2014 – $6 billion) and $2 billion of financial liabilities (October 31, 2014 – $2 billion), representing 1% of our total financial assets at fair value (October 31, 2014 – 1%) and 1% of our total financial liabilities at fair value (October 31, 2014 – 1%), respectively.

At each reporting date or more frequently when conditions warrant, we evaluate our AFS securities to determine whether there is any objective evidence of impairment, such as a significant or prolonged decline in the fair value of the security below its cost or when an adverse effect on future cash flows from the security can be reliably estimated. When assessing impairment for debt instruments we primarily consider counterparty ratings and security-specific factors, including collateral, external ratings, subordination and other market factors. For complex debt instruments including U.S. non-agency MBS, ABS and other structured products, we also use cash flow projection models which incorporate actual and projected cash flows for each security using a number of assumptions and inputs that are based on security specific factors. The inputs and assumptions used such as default, prepayment and recovery rates are based on updated market data. For U.S. non-agency MBS, recovery rates are largely dependent upon forecasted property prices which were assessed at the municipal level, provided by a third-party vendor. In addition, we also consider the transaction structure and credit enhancement for the structured securities. If the result indicates that we will not be able to recover the entire principal and interest amount, we do a further review of the security in order to assess whether a loss would ultimately be realized. As equity securities do not have contractual cash flows, they are assessed differently than debt securities. In assessing whether there is any objective evidence that suggests that the security is impaired we consider factors which include the length of time and extent the fair value has been below the cost and the financial condition and near term prospects of the issuer. We also consider the estimated recoverable value and the period of recovery. We conduct further analysis for securities where the fair value had been below cost for greater than twelve months. If an AFS security is impaired, the cumulative unrealized losses previously recognized in Other components of equity are recognized directly in income under Non-interest income. As at October 31, 2015, our gross unrealized losses on AFS securities were $304 million (October 31, 2014 – $181 million). Refer to Note 4 to our audited 2015 Annual Consolidated Financial Statements for more information.

Allowance for credit losses

We maintain allowance for credit losses relating to on-balance sheet exposures, such as loans and acceptances, and off-balance sheet items such as letters of credit, guarantees and unfunded commitments, at levels that management considers appropriate to cover credit related losses incurred as at the balance sheet date.

Allowances are determined individually for loans that are individually significant, and collectively for loans that are not individually significant and loans which are significant but for which there is no objective evidence of impairment, using current and historical credit information in both quantitative and qualitative assessments. For further information on allowance for credit losses, refer to Note 5 to our audited 2015 Annual Consolidated Financial Statements.

Individually assessed loans

Loans which are individually significant are assessed individually for objective indicators of impairment. A loan is considered impaired when management determines that it will not be able to collect all amounts due according to the original contractual terms or the equivalent value.

Credit exposures of individually significant loans are evaluated based on factors including the borrower's overall financial condition, resources and payment record, and where applicable, the realizable value of any collateral. If there is evidence of impairment leading to an impairment loss, then the amount of the loss is determined as the difference between the carrying amount of the loan, including accrued interest, and the estimated recoverable amount. The estimated recoverable amount is measured as the present value of expected future cash flows discounted at the loan's original effective interest rate, including cash flows that may result from the realization of collateral less costs to sell.

Collectively assessed loans

Loans which are not individually significant, or which are individually assessed and not determined to be impaired, are collectively assessed for impairment. For the purposes of a collective evaluation of impairment, loans are grouped on the basis of similar risk characteristics, taking into account loan type, industry, geographic location, collateral type, past due status and other relevant factors.

The collective impairment allowance is determined by reviewing factors including: (i) historical loss experience, which takes into consideration historical probabilities of default, loss given default and exposure at default, in portfolios of similar credit risk characteristics, and (ii) management's judgment on the level of impairment losses based on historical experience relative to the actual level as reported at the balance sheet date, taking into consideration the current portfolio credit quality trends, business and economic and credit conditions, the impact of policy and process changes, and other supporting factors. Future cash flows for a group of loans are collectively evaluated for impairment on the basis of the contractual cash flows of the loans in the group and historical loss experience for loans with credit risk characteristics similar to those in the group. Historical loss experience is adjusted based on current observable data to reflect the effects of current conditions that did not affect the period on which the historical loss experience is based and to remove the effects of conditions in the historical period that do not currently exist. The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

Write-off of loans

Loans and the related impairment allowance for credit losses are written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, they are generally written off after receipt of any proceeds from the realization of the collateral. In circumstances where the net realizable value of any collateral has been determined and there is no reasonable expectation of further recovery, write off may be earlier. For credit cards, the balances and related allowance for credit losses are written off when payment is 180 days in arrears. Personal loans are generally written off at 150 days past due.

Total allowance for credit losses

Based on the procedures discussed above, management believes that the total allowance for credit losses of $2,120 million is adequate to absorb estimated credit losses incurred in the lending portfolio as at October 31, 2015 (October 31, 2014 – $2,085 million). This amount includes $91 million (October 31, 2014 – $91 million) classified in Provisions under Other liabilities on our Consolidated Balance Sheets, which relates to off-balance sheet and other items.

Goodwill and other intangible assets

We allocate goodwill to groups of cash-generating units (CGU). Goodwill is not amortized and is tested for impairment on an annual basis, or more frequently if there are objective indications of impairment. We test for impairment by comparing the recoverable amount of a CGU with its carrying amount. A CGU's recoverable amount is the higher of its fair value less cost of disposal and its value in use. The carrying amount of a CGU comprises the carrying amount of assets, liabilities, and goodwill allocated to the CGU. When the carrying value of a CGU exceeds its recoverable amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the CGU and then to the other assets of the CGU proportionally based on the carrying amount of each asset. Any impairment charge is recognized in income in the period it is identified. Subsequent reversals of goodwill impairment are prohibited.

We estimate the value in use and fair value less costs of disposal of our CGUs primarily using a discounted cash flow method which incorporates each CGU's internal forecasts of revenues and expenses. Significant management judgment is applied in the determination of expected future cash flows (uncertainty in timing and amount), discount rates (based on CGU-specific risks) and terminal growth rates. CGU-specific risks include country risk, business/operational risk, geographic risk (including political risk, devaluation risk and government regulation), currency risk and price risk (including product pricing risk and inflation). If the forecast earnings and other assumptions in future periods deviate significantly from the current amounts used in our impairment testing, the value of our goodwill could become impaired.

Other intangible assets with a finite life are amortized on a straight-line basis over their estimated useful lives as follows: computer software – 3 to 10 years and customer relationships – 10 to 20 years. They are assessed for indicators of impairment at each reporting period if there is an indication that an asset may be impaired. An impairment test is performed by comparing the carrying amount of the intangible asset to its recoverable amount. Where it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the CGU to which the asset belongs. If the recoverable amount of the asset (or CGU) is less than its carrying amount, the carrying amount of the intangible asset is written down to its recoverable amount as an impairment loss. An impairment loss recognized previously is reversed if there is a change in the estimates used to determine the recoverable amount of the asset (or CGU) since the last impairment loss was recognized. If an impairment loss is subsequently reversed, the carrying amount of the asset (or CGU) is revised to the lower of its recoverable amount and the carrying amount that would have been determined (net of amortization) had there been no prior impairment.

Significant judgment is applied in estimating the useful lives and recoverable amounts of our intangible assets and assessing whether certain events or circumstances constitute objective evidence of impairment. We do not have any other intangible assets with indefinite lives.

As at October 31, 2015, we had $9.3 billion of goodwill (October 31, 2014 – $8.6 billion) and $2.8 billion of other intangible assets (October 31, 2014 – $2.8 billion). For further details, refer to Notes 2 and 10 to our 2015 Annual Consolidated Financial Statements.

Employee benefits

We sponsor a number of benefit programs for eligible employees, including registered pension plans, supplemental pension plans, health, dental, disability and life insurance plans.

The calculation of defined benefit expenses and obligations depends on various assumptions such as discount rates, healthcare cost trend rates, projected salary increases, retirement age, and mortality and termination rates. The discount rate assumption is determined using spot rates from a derived Aa corporate bond yield curve for our Canadian pension and other post-employment benefit plans, and spot rates from an Aa corporate bond yield curve for our International pension and other post-employment benefit plans. All other assumptions are determined by management, applying significant judgment, and are reviewed by the actuaries. Actual experience that differs from the actuarial assumptions will affect the amounts of benefit obligations and remeasurements that we recognize. The weighted average assumptions used and the sensitivity of key assumptions are presented in Note 17 to our audited 2015 Annual Consolidated Financial Statements.

Consolidation

Subsidiaries are those entities, including structured entities, over which we have control. We control an entity when we are exposed, or have rights, to variable returns from our involvement with the entity and have the ability to affect those returns through our power over the investee. We have power over an entity when we have existing rights that give us the current ability to direct the activities that most significantly affect the entity's returns (relevant activities). Power may be determined on the basis of voting rights or, in the case of structured entities, other contractual arrangements.

We are not deemed to control an entity when we exercise power over an entity in an agency capacity. In determining whether we are acting as an agent, we consider the overall relationship between us, the investee and other parties to the arrangement with respect to the following factors: (i) the scope of our decision making power; (ii) the rights held by other parties; (iii) the remuneration to which we are entitled; and (iv) our exposure to variability of returns.

The determination of control is based on the current facts and circumstances and is continuously assessed. In some circumstances, different factors and conditions may indicate that various parties control an entity depending on whether those factors and conditions are assessed in isolation or in totality. Significant judgment is applied in assessing the relevant factors and conditions in totality when determining whether we control an entity. Specifically, judgment is applied in assessing whether we have substantive decision making rights over the relevant activities and whether we are exercising our power as a principal or an agent.

We consolidate all subsidiaries from the date control is transferred to us, and cease consolidation when an entity is no longer controlled by us. Our consolidation conclusions affect the classification and amount of assets, liabilities, revenues and expenses reported in our Consolidated Financial Statements.

Non-controlling interests in subsidiaries that we consolidate are shown on our Consolidated Balance Sheets as a separate component of equity which is distinct from our shareholders' equity. The net income attributable to non-controlling interests is separately disclosed in our Consolidated Statements of Income.

For further details, refer to Off-balance sheet arrangements and Note 7 to our audited 2015 Annual Consolidated Financial Statements.

Derecognition of financial assets

We periodically enter into transactions in which we transfer financial assets such as loans or packaged MBS to structured entities or trusts that issue securities to investors. We derecognized the assets when our contractual rights to the cash flows from the assets have expired, when we retain the rights to receive the cash flows but assume an obligation to pay those cash flows to a third party subject to certain pass-through requirements, or when we transfer our contractual rights to receive the cash flows and substantially all of the risks and rewards of the assets have been transferred. When we retain substantially all of the risks and rewards of the transferred assets, the transferred assets are not derecognized from our Consolidated Balance Sheets and are accounted for as secured financing transactions. When we neither retain nor transfer substantially all risks and rewards of ownership of the assets, we derecognize the assets if control over the assets is relinquished. If we retain control over the transferred assets, we continue to recognize the transferred assets to the extent of our continuing involvement. Management's judgment is applied in determining whether we have transferred or retained substantially all risk and rewards of ownership of the transferred financial asset.

The majority of assets transferred under repurchase agreements, securities lending agreements, and in our Canadian residential mortgage securitization transactions do not qualify for derecognition; as a result, we continue to record the associated transferred assets on our Consolidated Balance Sheets and no gains or losses are recognized for these securitization activities. Otherwise, a gain or loss is recognized on securitization by comparing the carrying amount of the transferred asset with its fair value at the date of the transfer. As at October 31, 2015, the carrying and fair values of the transferred assets that do not qualify for derecognition were $119 billion and $119 billion, respectively (October 31, 2014 – $101 billion and $101 billion), and the carrying and fair values of the associated liabilities totalled $119 billion and $120 billion, respectively (October 31, 2014 – $101 billion and $102 billion). For further information on derecognition of financial assets, refer to Note 6 to our audited 2015 Annual Consolidated Financial Statements.

Application of the effective interest method
Interest is recognized in Interest income and Interest expense in the Consolidated Statements of Income for all interest bearing financial instruments using the effective interest method. The effective interest rate is the rate that discounts estimated future cash flows over the expected life of the financial asset or liability to the net carrying amount upon initial recognition. Significant judgment is applied in determining the effective interest rate due to uncertainty in the timing and amounts of future cash flows.

Provisions
Provisions are liabilities of uncertain timing or amount and are recognized when we have a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. Provisions are measured as the best estimate of the consideration required to settle the present obligation at the reporting date. Significant judgment is required in determining whether a present obligation exists and in estimating the probability, timing and amount of any outflows. We record provisions related to litigation, asset retirement obligations, and the allowance for off-balance sheet and other items. Provisions are recorded under Other liabilities on our Consolidated Balance Sheets.

We are required to estimate the results of ongoing legal proceedings, expenses to be incurred to dispose of capital assets, and credit losses on undrawn commitments and guarantees. The forward-looking nature of these estimates requires us to use a significant amount of judgment in projecting the timing and amount of future cash flows. We record our provisions on the basis of all available information at the end of the reporting period and make adjustments on a quarterly basis to reflect current expectations. Should actual results differ from our expectations, we may incur expenses in excess of the provisions recognized.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, such as an insurer, a separate asset is recognized if it is virtually certain that reimbursement will be received.

Insurance claims and policy benefit liabilities
Insurance claims and policy benefit liabilities represent current claims and estimates for future insurance policy benefits. Liabilities for life insurance contracts are determined using the Canadian Asset Liability Method, which incorporates assumptions for mortality, morbidity, policy lapses and surrenders, investment yields, policy dividends, operating and policy maintenance expenses, and provisions for adverse deviation. These assumptions are reviewed at least annually and updated in response to actual experience and market conditions. Liabilities for property and casualty insurance represent estimated provisions for reported and unreported claims. Liabilities for life and property and casualty insurance are included in Insurance claims and policy benefit liabilities. Changes in Insurance claims and policy benefit liabilities are included in the Insurance policyholder benefits, claims and acquisition expense in our Consolidated Statements of Income in the period in which the estimates change.

Income taxes
We are subject to income tax laws in various jurisdictions where we operate, and the complex tax laws are potentially subject to different interpretations by us and the relevant taxation authority. Management's judgment is applied in the interpretation of the relevant tax laws and in the estimation of the provision for current and deferred income taxes, including the expected timing and amount of the realization. A deferred tax asset or liability is determined for each temporary difference based on the tax rates that are expected to be in effect in the period that the asset is realized or the liability is settled. Where the temporary differences will not reverse in the foreseeable future, no deferred tax amount is recognized.

On a quarterly basis, we review whether it is probable that the benefits associated with our deferred tax assets will be realized, using both positive and negative evidence. Refer to Note 24 to our audited 2015 Annual Consolidated Financial Statements for further information.

Changes in accounting policies and disclosure
We have adopted new accounting pronouncements effective November 1, 2014. These new and amended standards include, IAS 32 Financial Instruments: Presentations and IFRS Interpretations Committee IFRIC Interpretation 21 Levies. Refer to Note 2 to our audited 2015 Annual Consolidated Financial Statements for details of these changes.

Future changes in accounting policy and disclosure

IFRS 15 *Revenue from Contracts with Customers* (IFRS 15)
In May 2014, the IASB issued IFRS 15 which establishes principles for reporting about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. The standard provides a single, principles based five-step model for revenue recognition to be applied to contracts with customers except for revenue arising from items such as financial instruments, insurance contracts and leases. In September 2015, the IASB amended IFRS 15 by deferring its effective date by one year. IFRS 15 will be effective for us on November 1, 2018.

IFRS 9 *Financial Instruments* (IFRS 9)
In July 2014, the IASB issued the complete version of IFRS 9, which brings together the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39 *Financial Instruments: Recognition and Measurement* (IAS 39).

In January 2015, OSFI issued an advisory with respect to the early adoption of IFRS 9 for D-SIBs, requiring D-SIBs to adopt IFRS 9 for the annual period beginning on November 1, 2017. As a result, we will be required to adopt IFRS 9 on November 1, 2017, with the exception of the own credit provisions of IFRS 9, which we adopted in the second quarter of 2014.

Impairment
IFRS 9 introduces an expected loss model for all financial assets not classified as or designated as at FVTPL. Allowances are measured according to the model which has three stages: (1) on initial recognition and where there has been no significant increase in credit risk or the resulting credit risk is considered to be low, 12-month expected credit losses are recognized in profit or loss and a loss allowance is established; (2) if credit risk increases significantly since initial recognition, and the resulting credit risk is not considered to be low, full lifetime expected credit losses are recognized; and (3) when a financial asset is considered impaired, interest revenue is calculated based on the carrying amount of the asset, net of the loss allowance, rather than its gross carrying amount.

The assessment of changes in credit risk since initial recognition and the estimation of expected credit losses are required to incorporate all relevant information which is available as at the reporting date. This includes information about past events and current conditions as well as reasonable and supportable forecasts of future events and economic conditions. The estimation of expected credit losses is a discounted probability-weighted estimate.

The recognition and measurement of impairment losses under IFRS 9 is intended to be more forward-looking than under IAS 39 and the resulting provision for credit losses is expected to be more volatile. Because all financial assets within the scope of the IFRS 9 impairment model will be assessed for at least 12-months of expected credit losses, and the population of financial assets to which full lifetime expected credit losses applies is larger than the population of impaired loans for which there is objective evidence of impairment in accordance with IAS 39, the allowance for credit losses is expected to increase.

Classification and measurement
IFRS 9 also introduces a principles-based approach to the classification of financial assets based on an entity's business model and the nature of the cash flows of the assets. All financial assets, including hybrid contracts, are measured at FVTPL, fair value through other comprehensive income or amortized cost replacing the existing IAS 39 classifications of held-to-maturity, loans and receivables, and available-for-sale. The combined application of the business model and contractual cash flow characteristics test may result in some differences in the population of financial assets measured at amortized cost or fair value compared with IAS 39. For financial liabilities, IFRS 9 includes the requirements for classification and measurement previously included in IAS 39.

Hedge accounting
The new hedge accounting model under IFRS 9 aims to simplify hedge accounting, align the accounting for hedge relationships more closely with an entity's risk management activities and permit hedge accounting to be applied more broadly to a greater variety of hedging instruments and risks eligible for hedge accounting.

The new standard does not explicitly address the accounting for macro hedging activities, which is being addressed by the IASB in a separate project. As a result, IFRS 9 includes an accounting policy choice to retain IAS 39 for hedge accounting requirements until the standard resulting from the IASB's project on macro hedge accounting is effective. The new hedge accounting disclosures, however, are required for the annual period beginning November 1, 2017.

Transition
The impairment and classification and measurement requirements of IFRS 9 will be applied retrospectively by adjusting the opening balance sheet at November 1, 2017. There is no requirement to restate comparative periods. Hedge accounting, if adopted, will be applied prospectively, with limited exceptions. At this stage, it is not possible to quantify the potential financial effect of adoption of IFRS 9 to the Bank.

To manage our transition to IFRS 9, we have implemented a comprehensive enterprise-wide program led jointly by Finance and GRM that focuses on key areas of impact including financial reporting, systems and processes, as well as communications and training. We have completed a preliminary organization-wide diagnostic to assess the scope and complexity of the adoption of IFRS 9 which identified areas with differences between IFRS 9 and IAS 39, as discussed above. We will continue to monitor and revisit our preliminary conclusions in order to identify any further financial, capital and business implications.

During 2015, we continued to manage the IFRS 9 program through the completion of activities and deliverables to support the key areas of impact noted above. To date, we have:

- Conducted preliminary assessments of the accounting policy elections for the adoption of IFRS 9;
- Initiated projects within the program framework which are in progress conducting thorough analysis, assessing financial and economic impacts and identifying process and systems requirements to ensure a successful transition;
- Developed a resourcing model and prepared an initial cost analysis and timeline to ensure that sufficient program resources are available to meet key deliverables;
- Provided updates to the Audit Committee and senior management to ensure timely decisions and escalation of key issues and risks; and
- Conducted internal education seminars for key stakeholders across the Bank in the various business platforms and functional groups.

In the upcoming year, we expect to:

- Continue to design specifications for data sourcing, systems, models, controls and processes in order to align finance and risk processes and systems;
- Agree on accounting interpretations and formulate bank-wide policies;
- Continue to roll out training and educational seminars to impacted internal stakeholders;
- Develop and validate new impairment models; and
- Design controls and governance of future processes.

As we prepare for our transition to IFRS 9, we continue to monitor industry interpretations of the new standard and expect to adjust our transition and implementation plans accordingly. Our IFRS 9 program remains aligned to our implementation schedule and we are on track to meet the timelines essential to our transition.

Future changes in regulatory disclosure

Basel Committee on Banking Supervision revised Pillar 3 disclosure requirements
In January 2015, the BCBS issued the final standard for the revised Pillar 3 which requires disclosure of standard templates to provide comparability and consistency of capital and risk disclosure amongst banks. BCBS requires all banks to provide the revised Pillar 3 disclosures by the end of fiscal 2016. The implementation date for Pillar 3 for Canadian banks is expected to be no earlier than the fourth quarter of 2017.

Controls and procedures

Disclosure controls and procedures
Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by us in reports filed or submitted under Canadian and U.S. securities laws is recorded, processed, summarized and reported within the time periods specified under those laws and include controls and procedures that are designed to ensure that information is accumulated and communicated to management, including the President and Chief Executive Officer, and the Chief Administrative Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

As of October 31, 2015, management evaluated, under the supervision of and with the participation of the President and Chief Executive Officer and the Chief Administrative Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as defined under rules adopted by the United States Securities and Exchange Commission. Based on that evaluation, the President and Chief Executive Officer and the Chief Administrative Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of October 31, 2015.

Internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. However, because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. See Management's Report on Internal Control over Financial Reporting and the Report of Independent Registered Public Accounting Firm.

No changes were made in our internal control over financial reporting during the year ended October 31, 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Related party transactions

In the ordinary course of business, we provide normal banking services and operational services, and enter into other transactions with associated and other related corporations, including our joint venture entities, on terms similar to those offered to non-related parties. We grant loans to directors, officers and other employees at rates normally accorded to preferred clients. In addition, we offer deferred share and other plans to non-employee directors, executives and certain other key employees. For further information, refer to Notes 12 and 29 of our audited 2015 Annual Consolidated Financial Statements.

Net interest income on average assets and liabilities — Table 78

(Millions of Canadian dollars, except for percentage amounts)	Average balances 2015	Average balances 2014	Average balances 2013	Interest 2015	Interest 2014	Interest 2013	Average rate 2015	Average rate 2014	Average rate 2013
Assets									
Deposits with other banks (3)									
Canada	$ 8,463	$ 1,692	$ 1,355	$ 70	$ 61	$ 57	0.83%	3.61%	4.21%
U.S.	5,567	540	426	12	1	4	0.22	0.19	0.94
Other International	14,837	5,227	7,370	(5)	14	13	(0.03)	0.27	0.18
	28,867	7,459	9,151	77	76	74	0.27%	1.02%	0.81%
Securities									
Trading	164,509	149,920	137,064	3,543	3,322	3,113	2.15	2.22	2.27
Available-for-sale	52,833	43,047	37,809	976	671	666	1.85	1.56	1.76
	217,342	192,967	174,873	4,519	3,993	3,779	2.08	2.07	2.16
Asset purchased under reverse repurchase agreements and securities borrowed	165,602	136,857	123,766	1,251	971	941	0.76	0.71	0.76
Loans (2)									
Canada									
Retail	326,153	314,159	301,887	12,086	12,245	12,077	3.71	3.90	4.00
Wholesale	58,946	54,681	50,248	2,715	2,721	2,486	4.61	4.98	4.95
	385,099	368,840	352,135	14,801	14,966	14,563	3.84	4.06	4.14
U.S.	36,581	28,402	22,691	780	888	776	2.13	3.13	3.42
Other International	31,261	25,067	21,129	1,301	1,125	1,015	4.16	4.49	4.80
	452,941	422,309	395,955	16,882	16,979	16,354	3.73	4.02	4.13
Total interest-earning assets	864,752	759,592	703,745	22,729	22,019	21,148	2.63	2.90	3.01
Non-interest-bearing deposits with other banks	19,283	13,495	11,511	–	–	–	–	–	–
Customers' liability under acceptances	12,423	10,725	9,663	–	–	–	–	–	–
Other assets (3)	156,342	122,688	127,081	–	–	–	–	–	–
Total assets	$ 1,052,800	$ 906,500	$ 852,000	$ 22,729	$ 22,019	$ 21,148	2.16%	2.43%	2.48%
Liabilities and shareholders' equity									
Deposits (4)									
Canada (1)	459,679	418,780	379,080	5,162	5,416	5,242	1.12%	1.29%	1.38%
U.S.	68,909	50,459	43,076	214	158	169	0.31	0.31	0.39
Other International	62,029	54,267	48,953	347	299	283	0.56	0.55	0.58
	590,617	523,506	471,109	5,723	5,873	5,694	0.97	1.12	1.21
Obligations related to securities sold short	56,827	50,548	48,979	1,645	1,494	1,579	2.89	2.96	3.22
Obligations related to assets sold under repurchase agreements and securities loaned	84,380	68,594	70,881	337	278	279	0.40	0.41	0.39
Subordinated debentures	7,654	6,632	8,216	240	246	336	3.14	3.71	4.09
Other interest-bearing liabilities (3)	13,585	251	484	13	12	11	0.10	4.78	2.27
Total interest-bearing liabilities	753,063	649,531	599,669	7,958	7,903	7,899	1.06	1.22	1.32
Non-interest-bearing deposits (1)	76,830	69,596	66,607	–	–	–	–	–	–
Acceptances	12,422	10,725	9,663	–	–	–	–	–	–
Other liabilities (3)	151,845	124,643	129,118	–	–	–	–	–	–
Total liabilities	$ 994,160	$ 854,495	$ 805,057	$ 7,958	$ 7,903	$ 7,899	0.80%	0.92%	0.98%
Equity	58,640	52,005	46,943	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total liabilities and shareholders' equity	$ 1,052,800	$ 906,500	$ 852,000	$ 7,958	$ 7,903	$ 7,899	0.76%	0.87%	0.93%
Net interest income and margin	$ 1,052,800	$ 906,500	$ 852,000	$ 14,771	$ 14,116	$ 13,249	1.40%	1.56%	1.56%
Net interest income and margin (average earning assets)									
Canada	$ 539,333	$ 497,436	$ 471,448	$ 11,538	$ 11,121	$ 10,956	2.14%	2.24%	2.32%
U.S.	165,083	135,876	116,016	1,977	1,896	1,603	1.20	1.40	1.38
Other International	160,336	126,280	116,281	1,256	1,099	690	0.78	0.87	0.59
Total	$ 864,752	$ 759,592	$ 703,745	$ 14,771	$ 14,116	$ 13,249	1.71%	1.86%	1.88%

(1) Amounts have been revised from those previously presented.
(2) Interest income includes loan fees of $503 million (2014 – $516 million; 2013 – $509 million).
(3) Starting in 2015, we have included cash collateral and margin deposits, and cash collateral received in Deposits with other banks and Other interest-bearing liabilities, respectively (previously, in Other assets and Other liabilities). Insurance segment assets and liabilities are included in Other assets and Other liabilities, respectively.
(4) Deposits include personal savings deposits with average balances of $142 billion (2014 – $133 billion; 2013 – $124 billion), interest expense of $.6 billion (2014 – $.7 billion; 2013 – $.7 billion) and average rates of .4% (2014 – .5%; 2013 – .6%). Deposits also include term deposits with average balances of $345 billion (2014 – $302 billion; 2013 – $273 billion), interest expense of $4.5 billion (2014 – $4.4 billion; 2013 – $4.3 billion) and average rates of 1.30% (2014 – 1.47%; 2013 – 1.57%).

Change in net interest income — Table 79

(Millions of Canadian dollars)	2015 (3) vs. 2014 Increase (decrease) due to changes in: Average volume (1)	Average rate (1)	Net change	2014 vs. 2013 Increase (decrease) due to changes in: Average volume (1)	Average rate (1)	Net change
Assets						
Deposits with other banks (2)						
Canada (4)	$ 244	$ (235)	$ 9	$ 14	$ (10)	$ 4
U.S. (4)	9	2	11	1	(4)	(3)
Other international (4)	26	(45)	(19)	(4)	5	1
Securities						
Trading	323	(102)	221	292	(83)	209
Available-for-sale	153	152	305	92	(87)	5
Asset purchased under reverse repurchase agreements and securities borrowed	204	76	280	100	(70)	30
Loans						
Canada						
Retail	467	(626)	(159)	491	(323)	168
Wholesale	212	(218)	(6)	219	16	235
U.S.	256	(364)	(108)	195	(83)	112
Other international	278	(102)	176	189	(79)	110
Total interest income	$ 2,172	$ (1,462)	$ 710	$ 1,589	$ (718)	$ 871
Liabilities						
Deposits						
Canada (5)	529	(783)	(254)	549	(375)	174
U.S.	58	(2)	56	29	(40)	(11)
Other international	43	5	48	31	(15)	16
Obligations related to securities sold short	186	(35)	151	51	(136)	(85)
Obligations related to assets sold under repurchase agreements and securities loaned	64	(5)	59	(9)	8	(1)
Subordinated debentures	38	(44)	(6)	(65)	(25)	(90)
Other interest-bearing liabilities (2)	637	(636)	1	(5)	6	1
Total interest expense	$ 1,555	$ (1,500)	$ 55	$ 581	$ (577)	$ 4
Net interest income	$ 617	$ 38	$ 655	$ 1,008	$ (141)	$ 867

(1) Volume/rate variance is allocated on the percentage relationships of changes in balances and changes in rates to the total net change in net interest income.
(2) Starting in 2015, we have included cash collateral and margin deposits, and cash collateral received in Deposits with other banks and Other interest-bearing liabilities, respectively (previously, in Other assets and Other liabilities).
(3) Insurance segment assets and liabilities are included in Other assets and Other liabilities, respectively.
(4) Geographic classification for selected assets and liabilities is based on the domicile of the booking point of the subject assets and liabilities.
(5) Amounts have been revised from those previously presented.

Loans and acceptances by geography — Table 80

As at October 31 (Millions of Canadian dollars)	2015	2014	2013	2012 (1)	2011 (1)
Canada					
Residential mortgages	$ 229,987	$ 215,624	$ 206,134	$ 195,552	$ 185,620
Personal	84,637	86,984	86,102	80,000	75,668
Credit cards	15,516	14,650	13,902	13,422	12,723
Small business	4,003	4,067	4,026	2,503	2,481
Retail	334,143	321,325	310,164	291,477	276,492
Business	71,246	64,643	58,920	51,212	45,186
Sovereign (2)	8,508	3,840	3,807	3,751	3,304
Bank	530	413	823	390	747
Wholesale	$ 80,284	$ 68,896	$ 63,550	$ 55,353	$ 49,237
	$ 414,427	$ 390,221	$ 373,714	$ 346,830	$ 325,729
U.S.					
Retail	5,484	4,686	3,734	3,138	3,101
Wholesale	34,702	23,639	19,443	17,081	11,094
	40,186	28,325	23,177	20,219	14,195
Other International					
Retail	8,556	8,258	6,768	5,673	5,152
Wholesale	24,536	21,881	17,103	16,900	12,110
	33,092	30,139	23,871	22,573	17,262
Total loans and acceptances	$ 487,705	$ 448,685	$ 420,762	$ 389,622	$ 357,186
Total allowance for loan losses	(2,029)	(1,994)	(1,959)	(1,996)	(1,967)
Total loans and acceptances, net of allowance for loan losses	$ 485,676	$ 446,691	$ 418,803	$ 387,626	$ 355,219

(1) On a continuing operations basis.
(2) In 2015, we reclassified $4 billion from AFS securities to Loans.

Loans and acceptances by portfolio and sector — Table 81

As at October 31 (Millions of Canadian dollars)	2015	2014	2013	2012 (1)	2011 (1)
Residential mortgages	$ 233,975	$ 219,257	$ 209,238	$ 198,324	$ 188,406
Personal	94,346	96,021	93,260	85,800	80,921
Credit cards	15,859	14,924	14,142	13,661	12,937
Small business	4,003	4,067	4,026	2,503	2,481
Retail	$ 348,183	$ 334,269	$ 320,666	$ 300,288	$ 284,745
Business					
Agriculture	6,057	5,694	5,441	5,202	4,880
Automotive	6,614	6,209	6,167	3,585	3,025
Consumer goods	7,146	7,172	6,230	5,432	5,341
Energy					
Oil & gas	7,691	5,849	5,046	4,981	4,119
Utilities	5,162	3,766	3,860	3,821	2,275
Non-bank financial services	6,428	5,688	4,903	3,895	2,007
Forest products	1,169	979	893	811	698
Industrial products	4,725	4,665	4,038	3,938	3,381
Mining & metals	1,402	1,320	1,074	965	1,122
Real estate & related	33,802	30,387	24,413	20,650	15,569
Technology & media	6,599	4,822	4,006	4,203	2,712
Transportation & environment	5,907	5,432	5,593	5,221	4,927
Other (2)	35,133	26,604	22,716	21,447	17,011
Sovereign	9,887	4,628	4,396	4,193	4,050
Bank	1,800	1,201	1,320	990	1,324
Wholesale	$ 139,522	$ 114,416	$ 100,096	$ 89,334	$ 72,441
Total loans and acceptances	$ 487,705	$ 448,685	$ 420,762	$ 389,622	$ 357,186
Total allowance for loan losses	(2,029)	(1,994)	(1,959)	(1,996)	(1,967)
Total loans and acceptances, net of allowance for loan losses	$ 485,676	$ 446,691	$ 418,803	$ 387,626	$ 355,219

(1) On a continuing operations basis.
(2) Other in 2015 related to financing products, $10.1 billion; health, $6.0 billion; holding and investments, $6.9 billion; other services, $8.8 billion; and other, $3.3 billion.

Impaired loans by portfolio and geography — Table 82

As at October 31 (Millions of Canadian dollars, except for percentage amounts)	2015	2014	2013	2012 (1)	2011 (1)
Residential mortgages	$ 646	$ 678	$ 691	$ 674	$ 719
Personal	299	300	363	273	289
Small business	45	47	37	33	40
Retail	990	1,025	1,091	980	1,048
Business					
Agriculture	$ 41	$ 40	$ 43	$ 52	$ 75
Automotive	11	12	12	17	38
Consumer goods	130	108	101	83	91
Energy					
Oil and gas	156	6	14	2	33
Utilities	57	–	–	–	–
Non-bank financial services	1	3	1	5	13
Forest products	28	25	26	30	27
Industrial products	45	48	54	88	38
Mining & metals	17	9	2	2	4
Real estate & related	297	314	367	353	464
Technology & media	34	38	117	251	47
Transportation & environment	53	32	98	73	105
Other (2)	423	315	272	312	311
Sovereign	–	–	–	–	–
Bank	2	2	3	2	33
Wholesale	1,295	952	1,110	1,270	1,279
Total impaired loans (3)	$ 2,285	$ 1,977	$ 2,201	$ 2,250	$ 2,327
Canada					
Residential mortgages	$ 356	$ 388	$ 464	$ 475	$ 567
Personal	223	224	229	206	188
Small business	45	47	36	34	40
Retail	624	659	729	715	795
Business					
Agriculture	39	36	38	44	62
Automotive	8	11	9	11	30
Consumer goods	65	70	58	34	48
Energy					
Oil & gas	39	4	14	–	25
Utilities	20	–	–	–	–
Non-bank financial services	–	1	1	3	1
Forest products	5	6	8	12	7
Industrial products	39	41	40	34	26
Mining & metals	7	9	2	2	2
Real estate & related	161	171	169	153	164
Technology & media	34	37	86	238	43
Transportation & environment	29	11	21	22	12
Other	66	90	80	88	93
Sovereign	–	–	–	–	–
Bank	–	–	–	–	–
Wholesale	512	487	526	641	513
Total	$ 1,136	$ 1,146	$ 1,255	$ 1,356	$ 1,308
U.S.					
Retail	$ 10	$ 13	$ 14	$ 7	$ 6
Wholesale	204	18	98	162	116
Total	$ 214	$ 31	$ 112	$ 169	$ 122
Other International					
Retail	$ 356	$ 353	$ 348	$ 258	$ 247
Wholesale	579	447	486	467	650
Total	$ 935	$ 800	$ 834	$ 725	$ 897
Total impaired loans	$ 2,285	$ 1,977	$ 2,201	$ 2,250	$ 2,327
Allowance for impaired loans	(654)	(632)	(599)	(636)	(605)
Net impaired loans	$ 1,631	$ 1,345	$ 1,602	$ 1,614	$ 1,722
Gross impaired loans as a % of loans and acceptances					
Residential mortgages	0.28%	0.31%	0.33%	0.34%	0.38%
Personal	0.32%	0.31%	0.39%	0.32%	0.36%
Small business	1.13%	1.16%	0.83%	1.32%	1.61%
Retail	0.28%	0.31%	0.34%	0.33%	0.37%
Wholesale	0.93%	0.84%	1.11%	1.42%	1.77%
Total	0.47%	0.44%	0.52%	0.58%	0.65%
Allowance for impaired loans as a % of gross impaired loans	28.64%	31.98%	27.22%	28.33%	26.00%

(1) On a continuing operations basis.
(2) Other in 2015 is related to financing products, $109 million; health, $17 million; holding and investments, $185 million; other services, $69 million; and other, $43 million.
(3) Past due loans greater than 90 days not included in impaired loans were $314 million in 2015 (2014 – $316 million; 2013 – $346 million; 2012 – $393 million; 2011 – $525 million).

Provision for credit losses by portfolio and geography — Table 83

(Millions of Canadian dollars, except for percentage amounts)	2015	2014	2013	2012 (1)	2011 (1)
Residential mortgages	$ 47	$ 94	$ 41	$ 67	$ 42
Personal	388	441	458	445	438
Credit cards	378	353	354	394	448
Small business	32	44	32	43	35
Retail	**$ 845**	**$ 932**	**$ 885**	**$ 949**	**$ 963**
Business					
Agriculture	$ 9	$ 3	$ 4	$ 8	$ 7
Automotive	3	2	3	(2)	(4)
Consumer goods	33	27	17	27	14
Energy					
Oil and gas	47	(5)	(6)	(11)	(20)
Utilities	9	32	–	–	–
Non-bank financial services	7	–	10	1	(11)
Forest products	6	7	4	5	5
Industrial products	4	14	21	32	3
Mining & metals	8	2	1	–	–
Real estate & related	29	58	62	82	66
Technology & media	5	14	157	102	(3)
Transportation & environment	8	2	35	47	29
Other (2)	85	76	44	61	82
Sovereign	–	–	–	–	–
Bank	(1)	–	–	–	–
Wholesale	**$ 252**	**$ 232**	**$ 352**	**$ 352**	**$ 168**
Total provision for credit losses on impaired loans	**$ 1,097**	**$ 1,164**	**$ 1,237**	**$ 1,301**	**$ 1,131**
Canada					
Residential mortgages	$ 27	$ 27	$ 27	$ 34	$ 25
Personal	393	393	391	413	408
Credit cards	371	345	346	391	448
Small business	32	44	32	43	35
Retail	$ 823	$ 809	$ 796	$ 881	$ 916
Business					
Agriculture	9	4	4	8	7
Automotive	3	3	3	(2)	(3)
Consumer goods	21	25	16	13	13
Energy					
Oil & gas	22	(5)	(6)	(11)	(9)
Utilities	1	–	–	–	–
Non-bank financial services	–	–	–	1	–
Forest products	1	1	3	5	4
Industrial products	7	14	14	12	3
Mining & metals	3	2	1	–	1
Real estate & related	13	34	37	43	31
Technology & media	6	14	50	98	6
Transportation & environment	7	3	2	10	5
Other	23	28	25	30	44
Sovereign	–	–	–	–	–
Bank	–	–	–	–	–
Wholesale	$ 116	$ 123	$ 149	$ 207	$ 102
Total	$ 939	$ 932	$ 945	$ 1,088	$ 1,018
U.S.					
Retail	1	2	3	4	4
Wholesale	40	40	32	29	(19)
	$ 41	$ 42	$ 35	$ 33	$ (15)
Other International					
Retail	21	121	86	64	43
Wholesale	96	69	171	116	85
	$ 117	$ 190	$ 257	$ 180	$ 128
Total provision for credit losses on impaired loans	**$ 1,097**	**$ 1,164**	**$ 1,237**	**$ 1,301**	**$ 1,131**
Total provision for credit losses on non-impaired loans	**–**	**–**	**–**	**(2)**	**2**
Total provision for credit losses	**$ 1,097**	**$ 1,164**	**$ 1,237**	**$ 1,299**	**$ 1,133**
Provision for credit losses as a % of average net loans and acceptances	**0.24%**	**0.27%**	**0.31%**	**0.35%**	**0.33%**

(1) On a continuing operations basis.
(2) Other in 2015 is related to financing products, $39 million; holding and investments, $19 million; other services, $4 million; and other, $23 million.

Allowance for credit losses by portfolio and geography — Table 84

(Millions of Canadian dollars, except percentage amounts)	2015	2014	2013	2012 (1), (2)	2011 (2)
Allowance at beginning of year	$ 2,085	$ 2,050	$ 2,087	$ 2,056	$ 2,966
Alowance at beginning of year – discontinued operations	–	–	–	–	(854)
Provision for credit losses	1,097	1,164	1,237	1,299	1,133
Write-offs by portfolio					
Residential mortgages	(64)	(30)	(24)	(32)	(16)
Personal	(494)	(565)	(498)	(499)	(515)
Credit cards	(497)	(466)	(466)	(496)	(545)
Small business	(40)	(47)	(35)	(50)	(45)
Retail	$ (1,095)	$ (1,108)	$ (1,023)	$ (1,077)	$ (1,121)
Business	$ (243)	$ (221)	$ (448)	$ (288)	$ (226)
Sovereign	–	–	–	–	(9)
Bank	–	–	–	(32)	–
Wholesale	$ (243)	$ (221)	$ (448)	$ (320)	$ (235)
Total write-offs by portfolio	$ (1,338)	$ (1,329)	$ (1,471)	$ (1,397)	$ (1,356)
Recoveries by portfolio					
Residential mortgages	$ 7	$ 2	$ 2	$ 1	$ 1
Personal	105	106	96	83	79
Credit cards	119	114	112	102	97
Small business	10	9	9	8	7
Retail	$ 241	$ 231	$ 219	$ 194	$ 184
Business	$ 33	$ 32	$ 51	$ 39	$ 60
Sovereign	–	–	–	–	–
Bank	1	–	–	–	–
Wholesale	$ 34	$ 32	$ 51	$ 39	$ 60
Total recoveries by portfolio	$ 275	$ 263	$ 270	$ 233	$ 244
Net write-offs	$ (1,063)	$ (1,066)	$ (1,201)	$ (1,164)	$ (1,112)
Adjustments (3)	1	(63)	(73)	(104)	(75)
Total allowance for credit losses at end of year	$ 2,120	$ 2,085	$ 2,050	$ 2,087	$ 2,058
Allowance against impaired loans					
Canada					
Residential mortgages	$ 27	$ 31	$ 36	$ 41	$ 47
Personal	96	93	97	89	88
Small business	19	19	16	12	15
Retail	$ 142	$ 143	$ 149	$ 142	$ 150
Business					
Agriculture	$ 5	$ 6	$ 6	$ 9	$ 13
Automotive	4	4	4	7	15
Consumer goods	12	22	15	14	17
Energy					
Oil & gas	–	–	1	1	3
Utilities	1	–	–	–	–
Non-bank financial services	–	–	–	–	–
Forest products	3	3	4	6	3
Industrial products	13	18	15	10	12
Mining & metals	1	1	1	1	1
Real estate & related	28	48	42	45	47
Technology & media	12	17	46	107	20
Transportation & environment	7	5	6	8	5
Other	25	36	30	31	43
Sovereign	–	–	–	–	–
Bank	–	–	–	–	–
Wholesale	$ 111	$ 160	$ 170	$ 239	$ 179
	$ 253	$ 303	$ 319	$ 381	$ 329
U.S.					
Retail	$ 1	$ 1	$ 2	$ 1	$ 1
Wholesale	47	16	19	38	25
	$ 48	$ 17	$ 21	$ 39	$ 26
Other International					
Retail	$ 169	$ 172	$ 146	$ 96	$ 80
Wholesale	184	140	113	120	170
	$ 353	$ 312	$ 259	$ 216	$ 250
Total allowance against impaired loans	$ 654	$ 632	$ 599	$ 636	$ 605
Allowance against non-impaired loans					
Residential mortgages	$ 83	$ 78	$ 48	$ 48	$ 41
Personal	396	400	405	392	412
Credit cards	386	385	385	403	415
Small business	45	45	45	60	60
Retail	$ 910	$ 908	$ 883	$ 903	$ 928
Wholesale	$ 465	$ 454	$ 477	$ 457	$ 434
Off-balance sheet and other items	$ 91	$ 91	$ 91	$ 91	$ 91
Total allowance against non-impaired loans	$ 1,466	$ 1,453	$ 1,451	$ 1,451	$ 1,453
Total allowance for credit losses	$ 2,120	$ 2,085	$ 2,050	$ 2,087	$ 2,058
Key ratios					
Allowance for credit losses as a % of loans and acceptances	0.43%	0.46%	0.49%	0.54%	0.57%
Net write-offs as a % of average net loans and acceptances	0.23%	0.25%	0.30%	0.31%	0.33%

(1) On a continuing operations basis.

(2) Opening allowance for credit losses as at November 1, 2011 has been restated due to the implementation of amendments to IFRS 11.

(3) Under IFRS, other adjustments include $80 million of unwind of discount and $(81) million of changes in exchange rate (2014 – $87 million and $(24) million; 2013 – $86 million and $(13) million). For further details, refer to Note 5 of our audited 2015 Annual Consolidated Financial Statements.

Credit quality information by Canadian province — Table 85

(Millions of Canadian dollars)	2015	2014	2013	2012 (1)	2011 (1)
Loans and acceptances					
Atlantic provinces (2)	$ 23,040	$ 22,130	$ 21,263	$ 19,953	$ 18,481
Quebec	51,197	50,748	48,060	42,920	38,776
Ontario	175,315	159,817	152,258	141,566	141,230
Prairie provinces (3)	94,392	88,538	84,015	77,187	68,468
B.C. and territories (4)	70,483	68,988	68,118	65,204	58,774
Total loans and acceptances in Canada	$ 414,427	$ 390,221	$ 373,714	$ 346,830	$ 325,729
Gross impaired loans					
Atlantic provinces (2)	$ 93	$ 81	$ 83	$ 67	$ 66
Quebec	213	205	177	180	135
Ontario	341	391	424	502	398
Prairie provinces (3)	339	258	330	338	404
B.C. and territories (4)	150	211	241	269	305
Total gross impaired loans in Canada	$ 1,136	$ 1,146	$ 1,255	$ 1,356	$ 1,308
Provision for credit losses on impaired loans					
Atlantic provinces (2)	$ 57	$ 51	$ 50	$ 62	$ 54
Quebec	96	92	78	96	63
Ontario	590	588	605	704	686
Prairie provinces (3)	129	111	113	120	107
B.C. and territories (4)	67	90	99	106	108
Total provision for credit losses on impaired loans in Canada	$ 939	$ 932	$ 945	$ 1,088	$ 1,018

(1) On a continuing operations basis.
(2) Comprises Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick.
(3) Comprises Manitoba, Saskatchewan and Alberta.
(4) Comprises British Columbia, Nunavut, Northwest Territories and Yukon.

EDTF recommendations index

On October 29, 2012, the Enhanced Disclosure Task Force (EDTF), established by the Financial Stability Board, issued its report Enhancing the Risk Disclosures of Banks, which included 32 recommendations aimed at achieving transparent, high-quality risk disclosures. As a result, our enhanced disclosures have been provided in our 2015 Annual Report and Supplementary Financial Information package (SFI).

The following index summarizes our disclosure by EDTF recommendation:

			Location of disclosure	
Type of Risk	Recommendation	Disclosure	Annual Report page	SFI page
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	3	Top and emerging risks	49-50	–
	4	New regulatory ratios	73, 92-93	–
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	7	Risk in the context of our business activities	100	–
	8	Stress testing	52-53, 69	–
Capital adequacy and risk-weighted assets(RWA)	9	Minimum Basel III capital ratios and Domestic systemically important bank surcharge	92-93	–
	10	Composition of capital and reconciliation of the accounting balance sheet to the regulatory balance sheet	–	21-24
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	12	Capital strategic planning	91-93	–
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Management's responsibility for financial reporting

The accompanying consolidated financial statements of Royal Bank of Canada were prepared by management, which is responsible for the integrity and fairness of the information presented, including the many amounts that must of necessity be based on estimates and judgments. These consolidated financial statements were prepared in accordance with the *Bank Act* (Canada) and International Financial Reporting Standards as issued by the International Accounting Standards Board. Financial information appearing throughout our Management's Discussion and Analysis is consistent with these consolidated financial statements.

Our internal controls are designed to provide reasonable assurance that transactions are authorized, assets are safeguarded and proper records are maintained. These controls include quality standards in hiring and training of employees, policies and procedures manuals, a corporate code of conduct and accountability for performance within appropriate and well-defined areas of responsibility.

The system of internal controls is further supported by a compliance function, which is designed to ensure that we and our employees comply with securities legislation and conflict of interest rules, and by an internal audit staff, which conducts periodic audits of all aspects of our operations.

The Board of Directors oversees management's responsibilities for financial reporting through an Audit Committee, which is composed entirely of independent directors. This Committee reviews our consolidated financial statements and recommends them to the Board for approval. Other key responsibilities of the Audit Committee include reviewing our existing internal control procedures and planned revisions to those procedures, and advising the directors on auditing matters and financial reporting issues. Our Chief Compliance Officer and Chief Internal Auditor have full and unrestricted access to the Audit Committee.

The Office of the Superintendent of Financial Institutions Canada (OSFI) examines and inquires into our business and affairs as deemed necessary to determine whether the provisions of the *Bank Act* are being complied with, and that we are in sound financial condition. In carrying out its mandate, OSFI strives to protect the rights and interests of our depositors and creditors.

Deloitte LLP, Independent Registered Public Accounting Firm appointed by our shareholders upon the recommendation of the Audit Committee and Board, have performed an independent audit of the consolidated financial statements and their report follows. The auditors have full and unrestricted access to the Audit Committee to discuss their audit and related findings.

David I. McKay
President and Chief Executive Officer

Janice R. Fukakusa
Chief Administrative Officer and Chief Financial Officer

Toronto, December 1, 2015

Report of Independent Registered Public Accounting Firm

To the Shareholders of Royal Bank of Canada

We have audited the accompanying consolidated financial statements of Royal Bank of Canada and subsidiaries (the "Bank"), which comprise the consolidated balance sheets as at October 31, 2015 and October 31, 2014, and the consolidated statements of income, statements of comprehensive income, statements of changes in equity, and statements of cash flows for each of the years in the three-year period ended October 31, 2015, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements
Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the consolidated financial statements present fairly, in all material respects, the balance sheets of Royal Bank of Canada and subsidiaries as at October 31, 2015 and October 31, 2014, and their financial performance and cash flows for each of the years in the three-year period ended October 31, 2015 in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

Other Matter
We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Bank's internal control over financial reporting as of October 31, 2015 based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated December 1, 2015 expressed an unqualified opinion on the Bank's internal control over financial reporting.

Deloitte LLP
Chartered Professional Accountants
Licensed Public Accountants
Toronto, Canada
December 1, 2015

Management's Report on Internal Control over Financial Reporting

Management of Royal Bank of Canada is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the President and Chief Executive Officer and the Chief Administrative Officer and Chief Financial Officer and effected by the Board of Directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. It includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions related to and dispositions of our assets;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and our receipts and expenditures are made only in accordance with authorizations of our management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our financial statements.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. Also, projections of any evaluation of the effectiveness of internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management evaluated, under the supervision of and with the participation of the President and Chief Executive Officer and the Chief Administrative Officer and Chief Financial Officer, the effectiveness of our internal control over financial reporting as of October 31, 2015, based on the criteria set forth in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, management concluded that, as of October 31, 2015, internal control over financial reporting was effective based on the criteria established in the *Internal Control–Integrated Framework (2013)*. Also, based on the results of our evaluation, management concluded that there were no material weaknesses that have been identified in internal control over financial reporting as of October 31, 2015.

Our internal control over financial reporting as of October 31, 2015 has been audited by Deloitte LLP, Independent Registered Public Accounting Firm, who also audited our Consolidated Financial Statements for the year ended October 31, 2015, as stated in the Report of Independent Registered Public Accounting Firm, which report expressed an unqualified opinion on the effectiveness of our internal control over financial reporting.

David I. McKay
President and Chief Executive Officer

Janice R. Fukakusa
Chief Administrative Officer and Chief Financial Officer

Toronto, December 1, 2015

Report of Independent Registered Public Accounting Firm

To the Shareholders of Royal Bank of Canada

We have audited the internal control over financial reporting of Royal Bank of Canada and subsidiaries (the "Bank") as of October 31, 2015, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Bank's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Bank's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Bank maintained, in all material respects, effective internal control over financial reporting as of October 31, 2015, based on the criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended October 31, 2015 of the Bank and our report dated December 1, 2015 expressed an unqualified opinion on those consolidated financial statements.

Deloitte LLP
Chartered Professional Accountants
Licensed Public Accountants
Toronto, Canada
December 1, 2015

Consolidated Balance Sheets

(Millions of Canadian dollars)	As at October 31 2015	As at October 31 2014
Assets		
Cash and due from banks	$ 12,452	$ 17,421
Interest-bearing deposits with banks	22,690	8,399
Securities (Note 4)		
Trading	158,703	151,380
Available-for-sale	56,805	47,768
	215,508	199,148
Assets purchased under reverse repurchase agreements and securities borrowed	174,723	135,580
Loans (Note 5)		
Retail	348,183	334,269
Wholesale	126,069	102,954
	474,252	437,223
Allowance for loan losses (Note 5)	(2,029)	(1,994)
	472,223	435,229
Segregated fund net assets (Note 16)	830	675
Other		
Customers' liability under acceptances	13,453	11,462
Derivatives (Note 8)	105,626	87,402
Premises and equipment, net (Note 9)	2,728	2,684
Goodwill (Note 10)	9,289	8,647
Other intangibles (Note 10)	2,814	2,775
Investments in joint ventures and associates (Note 12)	360	295
Employee benefit assets (Note 17)	245	138
Other assets (Note 13)	41,267	30,695
	175,782	144,098
Total assets	$ 1,074,208	$ 940,550
Liabilities and equity		
Deposits (Note 14)		
Personal	$ 220,566	$ 209,217
Business and government	455,578	386,660
Bank	21,083	18,223
	697,227	614,100
Segregated fund net liabilities (Note 16)	830	675
Other		
Acceptances	13,453	11,462
Obligations related to securities sold short	47,658	50,345
Obligations related to assets sold under repurchase agreements and securities loaned	83,288	64,331
Derivatives (Note 8)	107,860	88,982
Insurance claims and policy benefit liabilities (Note 15)	9,110	8,564
Employee benefit liabilities (Note 17)	1,969	2,420
Other liabilities (Note 18)	41,507	37,309
	304,845	263,413
Subordinated debentures (Note 19)	7,362	7,859
Total liabilities	1,010,264	886,047
Equity attributable to shareholders (Note 21)		
Preferred shares	5,100	4,075
Common shares (shares issued – 1,443,423,151 and 1,442,232,886)	14,573	14,511
Treasury shares – preferred (shares held – (63,179) and 1,207)	(2)	–
– common (shares held – 531,638 and 891,733)	38	71
Retained earnings	37,811	31,615
Other components of equity	4,626	2,418
	62,146	52,690
Non-controlling interests (Note 21)	1,798	1,813
Total equity	63,944	54,503
Total liabilities and equity	$ 1,074,208	$ 940,550

The accompanying notes are an integral part of these Consolidated Financial Statements.

David I. McKay
President and Chief Executive Officer

David F. Denison
Director

Consolidated Statements of Income

(Millions of Canadian dollars, except per share amounts)	For the year ended October 31 2015	October 31 2014	October 31 2013
Interest income			
Loans	$ 16,882	$ 16,979	$ 16,354
Securities	4,519	3,993	3,779
Assets purchased under reverse repurchase agreements and securities borrowed	1,251	971	941
Deposits and other	77	76	74
	22,729	22,019	21,148
Interest expense			
Deposits and other	5,723	5,873	5,694
Other liabilities	1,995	1,784	1,869
Subordinated debentures	240	246	336
	7,958	7,903	7,899
Net interest income	14,771	14,116	13,249
Non-interest income			
Insurance premiums, investment and fee income (Note 15)	4,436	4,957	3,911
Trading revenue	552	742	867
Investment management and custodial fees	3,778	3,355	2,870
Mutual fund revenue	2,881	2,621	2,201
Securities brokerage commissions	1,436	1,379	1,337
Service charges	1,592	1,494	1,437
Underwriting and other advisory fees	1,885	1,809	1,569
Foreign exchange revenue, other than trading	814	827	748
Card service revenue	798	689	632
Credit fees	1,184	1,080	1,092
Net gains on available-for-sale securities (Note 4)	145	192	188
Share of profit in joint ventures and associates (Note 12)	149	162	159
Other	900	685	422
	20,550	19,992	17,433
Total revenue	35,321	34,108	30,682
Provision for credit losses (Note 5)	1,097	1,164	1,237
Insurance policyholder benefits, claims and acquisition expense (Note15)	2,963	3,573	2,784
Non-interest expense			
Human resources (Note 17 and 22)	11,583	11,031	10,248
Equipment	1,277	1,147	1,081
Occupancy	1,410	1,330	1,235
Communications	888	847	796
Professional fees	932	763	753
Amortization of other intangibles (Note 10)	712	666	566
Other	1,836	1,877	1,535
	18,638	17,661	16,214
Income before income taxes	12,623	11,710	10,447
Income taxes (Note 24)	2,597	2,706	2,105
Net income	$ 10,026	$ 9,004	$ 8,342
Net income attributable to:			
Shareholders	$ 9,925	$ 8,910	$ 8,244
Non-controlling interests	101	94	98
	$ 10,026	$ 9,004	$ 8,342
Basic earnings per share (in dollars) (Note 25)	$ 6.75	$ 6.03	$ 5.53
Diluted earnings per share (in dollars) (Note 25)	6.73	6.00	5.49
Dividends per common share (in dollars)	3.08	2.84	2.53

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated Statements of Comprehensive Income

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Net income	$ 10,026	$ 9,004	$ 8,342
Other comprehensive income (loss), net of taxes (Note 24)			
Items that will be reclassified subsequently to income:			
Net change in unrealized gains (losses) on available-for-sale securities			
Net unrealized gains (losses) on available-for-sale securities	(76)	143	15
Reclassification of net losses (gains) on available-for-sale securities to income	(41)	(58)	(87)
	(117)	85	(72)
Foreign currency translation adjustments			
Unrealized foreign currency translation gains (losses)	5,885	2,743	1,402
Net foreign currency translation gains (losses) from hedging activities	(3,223)	(1,585)	(912)
Reclassification of losses (gains) on foreign currency translation to income	(224)	44	1
Reclassification of losses (gains) on net investment hedging activities to income	111	3	(1)
	2,549	1,205	490
Net change in cash flow hedges			
Net gains (losses) on derivatives designated as cash flow hedges	(541)	(108)	(11)
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	330	28	(30)
	(211)	(80)	(41)
Items that will not be reclassified subsequently to income:			
Remeasurements of employee benefit plans (Note 17)	582	(236)	319
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	350	(59)	-
	932	(295)	319
Total other comprehensive income (loss), net of taxes	3,153	915	696
Total comprehensive income	$ 13,179	$ 9,919	$ 9,038
Total comprehensive income attributable to:			
Shareholders	$ 13,065	$ 9,825	$ 8,940
Non-controlling interests	114	94	98
	$ 13,179	$ 9,919	$ 9,038

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated Statements of Changes in Equity

(Millions of Canadian dollars)	Preferred shares	Common shares	Treasury shares – preferred	Treasury shares – common	Retained earnings	Other components of equity: Available-for-sale securities	Other components of equity: Foreign currency translation	Other components of equity: Cash flow hedges	Other components of equity: Total other components of equity	Equity attributable to shareholders	Non-controlling interests	Total equity
Balance at November 1, 2012	$ 4,813	$ 14,323	$ 1	$ 30	$ 23,162	$ 419	$ 196	$ 216	$ 831	$ 43,160	$ 1,761	$ 44,921
Changes in equity												
Issues of share capital	–	121	–	–	–	–	–	–	–	121	–	121
Common shares purchased for cancellation	–	(67)	–	–	(341)	–	–	–	–	(408)	–	(408)
Preferred shares redeemed	(213)	–	–	–	(9)	–	–	–	–	(222)	–	(222)
Sales of treasury shares	–	–	127	4,453	–	–	–	–	–	4,580	–	4,580
Purchases of treasury shares	–	–	(127)	(4,442)	–	–	–	–	–	(4,569)	–	(4,569)
Share-based compensation awards	–	–	–	–	(7)	–	–	–	–	(7)	–	(7)
Dividends on common shares	–	–	–	–	(3,651)	–	–	–	–	(3,651)	–	(3,651)
Dividends on preferred shares and other	–	–	–	–	(253)	–	–	–	–	(253)	(94)	(347)
Other	–	–	–	–	(26)	–	–	–	–	(26)	30	4
Net income	–	–	–	–	8,244	–	–	–	–	8,244	98	8,342
Total other comprehensive income (loss), net of taxes	–	–	–	–	319	(72)	490	(41)	377	696	–	696
Balance at October 31, 2013	$ 4,600	$ 14,377	$ 1	$ 41	$ 27,438	$ 347	$ 686	$ 175	$ 1,208	$ 47,665	$ 1,795	$ 49,460
Changes in equity												
Issues of share capital	1,000	150	–	–	(14)	–	–	–	–	1,136	–	1,136
Common shares purchased for cancellation	–	(16)	–	–	(97)	–	–	–	–	(113)	–	(113)
Preferred shares redeemed	(1,525)	–	–	–	–	–	–	–	–	(1,525)	–	(1,525)
Sales of treasury shares	–	–	124	5,333	–	–	–	–	–	5,457	–	5,457
Purchases of treasury shares	–	–	(125)	(5,303)	–	–	–	–	–	(5,428)	–	(5,428)
Share-based compensation awards	–	–	–	–	(9)	–	–	–	–	(9)	–	(9)
Dividends on common shares	–	–	–	–	(4,097)	–	–	–	–	(4,097)	–	(4,097)
Dividends on preferred shares and other	–	–	–	–	(213)	–	–	–	–	(213)	(94)	(307)
Other	–	–	–	–	(8)	–	–	–	–	(8)	18	10
Net income	–	–	–	–	8,910	–	–	–	–	8,910	94	9,004
Total other comprehensive income (loss), net of taxes	–	–	–	–	(295)	85	1,205	(80)	1,210	915	–	915
Balance at October 31, 2014	$ 4,075	$ 14,511	$ –	$ 71	$ 31,615	$ 432	$ 1,891	$ 95	$ 2,418	$ 52,690	$ 1,813	$ 54,503
Changes in equity												
Issues of share capital	**1,350**	**62**	**–**	**–**	**(21)**	**–**	**–**	**–**	**–**	**1,391**	**–**	**1,391**
Preferred shares redeemed	**(325)**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**(325)**	**–**	**(325)**
Sales of treasury shares	**–**	**–**	**117**	**6,098**	**–**	**–**	**–**	**–**	**–**	**6,215**	**–**	**6,215**
Purchases of treasury shares	**–**	**–**	**(119)**	**(6,131)**	**–**	**–**	**–**	**–**	**–**	**(6,250)**	**–**	**(6,250)**
Share-based compensation awards	**–**	**–**	**–**	**–**	**(1)**	**–**	**–**	**–**	**–**	**(1)**	**–**	**(1)**
Dividends on common shares	**–**	**–**	**–**	**–**	**(4,443)**	**–**	**–**	**–**	**–**	**(4,443)**	**–**	**(4,443)**
Dividends on preferred shares and other	**–**	**–**	**–**	**–**	**(191)**	**–**	**–**	**–**	**–**	**(191)**	**(92)**	**(283)**
Other	**–**	**–**	**–**	**–**	**(5)**	**–**	**–**	**–**	**–**	**(5)**	**(37)**	**(42)**
Net income	**–**	**–**	**–**	**–**	**9,925**	**–**	**–**	**–**	**–**	**9,925**	**101**	**10,026**
Total other comprehensive income (loss), net of taxes	**–**	**–**	**–**	**–**	**932**	**(117)**	**2,536**	**(211)**	**2,208**	**3,140**	**13**	**3,153**
Balance at October 31, 2015	**$ 5,100**	**$ 14,573**	**$ (2)**	**$ 38**	**$ 37,811**	**$ 315**	**$ 4,427**	**$ (116)**	**$ 4,626**	**$ 62,146**	**$ 1,798**	**$ 63,944**

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated Statements of Cash Flows

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Cash flows from operating activities			
Net income	$ 10,026	$ 9,004	$ 8,342
Adjustments for non-cash items and others			
Provision for credit losses	1,097	1,164	1,237
Depreciation	527	499	445
Deferred income taxes	302	(207)	(72)
Amortization and Impairment of other intangibles	719	674	576
Impairment of investments in joint ventures and associates	3	–	20
Losses (Gains) on sale of premises and equipment	(32)	14	(24)
Losses (Gains) on available-for-sale securities	(220)	(228)	(217)
Losses (Gains) on disposition of business	(77)	95	(17)
Impairment of available-for-sale securities	59	25	26
Share of loss (profit) in joint ventures and associates	(149)	(162)	(159)
Net gains on sales of joint ventures and associates	–	(62)	–
Adjustments for net changes in operating assets and liabilities			
Insurance claims and policy benefit liabilities	546	530	113
Net change in accrued interest receivable and payable	(279)	187	(467)
Current income taxes	(905)	(206)	354
Derivative assets	(18,228)	(12,580)	16,475
Derivative liabilities	18,893	12,237	(20,017)
Trading securities	(7,401)	(7,253)	(23,038)
Loans, net of securitizations	(34,964)	(27,096)	(20,175)
Assets purchased under reverse repurchase agreements and securities borrowed	(39,143)	(18,063)	(5,260)
Deposits, net of securitizations	86,979	52,339	41,857
Obligations related to assets sold under repurchase agreements and securities loaned	18,957	3,915	(3,616)
Obligations related to securities sold short	(2,687)	3,233	6,372
Brokers and dealers receivable and payable	664	(638)	536
Other	(10,538)	(2,247)	3,794
Net cash from (used in) operating activities	24,149	15,174	7,085
Cash flows from investing activities			
Change in interest-bearing deposits with banks	(14,456)	640	1,207
Proceeds from sale of available-for-sale securities	10,331	8,795	6,476
Proceeds from maturity of available-for-sale securities	33,294	38,950	37,099
Purchases of available-for-sale securities	(51,304)	(54,208)	(41,057)
Proceeds from maturity of held-to-maturity securities	16	285	401
Purchases of held-to-maturity securities	(1,942)	(1,625)	(284)
Net acquisitions of premises and equipment and other intangibles	(1,337)	(1,227)	(932)
Proceeds from dispositions	255	173	17
Cash used in acquisitions	–	–	(2,537)
Net cash from (used in) investing activities	(25,143)	(8,217)	390
Cash flows from financing activities			
Redemption of trust capital securities	–	(900)	–
Issue of subordinated debentures	1,000	2,000	2,046
Repayment of subordinated debentures	(1,700)	(1,600)	(2,000)
Issue of common shares	62	150	121
Common shares purchased for cancellation	–	(113)	(408)
Issue of preferred shares	1,350	1,000	–
Redemption of preferred shares	(325)	(1,525)	(222)
Sales of treasury shares	6,215	5,457	4,580
Purchase of treasury shares	(6,250)	(5,428)	(4,569)
Dividends paid	(4,564)	(4,211)	(3,810)
Issuance costs	(21)	(14)	–
Dividends/distributions paid to non-controlling interests	(92)	(94)	(94)
Change in short-term borrowings of subsidiaries	(105)	(6)	(93)
Net cash from (used in) financing activities	(4,430)	(5,284)	(4,449)
Effect of exchange rate changes on cash and due from banks	455	198	96
Net change in cash and due from banks	(4,969)	1,871	3,122
Cash and due from banks at beginning of period (1)	17,421	15,550	12,428
Cash and due from banks at end of period (1)	$ 12,452	$ 17,421	$ 15,550
Cash flows from operating activities include:			
Amount of interest paid	$ 7,096	$ 7,186	$ 7,223
Amount of interest received	21,132	20,552	19,348
Amount of dividend received	1,843	1,702	1,478
Amount of income taxes paid	2,046	2,315	1,479

(1) We are required to maintain balances with central banks and other regulatory authorities. The total balances were $2.6 billion as at October 31, 2015 (October 31, 2014 – $2.0 billion; October 31, 2013 – $2.6 billion; November 1, 2012 – $2.1 billion).

The accompanying notes are an integral part of these Consolidated Financial Statements.

Note 1 General information

Royal Bank of Canada and its subsidiaries (the Bank) provide diversified financial services including personal and commercial banking, wealth management, insurance, investor services and capital markets products and services on a global basis. Refer to Note 30 for further details on our business segments.

The parent bank, Royal Bank of Canada, is a Schedule I Bank under the *Bank Act* (Canada) incorporated and domiciled in Canada. Our corporate headquarters are located at Royal Bank Plaza, 200 Bay Street, Toronto, Ontario, Canada and our head office is located at 1 Place Ville-Marie, Montreal, Quebec, Canada. Our common shares are listed on the Toronto Stock Exchange and New York Stock Exchange with the ticker symbol RY.

These Consolidated Financial Statements are prepared in compliance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). Unless otherwise stated, monetary amounts are stated in Canadian dollars. Tabular information is stated in millions of dollars, except per share amounts and percentages. These Consolidated Financial Statements also comply with Subsection 308 of the *Bank Act* (Canada), which states that, except as otherwise specified by the Office of the Superintendent of Financial Institutions (OSFI), our Consolidated Financial Statements are to be prepared in accordance with IFRS. The accounting policies outlined in Note 2 have been consistently applied to all periods presented.

On December 1, 2015, the Board of Directors authorized the Consolidated Financial Statements for issue.

Note 2 Summary of significant accounting policies, estimates and judgments

The significant accounting policies used in the preparation of these Consolidated Financial Statements, including the accounting requirements prescribed by OSFI, are summarized below. These accounting policies conform, in all material respects, to IFRS.

General

Use of estimates and assumptions

In preparing our Consolidated Financial Statements, management is required to make subjective estimates and assumptions that affect the reported amount of assets, liabilities, net income and related disclosures. Estimates made by management are based on historical experience and other assumptions that are believed to be reasonable. Key sources of estimation uncertainty include: securities impairment, determination of fair value of financial instruments, the allowance for credit losses, derecognition of financial assets, insurance claims and policy benefit liabilities, pensions and other post-employment benefits, income taxes, carrying value of goodwill and other intangible assets, litigation provisions, and deferred revenue under the credit card customer loyalty reward program. Accordingly, actual results may differ from these and other estimates thereby impacting our future Consolidated Financial Statements. Refer to the relevant accounting policies in this Note for details on our use of estimates and assumptions.

Significant judgments

In preparation of these Consolidated Financial Statements, management is required to make significant judgments that affect the carrying amounts of certain assets and liabilities, and the reported amounts of revenues and expenses recorded during the period. Significant judgments have been made in the following areas and discussed as noted in the Consolidated Financial Statements:

Consolidation of structured entities	Note 2 – page 125 Note 7 – page 158	Securities impairment	Note 2 – page 126 Note 4 – page 150
Fair value of financial instruments	Note 2 – page 127 Note 3 – page 136	Application of the effective interest method	Note 2 – page 128
Allowance for credit losses	Note 2 – page 130 Note 5 – page 154	Derecognition of financial assets	Note 2 – page 131 Note 6 – page 157
Employee benefits	Note 2 – page 132 Note 17 – page 175	Income taxes	Note 2 – page 132 Note 24 – page 187
Goodwill and other intangibles	Note 2 – page 133 Note 10 – page 168 Note 11 – page 170	Provisions	Note 2 – page 134 Note 26 – page 189 Note 27 – page 192

Basis of consolidation

Our Consolidated Financial Statements include the assets and liabilities and results of operations of the parent company, Royal Bank of Canada, and its subsidiaries including certain structured entities, after elimination of intercompany transactions, balances, revenues and expenses.

Consolidation

Subsidiaries are those entities, including structured entities, over which we have control. We control an entity when we are exposed, or have rights, to variable returns from our involvement with the entity and have the ability to affect those returns through our power over the investee. We have power over an entity when we have existing rights that give us the current ability to direct the activities that most significantly affect the entity's returns (relevant activities). Power may be determined on the basis of voting rights or, in the case of structured entities, other contractual arrangements.

We are not deemed to control an entity when we exercise power over an entity in an agency capacity. In determining whether we are acting as an agent, we consider the overall relationship between us, the investee and other parties to the arrangement with respect to the following factors: (i) the scope of our decision making power; (ii) the rights held by other parties; (iii) the remuneration to which we are entitled; and (iv) our exposure to variability of returns.

The determination of control is based on the current facts and circumstances and is continuously assessed. In some circumstances, different factors and conditions may indicate that different parties control an entity depending on whether those factors and conditions are assessed in isolation or in totality. Significant judgment is applied in assessing the relevant factors and conditions in totality when determining whether we control an entity. Specifically, judgment is applied in assessing whether we have substantive decision making rights over the relevant activities and whether we are exercising our power as a principal or an agent.

We consolidate all subsidiaries from the date we obtain control, and cease consolidation when an entity is no longer controlled by us. Our consolidation conclusions affect the classification and amount of assets, liabilities, revenues and expenses reported in our Consolidated Financial Statements.

Non-controlling interests in subsidiaries that we consolidate are shown on our Consolidated Balance Sheets as a separate component of equity which is distinct from our shareholders' equity. The net income attributable to non-controlling interests is separately disclosed in our Consolidated Statements of Income.

Investments in associates and joint ventures

Our investments in associated corporations and limited partnerships over which we have significant influence are accounted for using the equity method. The equity method is also applied to our interests in joint ventures over which we have joint control. Under the equity method of accounting, investments are initially recorded at cost, and the carrying amount is increased or decreased to recognize our share of the investee's net profit or loss, including our proportionate share of the investee's other comprehensive income (OCI), subsequent to the date of acquisition.

Non-current assets held for sale and discontinued operations

Non-current assets (and disposal groups) are classified as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. This condition is satisfied when the asset is available for immediate sale in its present condition, management is committed to the sale, and it is highly probable to occur within one year. Non-current assets (and disposal groups) classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell and if significant, are presented separately from other assets on our Consolidated Balance Sheets.

A disposal group is classified as a discontinued operation if it meets the following conditions: (i) it is a component that can be distinguished operationally and financially from the rest of our operations and (ii) it represents either a separate major line of business or is part of a single co-ordinated plan to dispose of a separate major line of business or geographical area of operations. Disposal groups classified as discontinued operations are presented separately from our continuing operations in our Consolidated Statements of Income.

Changes in accounting policies

During the first quarter, we adopted the following new accounting pronouncements:

IAS 32 *Financial Instruments: Presentation* (IAS 32)

Amendments to IAS 32 clarify the existing requirements for offsetting financial assets and financial liabilities. The standard provides clarifications on the legal right to offset transactions, and when transactions settled through a gross settlement system would meet the simultaneous settlement criteria. We retrospectively adopted the amendments on November 1, 2014. The adoption of these amendments did not have an impact on our Consolidated Financial Statements.

International Financial Reporting Standards (IFRS) Interpretations Committee IFRIC Interpretation 21 *Levies* (IFRIC 21)

IFRIC 21 provides guidance on when to recognize a liability to pay a levy that is accounted for in accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*. It also addresses the accounting for a liability to pay a levy whose timing and amount is certain. The interpretation clarifies that the obligating event that gives rise to a liability to pay a levy is the activity described in the relevant legislation that triggers the payment of the levy. We prospectively adopted the standard on November 1, 2014. We did not restate our quarterly or annual results for periods before November 1, 2014 as the amounts were not significant. The adoption of this interpretation did not have a material impact on our Consolidated Financial Statements.

Financial instruments – Recognition and measurement

Securities

Securities are classified at inception, based on management's intention, as at fair value through profit or loss (FVTPL), available-for-sale (AFS) or held-to-maturity. Certain debt securities with fixed or determinable payments and which are not quoted in an active market may be classified as loans and receivables.

Trading securities include securities purchased for sale in the near term which are classified as at FVTPL by nature and securities designated as at FVTPL under the fair value option. Obligations to deliver trading securities sold but not yet purchased are recorded as liabilities and carried at fair value. Realized and unrealized gains and losses on these securities are recorded as Trading revenue in Non-interest income. Dividends and interest income accruing on Trading securities are recorded in Interest income. Interest and dividends accrued on interest-bearing and equity securities sold short are recorded in Interest expense.

AFS securities include: (i) securities which may be sold to meet liquidity needs, in response to or in anticipation of changes in interest rates and resulting prepayment risk, changes in foreign currency risk, changes in funding sources or terms, and (ii) loan substitute securities which are client financings that have been structured as after-tax investments rather than conventional loans in order to provide the clients with a borrowing rate advantage. AFS securities are measured at fair value. Unrealized gains and losses arising from changes in fair value are included in Other components of equity. Changes in foreign exchange rates for AFS equity securities are recognized in Other components of equity, while changes in foreign exchange rates for AFS debt securities are recognized in Foreign exchange revenue, other than trading in Non-interest income. When the security is sold, the cumulative gain or loss recorded in Other components of equity is included as Net gains on AFS securities in Non-interest income. Purchase premiums or discounts on AFS debt securities are amortized over the life of the security using the effective interest method and are recognized in Net interest income.

At each reporting date, and more frequently when conditions warrant, we evaluate our AFS securities to determine whether there is any objective evidence of impairment. Such evidence includes: for debt instruments, when an adverse effect on future cash flows from the asset or group of assets can be reliably estimated; for equity securities, when there is a significant or prolonged decline in the fair value of the investment below its cost.

When assessing impairment for debt instruments we primarily consider counterparty ratings and security-specific factors, including subordination, external ratings, and the value of any collateral held, for which there may not be a readily accessible market. Significant judgment is required in assessing impairment as management is required to consider all available evidence in determining whether objective evidence of impairment exists and whether the principal and interest on the AFS debt security can be fully recovered. For complex debt instruments we use cash flow projection models which incorporate actual and projected cash flows for each security based on security specific factors using a number of assumptions and inputs that involve management judgment, such as default, prepayment and recovery rates. Due to the subjective nature of choosing these inputs and assumptions, the actual amount of the future cash flows and their timing may differ from the estimates used by management and consequently may cause a different conclusion as to the recognition of impairment or measurement of impairment loss.

In assessing whether there is any objective evidence that suggests that equity securities are impaired, we consider factors which include the length of time and extent the fair value has been below cost, along with management's assessment of the financial condition, business and other risks of the issuer. Management weighs all these factors to determine the impairment but to the extent that management judgment may differ from the actual experience of the timing and amount of the recovery of the fair value, the estimate for impairment could change from period to period based upon future events that may or may not occur, and the conclusion for the impairment of the equity securities may differ.

If an AFS security is impaired, the cumulative unrealized loss previously recognized in Other components of equity is removed from equity and recognized in Net gains on AFS securities under Non-interest income. This amount is determined as the difference between the cost/amortized cost and current fair value of the security less any impairment loss previously recognized. Subsequent to impairment, further declines in fair value are recorded in Non-interest income, while increases in fair value are recognized in Other components of equity until sold. For AFS debt securities, reversal of previously recognized impairment losses is recognized in our Consolidated Statements of Income if the recovery is objectively related to a specific event occurring after recognition of the impairment loss.

Held-to-maturity securities are debt securities where we have the intention and the ability to hold the investment until its maturity date. These securities are initially recorded at fair value and are subsequently measured at amortized cost using the effective interest method, less any impairment losses which we assess using the same impairment model as for loans. Interest income and amortization of premiums and discounts on debt securities are recorded in Net interest income. For held-to-maturity securities, reversal of previously recognized impairment losses is recognized in our Consolidated Statements of Income if the recovery is objectively related to a specific event occurring after the recognition of the impairment loss. Reversals of impairment losses on held-to-maturity securities are recorded to a maximum of what the amortized cost of the investment would have been, had the impairment not been recognized at the date the impairment is reversed. Held-to-maturity securities have been included with AFS securities on our Consolidated Balance Sheets.

We account for all of our securities using settlement date accounting and changes in fair value between the trade date and settlement date are reflected in income for securities classified or designated as at FVTPL, and changes in the fair value of AFS securities between the trade and settlement dates are recorded in OCI except for changes in foreign exchange rates on debt securities, which are recorded in Non-interest income.

Fair value option

A financial instrument can be designated as at FVTPL (the fair value option) on its initial recognition even if the financial instrument was not acquired or incurred principally for the purpose of selling or repurchasing it in the near term. An instrument that is designated as at FVTPL by way of this fair value option must have a reliably measurable fair value and satisfy one of the following criteria: (i) it eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities, or recognizing gains and losses on them on a different basis (an accounting mismatch); (ii) it belongs to a group of financial assets or financial liabilities or both that are managed, evaluated, and reported to key management personnel on a fair value basis in accordance with our risk management strategy, and we can demonstrate that significant financial risks are eliminated or significantly reduced; or (iii) there is an embedded derivative in the financial or non-financial host contract and the derivative is not closely related to the host contract. These instruments cannot be reclassified out of the FVTPL category while they are held or issued.

Financial assets designated as at FVTPL are recorded at fair value and any unrealized gain or loss arising due to changes in fair value is included in Trading revenue or Non-interest income – Other. Financial liabilities designated as at FVTPL are recorded at fair value and fair value changes attributable to changes in our own credit risk are recorded in OCI. Amounts recognized in OCI will not be reclassified subsequently to net income. The remaining fair value changes are recorded in Trading revenue or Non-interest income – Other. Upon initial recognition, if we determine that presenting the effects of own credit risk changes in OCI would create or enlarge an accounting mismatch in net income, the full fair value change in our debt designated as at FVTPL is recognized in net income.

To determine the fair value adjustments on our debt designated as at FVTPL, we calculate the present value of the instruments based on the contractual cash flows over the term of the arrangement by using our effective funding rate at the beginning and end of the period with the change in present value recorded in OCI, Trading revenue or Non-interest income – Other as appropriate.

Determination of fair value

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. We determine fair value by incorporating all factors that market participants would consider in setting a price, including commonly accepted valuation approaches.

The Board of Directors provides oversight on valuation of financial instruments, primarily through the Audit Committee and Risk Committee. The Audit Committee reviews the presentation and disclosure of financial instruments that are measured at fair value, while the Risk Committee assesses adequacy of governance structures and control processes for valuation of these instruments.

We have established policies, procedures and controls for valuation methodologies and techniques to ensure fair value is reasonably estimated. Major valuation processes and controls include, but are not limited to, profit and loss decomposition, independent price verification (IPV) and model validation standards. These control processes are managed by either Finance or Group Risk Management and are independent of the relevant businesses and their trading functions. Profit and loss decomposition is a process to explain the fair value changes of certain positions and is performed daily for trading portfolios. All fair value instruments are subject to IPV, a process whereby trading function valuations are verified against external market prices and other relevant market data. Market data sources include traded prices, brokers and price vendors. We give priority to those third-party pricing services and prices having the highest and most consistent accuracy. The level of accuracy is determined over time by comparing third-party price values to traders' or system values, to other pricing service values and, when available, to actual trade data. Other valuation techniques are used when a price or quote is not available. Some valuation processes use models to determine fair value. We have a systematic and consistent approach to control model use. Valuation models are approved for use within our model risk management framework. The framework addresses, among other things, model development standards, validation processes and procedures, and approval authorities. Model validation ensures that a model is suitable for its intended use and sets parameters for its use. All models are revalidated regularly by qualified personnel who are independent of the model design and development. Annually our model risk profile is reported to the Board of Directors.

IFRS 13 *Fair Value Measurement* permits an exception, through an accounting policy choice, to measure fair value of a portfolio of financial instruments on a net open risk position basis when certain criteria are met. We have elected to use this policy choice to determine fair value of certain portfolios of financial instruments, primarily derivatives, on a net exposure to market or credit risk.

We record valuation adjustments to appropriately reflect counterparty credit quality of our derivative portfolio, differences between the overnight index swap (OIS) curve and London Interbank Offered Rates (LIBOR) for collateralized derivatives, funding valuation adjustments (FVA) for uncollateralized and under-collateralized over-the-counter (OTC) derivatives, unrealized gains or losses at inception of the transaction, bid-offer spreads, unobservable parameters and model limitations. These adjustments may be subjective as they require significant judgment in the input selection, such as probability of default and recovery rate, and are intended to arrive at fair value that is determined based on

assumptions that market participants would use in pricing the financial instrument. The realized price for a transaction may be different from its recorded value that is previously estimated using management judgment, and may therefore impact unrealized gains and losses recognized in Non-interest income – Trading revenue or Other.

Valuation adjustments are recorded for the credit risk of our derivative portfolios in order to arrive at their fair values. Credit valuation adjustments (CVA) take into account our counterparties' creditworthiness, the current and potential future mark-to-market of the transactions, and the effects of credit mitigants such as master netting and collateral agreements. CVA amounts are derived from estimates of exposure at default, probability of default, recovery rates on a counterparty basis, and market and credit factor correlations. Exposure at default is the amounts of expected derivative related assets and liabilities at the time of default, estimated through modeling using underlying risk factors. Probability of default and recovery rate are generally implied from the market prices for credit protection and credit ratings of the counterparty. Correlation is the statistical measure of how credit and market factors may move in relation to one another. Correlation is estimated using historical data and market data where available. CVA is calculated daily and changes are recorded in Non-interest income – Trading revenue.

In the determination of fair value of collateralized OTC derivatives using the OIS curve, our valuation approach accounts for the difference between certain OIS rates and LIBOR for derivatives valuation as valuation adjustments.

FVA are also calculated to incorporate cost and benefit of funding in the valuation of uncollateralized and under-collateralized OTC derivatives. Future expected cash flows of these derivatives are discounted to reflect the cost and benefit of funding the derivatives by using a funding curve, implied volatilities and correlations as inputs.

Where required, a valuation adjustment is made to reflect the unrealized gain or loss at inception of a financial instrument contract where the fair value of that financial instrument is not obtained from a quoted market price or cannot be evidenced by other observable market transactions based on a valuation technique incorporating observable market data.

A bid-offer valuation adjustment is required when a financial instrument is valued at the mid-market price, instead of the bid or offer price for asset or liability positions, respectively. The valuation adjustment takes into account the spread from the mid to either the bid or offer price.

Some valuation models require parameter calibration from such factors as market observed option prices. The calibration of parameters may be sensitive to factors such as the choice of instruments or optimization methodology. A valuation adjustment is also estimated to mitigate the uncertainties of parameter calibration and model limitations.

In determining fair value, a hierarchy is used which prioritizes the inputs to valuation techniques. The fair value hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). Determination of fair value based on this hierarchy requires the use of observable market data whenever available. Level 1 inputs are unadjusted quoted prices in active markets for identical assets or liabilities that we have the ability to access at the measurement date. Level 2 inputs include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, and model inputs that are either observable, or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Level 3 inputs are one or more inputs that are unobservable and significant to the fair value of the asset or liability. Unobservable inputs are used to measure fair value to the extent that observable inputs are not available at the measurement date. The availability of inputs for valuation may affect the selection of valuation techniques. The classification of a financial instrument in the hierarchy for disclosure purposes is based upon the lowest level of input that is significant to the measurement of fair value.

Where observable prices or inputs are not available, management judgment is required to determine fair values by assessing other relevant sources of information such as historical data, proxy information from similar transactions, and through extrapolation and interpolation techniques. For more complex or illiquid instruments, significant judgment is required in the determination of the model used, the selection of model inputs, and in some cases the application of valuation adjustments to the model value or quoted price for inactively traded financial instruments, as the selection of model inputs may be subjective and the inputs may be unobservable. Unobservable inputs are inherently uncertain as there is little or no market data available from which to determine the level at which the transaction would occur under normal business circumstances. Appropriate parameter uncertainty and market risk valuation adjustments for such inputs and other model risk valuation adjustments are assessed in all such instances.

Interest

Interest is recognized in Interest income and Interest expense in the Consolidated Statements of Income for all interest bearing financial instruments using the effective interest method. The effective interest rate is the rate that discounts estimated future cash flows over the expected life of the financial asset or liability to the net carrying amount upon initial recognition. Significant judgment is applied in determining the effective interest rate due to uncertainty in the timing and amounts of future cash flows.

Transaction costs

Transaction costs are expensed as incurred for financial instruments classified or designated as at FVTPL. For other financial instruments, transaction costs are capitalized on initial recognition. For financial assets and financial liabilities measured at amortized cost, capitalized transaction costs are amortized through Net income over the estimated life of the instrument using the effective interest method. For AFS financial assets measured at fair value that do not have fixed or determinable payments and no fixed maturity, capitalized transaction costs are recognized in Net income when the asset is derecognized or becomes impaired.

Offsetting financial assets and financial liabilities

Financial assets and financial liabilities are offset on the balance sheet when there exists both a legally enforceable right to offset the recognized amounts and an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

Assets purchased under reverse repurchase agreements and sold under repurchase agreements

We purchase securities under agreements to resell (reverse repurchase agreement) and take possession of these securities. Reverse repurchase agreements are treated as collateralized lending transactions whereby we monitor the market value of the securities purchased and additional collateral is obtained when appropriate. We have the right to liquidate the collateral held in the event of counterparty default. We also sell securities under agreements to repurchase (repurchase agreements), which are treated as collateralized borrowing transactions. The securities received under reverse repurchase agreements and securities delivered under repurchase agreements are not recognized on, or derecognized from, our Consolidated Balance Sheets, respectively, unless the risks and rewards of ownership are obtained or relinquished.

Reverse repurchase agreements and repurchase agreements are carried on our Consolidated Balance Sheets at the amounts at which the securities were initially acquired or sold, except when they are designated as at FVTPL and are recorded at fair value. Interest earned on reverse

repurchase agreements is included in Interest income, and interest incurred on repurchase agreements is included in Interest expense in our Consolidated Statements of Income. Changes in fair value for reverse repurchase agreements and repurchase agreements designated as at FVTPL are included in Trading revenue or Other in Non-interest income.

Derivatives

Derivatives are primarily used in sales and trading activities. Derivatives are also used to manage our exposure to interest, currency, credit and other market risks. The most frequently used derivative products are interest rate swaps, interest rate futures, forward rate agreements, interest rate options, foreign exchange forward contracts, cross currency swaps, foreign currency futures, foreign currency options, equity swaps and credit derivatives. All derivative instruments are recorded on our Consolidated Balance Sheets at fair value, including those derivatives that are embedded in financial or non-financial contracts and are not closely related to the host contracts.

When derivatives are embedded in other financial instruments or host contracts, such combinations are known as hybrid instruments with the effect that some of the cash flows of a hybrid instrument vary in a way similar to a stand-alone derivative. If the host contract is not carried at fair value with changes in fair value reported in our Consolidated Statements of Income, the embedded derivative is generally required to be separated from the host contract and accounted for separately as at FVTPL if the economic characteristics and risks of the embedded derivative are not closely related to those of the host contract. All embedded derivatives are presented on a combined basis with the host contracts although they are separated for measurement purposes when conditions requiring separation are met.

When derivatives are used in sales and trading activities, the realized and unrealized gains and losses on these derivatives are recognized in Trading revenue in Non-interest income. Derivatives with positive fair values are reported as Derivative assets and derivatives with negative fair values are reported as Derivative liabilities. In accordance with our policy for offsetting financial assets and financial liabilities, the net fair value of certain derivative assets and liabilities are reported as an asset or liability, as appropriate. Valuation adjustments are included in the fair value of Derivative assets and Derivative liabilities. Premiums paid and premiums received are shown in Derivative assets and Derivative liabilities, respectively.

When derivatives are used to manage our own exposures, we determine for each derivative whether hedge accounting can be applied, as discussed in the Hedge accounting section below.

Hedge accounting

We use derivatives and non-derivatives in our hedging strategies to manage our exposure to interest rate, currency, credit and other market risks. Where hedge accounting can be applied, a hedge relationship is designated and documented at inception to detail the particular risk management objective and strategy for undertaking the hedge transaction. The documentation identifies the specific asset, liability or anticipated cash flows being hedged, the risk that is being hedged, the type of hedging instrument used and how effectiveness will be assessed. We assess, both at the inception of the hedge and on an ongoing basis, whether the hedging instruments are 'highly effective' in offsetting changes in the fair value or cash flows of the hedged items. A hedge is regarded as highly effective only if the following criteria are met: (i) at inception of the hedge and throughout its life, the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk, and (ii) actual results of the hedge are within a pre-determined range. In the case of hedging a forecast transaction, the transaction must have a high probability of occurring and must present an exposure to variations in cash flows that could ultimately affect the reported net profit or loss. Hedge accounting is discontinued when it is determined that the hedging instrument is no longer effective as a hedge, the hedging instrument is terminated or sold, upon the sale or early termination of the hedged item, or when the forecast transaction is no longer deemed highly probable. Refer to Note 8 for the fair value of derivatives and non-derivative instruments categorized by their hedging relationships, as well as derivatives that are not designated in hedging relationships.

Fair value hedges

In a fair value hedging relationship, the carrying value of the hedged item is adjusted for changes in fair value attributable to the hedged risk and recognized in Non-interest income. Changes in fair value of the hedged item, to the extent that the hedging relationship is effective, are offset by changes in the fair value of the hedging derivative, which are also recognized in Non-interest income. When hedge accounting is discontinued, the carrying value of the hedged item is no longer adjusted and the cumulative fair value adjustments to the carrying value of the hedged items are amortized to Net income over the remaining life of the hedged items.

We predominantly use interest rate swaps to hedge our exposure to changes in a fixed interest rate instrument's fair value caused by changes in interest rates.

Cash flow hedges

In a cash flow hedging relationship, the effective portion of the change in the fair value of the hedging derivative, net of taxes, is recognized in OCI while the ineffective portion is recognized in Non-interest income. When hedge accounting is discontinued, the cumulative amounts previously recognized in Other components of equity are reclassified to Net interest income during the periods when the variability in the cash flows of the hedged item affects Net interest income. Unrealized gains and losses on derivatives are reclassified immediately to Net income when the hedged item is sold or terminated early, or when the forecast transaction is no longer expected to occur.

We predominantly use interest rate swaps to hedge the variability in cash flows related to a variable-rate asset or liability.

Net investment hedges

In hedging a foreign currency exposure of a net investment in a foreign operation, the effective portion of foreign exchange gains and losses on the hedging instruments, net of applicable taxes, is recognized in OCI and the ineffective portion is recognized in Non-interest income. The amounts, or a portion thereof, previously recognized in Other components of equity are recognized in Net income on the disposal, or partial disposal, of the foreign operation.

We use foreign exchange contracts and foreign currency-denominated liabilities to manage our foreign currency exposures to net investments in foreign operations having a functional currency other than the Canadian dollar.

Loans

Loans are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and which are not classified as AFS. Loans are initially recognized at fair value. When loans are issued at a market rate, fair value is represented by the cash advanced to the borrowers. Loans are subsequently measured at amortized cost using the effective interest method less impairment, unless we intend to sell them in the near future upon origination or they have been designated as at FVTPL, in which case they are carried at fair value.

We assess at each balance sheet date whether there is objective evidence that the loans (including debt securities reclassified as loans) are impaired. Evidence of impairment may include indications that the borrower is experiencing significant financial difficulty, probability of bankruptcy or other financial reorganization, as well as a measurable decrease in the estimated future cash flows evidenced by the adverse changes in the payments status of the borrower or economic conditions that correlate with defaults. Whenever a payment is 90 days past due, loans other than credit card balances and loans guaranteed or insured by a Canadian government (Federal or Provincial) or a Canadian government agency (collectively, Canadian government) are classified as impaired unless they are fully secured and collection efforts are reasonably expected to result in repayment of debt within 180 days of the loans becoming past due. Loans guaranteed by a Canadian government are classified as impaired when the loan is contractually 365 days in arrears. Credit card balances are written off when a payment is 180 days in arrears.

Assets acquired to satisfy loan commitments are recorded at their fair value less costs to sell. Fair value is determined based on either current market value where available or discounted cash flows. Any excess of the carrying value of the loan over the fair value of the assets acquired is recognized by a charge to Provision for credit losses.

Interest on loans is recognized in Interest income – Loans using the effective interest method. The estimated future cash flows used in this calculation include those determined by the contractual term of the asset, all fees that are considered to be integral to the effective interest rate, transaction costs and all other premiums or discounts. Fees that relate to activities such as originating, restructuring or renegotiating loans are deferred and recognized as Interest income over the expected term of such loans using the effective interest method. Where there is a reasonable expectation that a loan will be originated, commitment and standby fees are also recognized as interest income over the expected term of the resulting loans using the effective interest method. Otherwise, such fees are recorded as other liabilities and amortized into Non-interest income over the commitment or standby period. Prepayment fees on mortgage loans are not included as part of the effective interest rate at origination as the amounts are not reliably measurable. If prepayment fees are received on a renewal of a mortgage loan, the fee is included as part of the effective interest rate, and if not renewed, the prepayment fee is recognized in interest income at the prepayment date.

Allowance for credit losses

An allowance for credit losses is established if there is objective evidence that we will be unable to collect all amounts due on our loans portfolio according to the original contractual terms or the equivalent value. This portfolio includes on-balance sheet exposures, such as loans and acceptances, and off-balance sheet items such as letters of credit, guarantees and unfunded commitments.

The allowance for credit losses is increased by the impairment losses recognized and decreased by the amount of write-offs, net of recoveries. The allowance for credit losses for on-balance sheet items is included as a reduction to assets, and the allowance for credit losses relating to off-balance sheet items is included in Provisions under Other Liabilities.

We assess whether objective evidence of impairment exists individually for loans that are individually significant and collectively for loans that are not individually significant. If we determine that no objective evidence of impairment exists for an individually assessed loan, whether significant or not, the loan is included in a group of loans with similar credit risk characteristics and collectively assessed for impairment. Loans that are individually assessed for impairment and for which an impairment loss is recognized are not included in a collective assessment of impairment.

Allowance for credit losses represent management's best estimates of losses incurred in our loan portfolio at the balance sheet date. Management's judgment is required in making assumptions and estimations when calculating allowances on both individually and collectively assessed loans. The underlying assumptions and estimates used for both individually and collectively assessed loans can change from period to period and may significantly affect our results of operations.

Individually assessed loans

Loans which are individually significant are assessed individually for objective indicators of impairment. A loan is considered impaired when management determines that it will not be able to collect all amounts due according to the original contractual terms or the equivalent value.

Credit exposures of individually significant loans are evaluated based on factors including the borrower's overall financial condition, resources and payment record, and where applicable, the realizable value of any collateral. If there is evidence of impairment leading to an impairment loss, then the amount of the loss is determined as the difference between the carrying amount of the loan, including accrued interest, and the estimated recoverable amount. The estimated recoverable amount is measured as the present value of expected future cash flows discounted at the loan's original effective interest rate, including cash flows that may result from the realization of collateral less costs to sell. Individually-assessed impairment losses reduce the carrying amount of the loan through the use of an allowance account and the amount of the loss is recognized in Provision for credit losses in our Consolidated Statements of Income. Following impairment, interest income is recognized on the unwinding of the discount from the initial recognition of impairment.

Significant judgment is required in assessing evidence of impairment and estimation of the amount and timing of future cash flows when determining the impairment loss. When assessing objective evidence of impairment we primarily consider specific factors such as the financial condition of the borrower, borrower's default or delinquency in interest or principal payments, local economic conditions and other observable data. In determining the estimated recoverable amount we consider discounted expected future cash flows at the effective interest rate using a number of assumptions and inputs. Management judgment is involved when choosing these inputs and assumptions used such as the expected amount of the loan that will not be recovered and the cost of time delays in collecting principal and/or interest, and when estimating the value of any collateral held for which there may not be a readily accessible market. Changes in the amount expected to be recovered would have a direct impact on the Provision for credit losses and may result in a change in the Allowance for credit losses.

Collectively assessed loans

Loans which are not individually significant, or which are individually assessed and not determined to be impaired, are collectively assessed for impairment. For the purposes of a collective evaluation of impairment, loans are grouped on the basis of similar risk characteristics, taking into account loan type, industry, geographic location, collateral type, past due status and other relevant factors.

The collective impairment allowance is determined by reviewing factors including: (i) historical loss experience, which takes into consideration historical probabilities of default, loss given default and exposure at default, in portfolios of similar credit risk characteristics, and (ii) management's judgment on the level of impairment losses based on historical experience relative to the actual level as reported at the balance sheet date, taking into consideration the current portfolio credit quality trends, business and economic and credit conditions, the impact of policy and process changes, and other supporting factors. Future cash flows for a group of loans are collectively evaluated for impairment on the basis of the contractual cash flows of the loans in the group and historical loss experience for loans with credit risk characteristics similar to those in the group. Historical loss experience is adjusted based on current observable data to reflect the effects of current conditions that did not affect the period on which the historical loss experience is based and to remove the effects of conditions in the historical period that do not

currently exist. The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience. Collectively-assessed impairment losses reduce the carrying amount of the aggregated loan position through an allowance account and the amount of the loss is recognized in Provision for credit losses. Following impairment, interest income is recognized on the unwinding of the discount from the initial recognition of impairment.

The methodology and assumptions used to calculate collective impairment allowances are subject to uncertainty, in part because it is not practicable to identify losses on an individual loan basis due to the large number of individually insignificant loans in the portfolio. Significant judgment is required in assessing historical loss experience, the loss identification period and its relationship to current portfolios including delinquency, and loan balances; and current business, economic and credit conditions including industry specific performance, unemployment and country risks. Changes in these assumptions would have a direct impact on the Provision for credit losses and may result in changes in the related Allowance for credit losses.

Write-off of loans

Loans and the related impairment allowance for credit losses are written off, either partially or in full, when there is no realistic prospect of recovery. Where loans are secured, they are generally written off after receipt of any proceeds from the realization of the collateral. In circumstances where the net realizable value of any collateral has been determined and there is no reasonable expectation of further recovery, write off may be earlier. For credit cards, the balances and related allowance for credit losses are written off when payment is 180 days in arrears. Personal loans are generally written off at 150 days past due.

Derecognition of financial assets

Our various securitization activities generally consist of the transfer of financial assets such as loans or packaged mortgage-backed securities (MBS) to independent structured entities or trusts that issue securities to investors.

Financial assets are derecognized from our Consolidated Balance Sheets when our contractual rights to the cash flows from the assets have expired, when we retain the rights to receive the cash flows of the assets but assume an obligation to pay those cash flows to a third party subject to certain pass-through requirements or when we transfer our contractual rights to receive the cash flows and substantially all of the risk and rewards of the assets have been transferred. When we retain substantially all of the risks and rewards of the transferred assets, the transferred assets are not derecognized from our Consolidated Balance Sheets and are accounted for as secured financing transactions. When we neither retain nor transfer substantially all risks and rewards of ownership of the assets, we derecognize the assets if control over the assets is relinquished. If we retain control over the transferred assets, we continue to recognize the transferred assets to the extent of our continuing involvement.

Management's judgment is applied in determining whether the contractual rights to the cash flows from the transferred assets have expired or whether we retain the rights to receive cash flows on the assets but assume an obligation to pay for those cash flows. We derecognize transferred financial assets if we transfer substantially all the risk and rewards of the ownership in the assets. When assessing whether we have transferred substantially all of the risk and rewards of the transferred assets, management considers the Bank's exposure before and after the transfer with the variability in the amount and timing of the net cash flows of the transferred assets. In transfers in which we retain the servicing rights, management has applied judgment in assessing the benefits of servicing against market expectations. When the benefits of servicing are greater than fair value, a servicing asset is recognized in Other assets in our Consolidated Balance Sheets. When the benefits of servicing are less than fair value, a servicing liability is recognized in Other liabilities in our Consolidated Balance Sheets.

Derecognition of financial liabilities

We derecognize a financial liability from our Consolidated Balance Sheets when our obligation specified in the contract expires, or is discharged or cancelled. We recognize the difference between the carrying amount of a financial liability transferred and the consideration paid in our Consolidated Statements of Income.

Guarantees

Financial guarantee contracts are contracts that contingently require us to make specified payments (in cash, other assets, our own shares or provision of services) to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. Liabilities are recognized on our Consolidated Balance Sheets at the inception of a guarantee for the fair value of the obligation undertaken in issuing the guarantee. Financial guarantees are subsequently remeasured at the higher of (i) the amount initially recognized and (ii) our best estimate of the present value of the expenditure required to settle the present obligation at the end of the reporting period.

If the financial guarantee contract meets the definition of a derivative, it is measured at fair value at each balance sheet date and reported under Derivatives on our Consolidated Balance Sheets.

Insurance and segregated funds

Premiums from long-duration contracts, primarily life insurance, are recognized when due in Non-interest income – Insurance premiums, investment and fee income. Premiums from short-duration contracts, primarily property and casualty, and fees for administrative services are recognized in Insurance premiums, investment and fee income over the related contract period. Unearned premiums of the short-duration contracts, representing the unexpired portion of premiums, are reported in Other liabilities. Investments made by our insurance operations are classified as AFS or loans and receivables, except for investments supporting the policy benefit liabilities on life and health insurance contracts and a portion of property and casualty contracts. These are designated as at FVTPL with changes in fair value reported in Insurance premiums, investment and fee income.

Insurance claims and policy benefit liabilities represent current claims and estimates for future insurance policy benefits. Liabilities for life insurance contracts are determined using the Canadian Asset Liability Method (CALM), which incorporates assumptions for mortality, morbidity, policy lapses and surrenders, investment yields, policy dividends, operating and policy maintenance expenses, and provisions for adverse deviation. These assumptions are reviewed at least annually and updated in response to actual experience and market conditions. Liabilities for property and casualty insurance represent estimated provisions for reported and unreported claims. Liabilities for life and property and casualty insurance are included in Insurance claims and policy benefit liabilities. Changes in Insurance claims and policy benefit liabilities are included in the Insurance policyholder benefits, claims and acquisition expense in our Consolidated Statements of Income in the period in which the estimates change.

Premiums ceded for reinsurance and reinsurance recoveries on policyholder benefits and claims incurred are reported in income and expense as appropriate. Reinsurance recoverables, which relate to paid benefits and unpaid claims, are included in Other assets.

Acquisition costs for new insurance business consist of commissions, premium taxes, certain underwriting costs and other costs that vary with the acquisition of new business. Deferred acquisition costs for life insurance products are implicitly recognized in Insurance claims and policy benefit liabilities by CALM. For property and casualty insurance, these costs are classified as Other assets and amortized over the policy term.

Segregated funds are lines of business in which we issue an insurance contract where the benefit amount is directly linked to the market value of the investments held in the underlying fund. The contractual arrangement is such that the underlying segregated fund assets are registered in our name but the segregated fund policyholders bear the risks and rewards of the funds' investment performance. Liabilities for these contracts are calculated based on contractual obligations using actuarial assumptions and are at least equivalent to the surrender or transfer value calculated by reference to the value of the relevant underlying funds or indices. Segregated funds' assets and liabilities are separately presented on our Consolidated Balance Sheets. As the segregated fund policyholders bear the risks and rewards of the funds' performance, investment income earned by the segregated funds and expenses incurred by the segregated funds are offset and are not separately presented in our Consolidated Statements of Income. Fee income we earn from segregated funds includes management fees, mortality, policy administration and surrender charges, and these fees are recorded in Non-interest income – Insurance premiums, investment and fee income. We provide minimum death benefit and maturity value guarantees on segregated funds. The liability associated with these minimum guarantees is recorded in Insurance claims and policy benefit liabilities.

Liability adequacy tests are performed for all insurance contract portfolios at each balance sheet date to ensure the adequacy of insurance contract liabilities. Current best estimates of future contractual cash flows, claims handling and administration costs, and investment returns from the assets backing the liabilities are taken into account in the tests. When the test results indicate that there is a deficiency in liabilities, the deficiency is charged immediately to our Consolidated Statements of Income by writing down the deferred acquisition costs in Other assets and/or increasing Insurance claims and policy benefit liabilities.

Employee benefits – Pensions and other post-employment benefits

Our defined benefit pension expense, which is included in Non-interest expense – Human resources, consists of the cost of employee pension benefits for the current year's service, net interest on the net defined benefit liability (asset), past service cost and gains or losses on settlement. Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses and return on plan assets (excluding amounts included in net interest on the net defined benefit liability), are recognized immediately in OCI in the period in which they occur. Actuarial gains and losses comprise experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred), as well as the effects of changes in actuarial assumptions. Amounts recognized in OCI will not be reclassified subsequently to net income. Past service cost is the change in the present value of the defined benefit obligation resulting from a plan amendment or curtailment and is charged immediately to income.

For each defined benefit plan, we recognize the present value of our defined benefit obligations less the fair value of the plan assets as a defined benefit liability reported in Employee benefit liabilities on our Consolidated Balance Sheets. For plans where there is a net defined benefit asset, the amount is reported as an asset in Employee benefit assets on our Consolidated Balance sheets.

The calculation of defined benefit expenses and obligations requires significant judgment as the recognition is dependent on discount rates and various actuarial assumptions such as healthcare cost trend rates, projected salary increases, retirement age, and mortality and termination rates. Due to the long-term nature of these plans, such estimates and assumptions are subject to inherent risks and uncertainties. For our pension and other post-employment plans, the discount rate is determined by reference to market yields on high quality corporate bonds. Since the discount rate is based on currently available yields, and involves management's assessment of market liquidity, it is only a proxy for future yields. Actuarial assumptions, set in accordance with current practices in the respective countries of our plans, may differ from actual experience as country specific statistics are only estimates of future employee behaviour. These assumptions are determined by management and are reviewed by actuaries at least annually. Changes to any of the above assumptions may affect the amounts of benefits obligations, expenses and remeasurements that we recognize.

Our contributions to defined contribution plans are expensed when employees have rendered services in exchange for such contributions. Defined contribution plan expense is included in Non-interest expense – Human resources.

Share-based compensation

We offer share-based compensation plans to certain key employees and to our non-employee directors.

To account for stock options granted to employees, compensation expense is recognized over the applicable vesting period with a corresponding increase in equity. Fair value is determined by using option valuation models, which take into account the exercise price of the option, the current share price, the risk free interest rate, the expected volatility of the share price over the life of the option and other relevant factors. When the options are exercised, the exercise price proceeds together with the amount initially recorded in equity are credited to common shares. Our other compensation plans include performance deferred share plans and deferred share unit plans for key employees (the Plans). The obligations for the Plans are accrued over their vesting periods. The Plans are settled in cash.

For cash-settled awards, our accrued obligations are adjusted to their fair value at each balance sheet date. For share-settled awards, our accrued obligations are based on the fair value of our common shares at the date of grant. Changes in our obligations, net of related hedges, are recorded as Non-interest expense – Human resources in our Consolidated Statements of Income with a corresponding increase in Other liabilities for cash-settled awards and in Retained earnings for share-settled awards.

The compensation cost attributable to options and awards granted to employees who are eligible to retire or will become eligible to retire during the vesting period, is recognized immediately if the employee is eligible to retire on the grant date or over the period between the grant date and the date the employee becomes eligible to retire.

Our contributions to the employee savings and share ownership plans are expensed as incurred.

Income taxes

Income tax comprises current tax and deferred tax and is recognized in our Consolidated Statements of Income except to the extent that it relates to items recognized directly in equity, in which case it is recognized in equity.

Current income tax payable on profits is recognized as an expense based on the applicable tax laws in each jurisdiction in the period in which profits arise, calculated using tax rates enacted or substantively enacted by the balance sheet date. Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities for accounting and tax purposes. A deferred income tax asset or liability is determined for each temporary difference, except for earnings related to our subsidiaries, branches, associates and interests in joint ventures where the temporary differences will not reverse in the foreseeable future and we have the ability to control the timing of reversal. Deferred tax assets and liabilities are determined based on the tax rates that are expected to be in effect in the period that the asset is realized

or the liability is settled, based on tax rates and tax laws that have been enacted or substantively enacted at the balance sheet date. Current tax assets and liabilities are offset when they are levied by the same taxation authority on either the same taxable entity or different taxable entities within the same tax reporting group (which intends to settle on a net basis), and when there is a legal right to offset. Deferred tax assets and liabilities are offset when the same conditions are satisfied. Our Consolidated Statements of Income include items that are non-taxable or non-deductible for income tax purposes and, accordingly, this causes the income tax provision to be different from what it would be if based on statutory rates.

Deferred income taxes accumulated as a result of temporary differences and tax loss carryforwards are included in Other assets and Other liabilities. On a quarterly basis, we review our deferred income tax assets to determine whether it is probable that the benefits associated with these assets will be realized; this review involves evaluating both positive and negative evidence.

We are subject to income tax laws in various jurisdictions where we operate, and the complex tax laws are potentially subject to different interpretations by us and the relevant taxation authorities. Significant judgment is required in the interpretation of the relevant tax laws, and the determination of our tax provision which includes our best estimate of tax positions that are under audit or appeal by relevant taxation authorities. We perform a review on a quarterly basis to incorporate our best assessment based on information available, but additional liability and income tax expense could result based on decisions made by the relevant tax authorities.

The determination of our deferred tax asset or liability also requires significant management judgment as the recognition is dependent on our projection of future taxable profits and tax rates that are expected to be in effect in the period the asset is realized or the liability is settled. Any changes in our projection will result in changes in deferred tax assets or liabilities on our Consolidated Balance Sheets, and also deferred tax expense in our Consolidated Statements of Income.

Business combinations, goodwill and other intangibles

All business combinations are accounted for using the acquisition method. Non-controlling interests, if any, are recognized at their proportionate share of the fair value of identifiable assets and liabilities, unless otherwise indicated. Identifiable intangible assets are recognized separately from goodwill and included in Other intangibles. Goodwill represents the excess of the price paid for the business acquired over the fair value of the net identifiable assets acquired on the date of acquisition.

Goodwill

Goodwill is allocated to cash-generating units or groups of cash-generating units (CGU) for the purpose of impairment testing, which is undertaken at the lowest level at which goodwill is monitored for internal management purposes. Impairment testing is performed annually as at August 1, or more frequently if there are objective indicators of impairment, by comparing the recoverable amount of a CGU with its carrying amount. The recoverable amount of a CGU is the higher of its value in use and its fair value less costs of disposal. Value in use is the present value of the expected future cash flows from a CGU. Fair value less costs of disposal is the amount obtainable from the sale of a CGU in an orderly transaction between market participants, less disposal costs. The fair value of a CGU is estimated using valuation techniques such as a discounted cash flow method, adjusted to reflect the considerations of a prospective third-party buyer. External evidence such as binding sale agreements or recent transactions for similar businesses within the same industry is considered to the extent that it is available.

Significant judgment is involved in estimating the model inputs used to determine the recoverable amount of our CGU, in particular future cash flows, discount rates and terminal growth rates, due to the uncertainty in the timing and amount of cash flows and the forward-looking nature of these inputs. Future cash flows are based on financial plans agreed by management which are estimated based on forecast results, business initiatives, planned capital investments and returns to shareholders. Discount rates are based on the bank-wide cost of capital, adjusted for CGU-specific risks and currency exposure as reflected by differences in expected inflation. Bank-wide cost of capital is based on the Capital Asset Pricing Model. CGU-specific risks include country risk, business/operational risk, geographic risk (including political risk, devaluation risk, and government regulation), currency risk, and price risk (including product pricing risk and inflation). Terminal growth rates reflect the expected long-term gross domestic product growth and inflation for the countries within which the CGU operates. Changes in these assumptions may impact the amount of impairment loss recognized in Non-interest expense.

The carrying amount of a CGU includes the carrying amount of assets, liabilities and goodwill allocated to the CGU. If the recoverable amount is less than the carrying value, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the CGU and then to the other non-financial assets of the CGU proportionately based on the carrying amount of each asset. Any impairment loss is charged to income in the period in which the impairment is identified. Goodwill is stated at cost less accumulated impairment losses. Subsequent reversals of goodwill impairment are prohibited.

Upon disposal of a portion of a CGU, the carrying amount of goodwill relating to the portion of the CGU sold is included in the determination of gains or losses on disposal. The carrying amount is determined based on the relative fair value of the disposed portion to the total CGU.

Other intangibles

Intangible assets represent identifiable non-monetary assets and are acquired either separately or through a business combination, or generated internally. Intangible assets acquired through a business combination are recognized separately from goodwill when they are separable or arise from contractual or other legal rights, and their fair value can be measured reliably. The cost of a separately acquired intangible asset includes its purchase price and directly attributable costs of preparing the asset for its intended use. In respect of internally generated intangible assets, cost includes all directly attributable costs necessary to create, produce, and prepare the asset to be capable of operating in the manner intended by management. Research and development costs that are not eligible for capitalization are expensed. After initial recognition, an intangible asset is carried at its cost less any accumulated amortization and accumulated impairment losses, if any. Intangible assets with a finite-life are amortized on a straight-line basis over their estimated useful lives as follows: computer software – 3 to 10 years; and customer relationships – 10 to 20 years. We do not have any intangible assets with indefinite lives.

Intangible assets are assessed for indicators of impairment at each reporting period. If there is an indication that an intangible asset may be impaired, an impairment test is performed by comparing the carrying amount of the intangible asset to its recoverable amount. Where it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the CGU to which the asset belongs. If the recoverable amount of the asset (or CGU) is less than its carrying amount, the carrying amount of the intangible asset is written down to its recoverable amount as an impairment loss.

An impairment loss recognized previously is reversed if there is a change in the estimates used to determine the recoverable amount of the asset (or CGU) since the last impairment loss was recognized. If an impairment loss is subsequently reversed, the carrying amount of the asset (or CGU) is revised to the lower of its recoverable amount and the carrying amount that would have been determined (net of amortization) had there been no prior impairment.

Due to the subjective nature of these estimates, significant judgment is required in determining the useful lives and recoverable amounts of our intangible assets, and assessing whether certain events or circumstances constitute objective evidence of impairment. Estimates of the recoverable amounts of our intangible assets rely on certain key inputs, including future cash flows and discount rates. Future cash flows are based on sales projections and allocated costs which are estimated based on forecast results and business initiatives. Discount rates are based on the bank-wide cost of capital, adjusted for asset-specific risks. Changes in these assumptions may impact the amount of impairment loss recognized in Non-interest expense.

Other

Translation of foreign currencies

Monetary assets and liabilities denominated in foreign currencies, are translated into Canadian dollars at rates prevailing at the balance sheet date. Foreign exchange gains and losses resulting from the translation and settlement of these items are recognized in Non-interest income in the Consolidated Statements of Income.

Non-monetary assets and liabilities that are measured at historical cost are translated into Canadian dollars at historical rates. Non-monetary financial assets classified as AFS securities, such as equity instruments, that are measured at fair value are translated into Canadian dollars at rates prevailing at the balance sheet date, and the resulting foreign exchange gains and losses are recorded in Other components of equity until the asset is sold or becomes impaired.

Assets and liabilities of our foreign operations with functional currencies other than Canadian dollars are translated into Canadian dollars at rates prevailing at the balance sheet date, and income and expenses of these foreign operations are translated at average rates of exchange for the reporting period.

Unrealized gains or losses arising as a result of the translation of our foreign operations along with the effective portion of related hedges are reported in Other components of equity on an after-tax basis. Upon disposal or partial disposal of a foreign operation, an appropriate portion of the accumulated net translation gains or losses is included in Non-interest income.

Premises and equipment

Premises and equipment includes land, buildings, leasehold improvements, computer equipment, furniture, fixtures and other equipment, and are stated at cost less accumulated depreciation, except for land which is not depreciated, and accumulated impairment losses. Cost comprises the purchase price, any costs directly attributable to bringing the asset to the location and condition necessary for its intended use, and the initial estimate of any disposal costs. Depreciation is recorded principally on a straight–line basis over the estimated useful lives of the assets, which are 25 to 50 years for buildings, 3 to 10 years for computer equipment, and 7 to 10 years for furniture, fixtures and other equipment. The amortization period for leasehold improvements is the lesser of the useful life of the leasehold improvements or the lease term plus the first renewal period, if reasonably assured of renewal, up to a maximum of 10 years. Depreciation methods, useful lives, and residual values are reassessed at each reporting period and adjusted as appropriate. Gains and losses on disposal are recorded in Non-interest income.

Premises and equipment are assessed for indicators of impairment at each reporting period. If there is an indication that an asset may be impaired, an impairment test is performed by comparing the asset's carrying amount to its recoverable amount. Where it is not possible to estimate the recoverable amount of an individual asset, we estimate the recoverable amount of the CGU to which the asset belongs and test for impairment at the CGU level. An impairment charge is recorded to the extent the recoverable amount of an asset (or CGU), which is the higher of value in use and fair value less costs of disposal, is less than its carrying amount. Value in use is the present value of the future cash flows expected to be derived from the asset (or CGU). Fair value less costs of disposal is the amount obtainable from the sale of the asset (or CGU) in an orderly transaction between market participants, less costs of disposal.

After the recognition of impairment, the depreciation charge is adjusted in future periods to reflect the asset's revised carrying amount. If an impairment is later reversed, the carrying amount of the asset is revised to the lower of the asset's recoverable amount and the carrying amount that would have been determined (net of depreciation) had there been no prior impairment loss. The depreciation charge in future periods is adjusted to reflect the revised carrying amount.

Provisions

Provisions are liabilities of uncertain timing or amount and are recognized when we have a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. Provisions are measured as the best estimate of the consideration required to settle the present obligation at the reporting date. Significant judgment is required in determining whether a present obligation exists and in estimating the probability, timing and amount of any outflows. We record provisions related to litigation, asset retirement obligations, and the allowance for off-balance sheet and other items. Provisions are recorded under Other liabilities on our Consolidated Balance Sheets.

We are required to estimate the results of ongoing legal proceedings, expenses to be incurred to dispose of capital assets, and credit losses on undrawn commitments and guarantees. The forward-looking nature of these estimates requires us to use a significant amount of judgment in projecting the timing and amount of future cash flows. We record our provisions on the basis of all available information at the end of the reporting period and make adjustments on a quarterly basis to reflect current expectations. Should actual results differ from our expectations, we may incur expenses in excess of the provisions recognized.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, such as an insurer, a separate asset is recognized if it is virtually certain that reimbursement will be received.

Commissions and fees

Portfolio management and other management advisory and service fees are recognized based on the applicable service contracts. Fees related to provision of services including asset management, wealth management, financial planning and custody services that cover a specified service period, are recognized over the period in which the service is provided. Investment management and custodial fees are generally calculated as a percentage of daily or period-end net asset values, and are received monthly, quarterly, semi-annually or annually, depending on the terms of the contracts. Management fees are generally derived from assets under management (AUM) when our clients solicit the investment capabilities of an investment manager and administrative fees are derived from assets under administration (AUA) where the investment strategy is directed by the client or a designated third party manager. Performance-based fees, which are earned upon exceeding certain benchmarks or performance targets, are recognized only when the benchmark or performance targets are achieved. Fees such as underwriting fees and brokerage fees that are related to the provision of specific transaction type services are recognized when the service has been completed.

Dividend income
Dividend income is recognized when the right to receive payment is established. This is the ex-dividend date for listed equity securities, and usually the date when shareholders have approved the dividend for unlisted equity securities.

Leasing
A lease is an agreement whereby the lessor conveys to the lessee the right to use an asset for an agreed upon period of time in return for a payment or series of payments. A finance lease is a lease that transfers substantially all the risks and rewards incidental to ownership of the leased asset to the lessee, where title may or may not eventually be transferred. An operating lease is a lease other than a finance lease.

Operating leases
When we are the lessee in an operating lease, we record rental payments on a straight-line basis over the lease term in Non-interest expense.

Finance leases
When we are the lessee in a finance lease, we initially record both the leased asset and the related lease obligation in Premises and equipment, Other intangibles and Other liabilities on our Consolidated Balance Sheets at an amount equal to the fair value of the leased asset or, if lower, the present value of the minimum lease payments, each determined at the date of inception of the lease. Initial direct costs directly attributed to the lease are recognized as an asset under the finance lease.

Earnings per share
Earnings per share is computed by dividing Net income available to common shareholders by the weighted average number of common shares outstanding for the period. Net income available to common shareholders is determined after deducting dividend entitlements of preferred shareholders, any gains (losses) on redemption of preferred shares net of related income taxes and the net income attributable to non-controlling interests.

Diluted earnings per share reflects the potential dilution that could occur if additional common shares are assumed to be issued under securities or contracts that entitle their holders to obtain common shares in the future, to the extent such entitlement is not subject to unresolved contingencies. For contracts that may be settled in cash or in common shares at our option, diluted earnings per share is calculated based on the assumption that such contracts will be settled in shares. Income and expenses associated with these types of contracts are excluded from the Net income available to common shareholders, and the additional number of shares that would be issued is included in the diluted earnings per share calculation. These contracts include our convertible Preferred Shares and Trust Capital Securities with the conversion assumed to have taken place at the beginning of the period or on the date of issue, if later. For stock options whose exercise price is less than the average market price of our common shares, they are assumed to be exercised and the proceeds are used to repurchase common shares at the average market price for the period. The incremental number of common shares issued under stock options and repurchased from proceeds is included in the calculation of diluted earnings per share.

Share capital
We classify a financial instrument that we issue as a financial asset, financial liability or an equity instrument in accordance with the substance of the contractual arrangement.

Our common shares held by us are classified as treasury shares in equity and accounted for at weighted average cost. Upon the sale of treasury shares, the difference between the sale proceeds and the cost of the shares is recognized in Retained earnings. Financial instruments issued by us are classified as equity instruments when there is no contractual obligation to transfer cash or other financial assets. Incremental costs directly attributable to the issue of equity instruments are included in equity as a deduction from the proceeds, net of tax. Financial instruments that will be settled by a variable number of our common shares upon their conversion by the holders as well as the related accrued distributions are classified as liabilities on our Consolidated Balance Sheets. Dividends and yield distributions on these instruments are classified as Interest expense in our Consolidated Statements of Income.

Future changes in accounting policy and disclosure
The following standards have been issued, but are not yet effective for us. We are currently assessing the impact of adopting these standards on our Consolidated Financial Statements:

IFRS 15 *Revenue from Contracts with Customers* (IFRS 15)
In May 2014, the IASB issued IFRS 15 which establishes principles for reporting about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. The standard provides a single, principles based five-step model for revenue recognition to be applied to contracts with customers except for revenue arising from items such as financial instruments, insurance contracts and leases. In September 2015, the IASB amended IFRS 15 by deferring its effective date by one year. IFRS 15 will be effective for us on November 1, 2018.

IFRS 9 *Financial Instruments* (IFRS 9)
In July 2014, the IASB issued the complete version of IFRS 9, first issued in November 2009, which brings together the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39 *Financial Instruments: Recognition and Measurement* (IAS 39).

IFRS 9 introduces a principles-based approach to the classification of financial assets based on an entity's business model and the nature of the cash flows of the asset. All financial assets, including hybrid contracts, are measured as at FVTPL, fair value through OCI or amortized cost. For financial liabilities, IFRS 9 includes the requirements for classification and measurement previously included in IAS 39.

IFRS 9 also introduces an expected loss impairment model for all financial assets not as at FVTPL. The model has three stages: (1) on initial recognition, 12-month expected credit losses are recognized in profit or loss and a loss allowance is established; (2) if credit risk increases significantly and the resulting credit risk is not considered to be low, full lifetime expected credit losses are recognized; and (3) when a financial asset is considered impaired, interest revenue is calculated based on the carrying amount of the asset, net of the loss allowance, rather than its gross carrying amount.

Finally, IFRS 9 introduces a new hedge accounting model that aligns the accounting for hedge relationships more closely with an entity's risk management activities, permits hedge accounting to be applied more broadly to a greater variety of hedging instruments and risks and requires additional disclosures.

We adopted the own credit provisions of IFRS 9 in the second quarter of 2014. The remaining sections of IFRS 9 will be effective for us on November 1, 2017.

Note 3 Fair value of financial instruments

Carrying value and fair value of selected financial instruments

The following tables provide a comparison of the carrying and fair values for each classification of financial instruments.

	As at October 31, 2015						
	Carrying value and fair value			Carrying value	Fair value		
(Millions of Canadian dollars)	Financial instruments classified as at FVTPL	Financial instruments designated as at FVTPL	Available-for-sale instruments measured at fair value	Financial instruments measured at amortized cost	Financial instruments measured at amortized cost	Total carrying amount	Total fair value
Financial assets							
Securities							
Trading	$ 148,939	$ 9,764	$ –	$ –	$ –	$ 158,703	$ 158,703
Available-for-sale (1)	–	–	48,164	8,641	8,759	56,805	56,923
	148,939	9,764	48,164	8,641	8,759	215,508	215,626
Assets purchased under reverse repurchase agreements and securities borrowed	–	114,692	–	60,031	60,071	174,723	174,763
Loans							
Retail	166	–	–	346,795	348,513	346,961	348,679
Wholesale	1,280	1,327	–	122,655	121,316	125,262	123,923
	1,446	1,327	–	469,450	469,829	472,223	472,602
Other							
Derivatives	105,626	–	–	–	–	105,626	105,626
Other assets (2)	–	925	–	44,852	44,852	45,777	45,777
Financial liabilities							
Deposits							
Personal	$ 69	$ 16,828		$ 203,669	$ 204,019	$ 220,566	$ 220,916
Business and government (3)	–	93,319		362,259	363,305	455,578	456,624
Bank (4)	–	5,376		15,707	15,713	21,083	21,089
	69	115,523		581,635	583,037	697,227	698,629
Other							
Obligations related to securities sold short	47,658	–		–	–	47,658	47,658
Obligations related to assets sold under repurchase agreements and securities loaned	–	73,362		9,926	9,928	83,288	83,290
Derivatives	107,860	–		–	–	107,860	107,860
Other liabilities (5)	192	13		43,251	43,196	43,456	43,401
Subordinated debentures	–	112		7,250	7,078	7,362	7,190

	As at October 31, 2014						
	Carrying value and fair value			Carrying value	Fair value		
(Millions of Canadian dollars)	Financial instruments classified as at FVTPL	Financial instruments designated as at FVTPL	Available-for-sale instruments measured at fair value	Financial instruments measured at amortized cost	Financial instruments measured at amortized cost	Total carrying amount	Total fair value
Financial assets							
Securities							
Trading	$ 141,217	$ 10,163	$ –	$ –	$ –	$ 151,380	$ 151,380
Available-for-sale (1)	–	–	46,009	1,759	1,762	47,768	47,771
	141,217	10,163	46,009	1,759	1,762	199,148	199,151
Assets purchased under reverse repurchase agreements and securities borrowed	–	85,292	–	50,288	50,288	135,580	135,580
Loans							
Retail	–	–	–	333,045	334,475	333,045	334,475
Wholesale	1,337	2,278	–	98,569	98,461	102,184	102,076
	1,337	2,278	–	431,614	432,936	435,229	436,551
Other							
Derivatives	87,402	–	–	–	–	87,402	87,402
Other assets (2)	–	930	–	32,975	32,975	33,905	33,905
Financial liabilities							
Deposits							
Personal	$ 112	$ 13,289		$ 195,816	$ 195,964	$ 209,217	$ 209,365
Business and government (3)	–	59,446		327,214	328,328	386,660	387,774
Bank (4)	–	6,592		11,631	11,636	18,223	18,228
	112	79,327		534,661	535,928	614,100	615,367
Other							
Obligations related to securities sold short	50,345	–		–	–	50,345	50,345
Obligations related to assets sold under repurchase agreements and securities loaned	–	58,411		5,920	5,921	64,331	64,332
Derivatives	88,982	–		–	–	88,982	88,982
Other liabilities (5)	20	30		36,816	36,762	36,866	36,812
Subordinated debentures	–	106		7,753	7,712	7,859	7,818

(1) Available-for-sale (AFS) securities include held-to-maturity securities that are recorded at amortized cost.
(2) The total carrying amount is comprised of Customers' liability under acceptances and financial instruments included in Other assets of $13.5 billion and $32.3 billion (October 31, 2014 – $11.5 billion and $22.4 billion), respectively.
(3) Business and government deposits include deposits from regulated deposit-taking institutions other than regulated banks.
(4) Bank deposits refer to deposits from regulated banks.
(5) The total carrying amount is comprised of Acceptances and financial instruments included in Other liabilities of $13.5 billion and $30 billion (October 31, 2014 – $11.5 billion and $25.4 billion), respectively.

Loans and receivables designated as at fair value through profit or loss

The following tables present information on loans and receivables designated as at FVTPL. For our loans and receivables designated as at FVTPL, we measure the change in fair value attributable to changes in credit risk as the difference between the total change in the fair value of the instrument during the period and the change in fair value calculated using the appropriate risk-free yield curves.

	As at October 31, 2015						
(Millions of Canadian dollars)	Carrying amount of loans and receivables designated as at FVTPL	Maximum exposure to credit risk	Extent to which credit derivatives or similar instruments mitigate credit risk	Changes in fair value for the year attributable to changes in credit risk for positions still held	Cumulative change in fair value attributable to changes in credit risk for positions still held (1)	Changes in fair value of credit derivatives or similar instruments for the year	Cumulative change in fair value of credit derivatives or similar instruments (1)
Interest-bearing deposits with banks	$ 15,717	$ 15,717	$ –	$ –	$ –	$ –	$ –
Assets purchased under reverse repurchase agreements and securities borrowed	114,692	114,692	–	–	–	–	–
Loans – Wholesale	1,327	1,327	–	10	–	3	3
Other assets	202	202	–	–	–	–	–
	$ 131,938	$ 131,938	$ –	$ 10	$ –	$ 3	$ 3

	As at October 31, 2014						
(Millions of Canadian dollars)	Carrying amount of loans and receivables designated as at FVTPL	Maximum exposure to credit risk	Extent to which credit derivatives or similar instruments mitigate credit risk	Changes in fair value for the year attributable to changes in credit risk for positions still held	Cumulative change in fair value attributable to changes in credit risk for positions still held (1)	Changes in fair value of credit derivatives or similar instruments for the year	Cumulative change in fair value of credit derivatives or similar instruments (1)
Interest-bearing deposits with banks	$ 5,603	$ 5,603	$ –	$ –	$ –	$ –	$ –
Assets purchased under reverse repurchase agreements and securities borrowed	85,292	85,292	–	–	–	–	–
Loans – Wholesale	2,278	2,278	242	4	5	–	–
Other assets	326	326	–	–	–	–	–
	$ 93,499	$ 93,499	$ 242	$ 4	$ 5	$ –	$ –

(1) The cumulative change is measured from the initial recognition of the credit derivative or similar instruments.

Liabilities designated as at fair value through profit or loss

The following tables present the changes in the fair value of our financial liabilities designated as at FVTPL as well as their contractual maturity and carrying amounts. For our financial liabilities designated as at FVTPL, we measure the change in fair value attributable to changes in credit risk as the difference between the total change in the fair value of the instrument during the period and the change in the fair value attributable to changes in market conditions such as changes in benchmark interest rate or foreign exchange rate.

	As at October 31, 2015					
(Millions of Canadian dollars)	Contractual maturity amount	Carrying value	Difference between carrying value and contractual maturity amount	Changes in fair value for the year attributable to changes in credit risk included in net income for positions still held	Changes in fair value for the year attributable to changes in credit risk included in other comprehensive income for positions still held	Cumulative change in fair value attributable to changes in credit risk for positions still held (1)
Term deposits						
Personal	$ 16,595	$ 16,828	$ 233	$ –	$ (93)	$ (74)
Business and government (2)	93,225	93,319	94	–	(387)	(329)
Bank (3)	5,376	5,376	–	–	–	–
	115,196	115,523	327	–	(480)	(403)
Obligations related to assets sold under repurchase agreements and securities loaned	73,364	73,362	(2)	–	–	–
Other liabilities	13	13	–	–	–	–
Subordinated debentures	108	112	4	–	–	(3)
	$ 188,681	$ 189,010	$ 329	$ –	$ (480)	$ (406)

	As at October 31, 2014					
(Millions of Canadian dollars)	Contractual maturity amount	Carrying value	Difference between carrying value and contractual maturity amount	Changes in fair value for the year attributable to changes in credit risk included in net income for positions still held	Changes in fair value for the year attributable to changes in credit risk included in other comprehensive income for positions still held	Cumulative change in fair value attributable to changes in credit risk for positions still held (1)
Term deposits						
Personal	$ 12,964	$ 13,289	$ 325	$ –	$ 13	$ 19
Business and government (2)	59,139	59,446	307	–	61	58
Bank (3)	6,592	6,592	–	–	–	–
	78,695	79,327	632	–	74	77
Obligations related to assets sold under repurchase agreements and securities loaned	58,413	58,411	(2)	–	–	–
Other liabilities	30	30	–	–	–	–
Subordinated debentures	101	106	5	–	3	(3)
	$ 137,239	$ 137,874	$ 635	$ –	$ 77	$ 74

(1) The cumulative change is measured from the initial recognition of the liabilities designated as at FVTPL. For the year ended October 31, 2015, $3 million of fair value losses previously included in Other comprehensive income (OCI) relate to financial liabilities derecognized during the year (October 31, 2014 – $4 million).

(2) Business and government term deposits include deposits from regulated deposit-taking institutions other than regulated banks.

(3) Bank term deposits refer to deposits from regulated banks.

Fair value of assets and liabilities measured on a recurring basis and classified using the fair value hierarchy

The following tables present the financial instruments that are measured at fair value on a recurring basis and classified by the fair value hierarchy.

	As at											
	October 31, 2015						October 31, 2014					
	Fair value measurements using			Total gross fair value	Netting adjustments	Assets/ liabilities at fair value	Fair value measurements using			Total gross fair value	Netting adjustments	Assets/ liabilities at fair value
(Millions of Canadian dollars)	Level 1	Level 2	Level 3				Level 1	Level 2	Level 3			
Financial assets												
Interest bearing deposits with banks	$ –	$ 15,717	$ –	$ 15,717	$	$ 15,717	$ –	$ 5,603	$ –	$ 5,603	$	$ 5,603
Securities												
Trading												
Canadian government debt (1)												
Federal	10,793	9,364	–	20,157		20,157	8,288	5,855	–	14,143		14,143
Provincial and municipal	–	13,888	5	13,893		13,893	–	11,371	–	11,371		11,371
U.S. state, municipal and agencies debt (1)	1,641	32,798	16	34,455		34,455	1,838	27,628	6	29,472		29,472
Other OECD government debt (2)	3,131	9,215	–	12,346		12,346	7,334	7,991	–	15,325		15,325
Mortgage-backed securities (1)	–	2,907	15	2,922		2,922	–	801	4	805		805
Asset-backed securities												
CDO (3)	–	67	5	72		72	–	37	74	111		111
Non-CDO securities	–	1,636	23	1,659		1,659	–	1,040	364	1,404		1,404
Corporate debt and other debt	16	24,502	191	24,709		24,709	15	27,434	149	27,598		27,598
Equities	45,811	2,556	123	48,490		48,490	47,396	3,589	166	51,151		51,151
	61,392	96,933	378	158,703		158,703	64,871	85,746	763	151,380		151,380
Available-for-sale (4)												
Canadian government debt (1)												
Federal	346	2,198	–	2,544		2,544	429	11,540	–	11,969		11,969
Provincial and municipal	–	1,600	–	1,600		1,600	–	799	–	799		799
U.S. state, municipal and agencies debt (1)	–	12,051	797	12,848		12,848	29	4,839	1,389	6,257		6,257
Other OECD government debt	4,752	7,535	–	12,287		12,287	6,979	7,303	11	14,293		14,293
Mortgage-backed securities (1)	–	318	–	318		318	–	138	–	138		138
Asset-backed securities												
CDO	–	1,510	–	1,510		1,510	–	857	24	881		881
Non-CDO securities	–	881	197	1,078		1,078	–	381	182	563		563
Corporate debt and other debt	–	12,372	1,757	14,129		14,129	–	7,714	1,573	9,287		9,287
Equities	431	323	987	1,741		1,741	140	514	1,028	1,682		1,682
Loan substitute securities	94	–	–	94		94	102	24	–	126		126
	5,623	38,788	3,738	48,149		48,149	7,679	34,109	4,207	45,995		45,995
Assets purchased under reverse repurchase agreements and securities borrowed	–	114,692	–	114,692		114,692	–	85,292	–	85,292		85,292
Loans	–	2,301	472	2,773		2,773	–	3,154	461	3,615		3,615
Other												
Derivatives												
Interest rate contracts	7	142,096	374	142,477		142,477	13	102,176	339	102,528		102,528
Foreign exchange contracts	–	41,021	91	41,112		41,112	–	33,761	48	33,809		33,809
Credit derivatives	–	90	4	94		94	–	244	10	254		254
Other contracts	4,424	5,637	712	10,773		10,773	3,238	4,839	560	8,637		8,637
Valuation adjustments	–	(1,265)	(38)	(1,303)		(1,303)	–	(702)	(56)	(758)		(758)
Total gross derivatives	4,431	187,579	1,143	193,153		193,153	3,251	140,318	901	144,470		144,470
Netting adjustments					(87,527)	(87,527)					(57,068)	(57,068)
Total derivatives						105,626						87,402
Other assets	723	202	–	925		925	604	326	–	930		930
	$72,169	$456,212	$ 5,731	$534,112	$ (87,527)	$ 446,585	$76,405	$354,548	$ 6,332	$437,285	$ (57,068)	$ 380,217
Financial Liabilities												
Deposits												
Personal	$ –	$ 16,508	$ 389	$ 16,897	$	$ 16,897	$ –	$ 12,904	$ 497	$ 13,401	$	$ 13,401
Business and government	–	93,311	8	93,319		93,319	–	59,376	70	59,446		59,446
Bank	–	5,376	–	5,376		5,376	–	6,592	–	6,592		6,592
Other												
Obligations related to securities sold short	31,945	15,713	–	47,658		47,658	32,857	17,484	4	50,345		50,345
Obligations related to assets sold under repurchase agreements and securities loaned	–	73,362	–	73,362		73,362	–	58,411	–	58,411		58,411
Derivatives												
Interest rate contracts	3	135,455	820	136,278		136,278	9	96,752	709	97,470		97,470
Foreign exchange contracts	–	46,675	33	46,708		46,708	–	35,664	39	35,703		35,703
Credit derivatives	–	166	5	171		171	–	327	15	342		342
Other contracts	3,835	8,075	1,025	12,935		12,935	2,886	8,537	1,062	12,485		12,485
Valuation adjustments	–	(281)	9	(272)		(272)	–	(65)	29	(36)		(36)
Total gross derivatives	3,838	190,090	1,892	195,820		195,820	2,895	141,215	1,854	145,964		145,964
Netting adjustments					(87,960)	(87,960)					(56,982)	(56,982)
Total derivatives						107,860						88,982
Other liabilities	145	13	47	205		205	–	30	20	50		50
Subordinated debentures	–	112	–	112		112	–	106	–	106		106
	$35,928	$394,485	$ 2,336	$432,749	$ (87,960)	$ 344,789	$35,752	$296,118	$ 2,445	$334,315	$ (56,982)	$ 277,333

(1) As at October 31, 2015, residential and commercial MBS included in all fair value levels of trading securities were $10,315 million and $137 million (October 31, 2014 – $6,400 million and $81 million), respectively, and in all fair value levels of AFS securities, $3,394 million and $242 million (October 31, 2014 – $6,956 million and $34 million), respectively.

(2) OECD stands for Organisation for Economic Co-operation and Development.

(3) CDO stands for collateralized debt obligations.

(4) Excludes $15 million of AFS securities (October 31, 2014 – $14 million) that are carried at cost.

The following describes how fair values are determined, what inputs are used and where they are classified in the fair value hierarchy table above, for our significant assets and liabilities that are measured at fair value on a recurring basis:

Government bonds (Canadian, U.S. and other OECD governments)
Government bonds are included in Canadian government debt, U.S. state, municipal and agencies debt, Other Organisation for Economic Co-operation and Development (OECD) government debt and Obligations related to securities sold short in the fair value hierarchy table. The fair values of government issued or guaranteed debt securities in active markets are determined by reference to recent transaction prices, broker quotes, or third-party vendor prices and are classified as Level 1 in the fair value hierarchy. The fair values of securities that are not traded in active markets are based on either security prices, or valuation techniques using implied yields and risk spreads derived from prices of actively traded and similar government securities. Securities with observable prices or rate inputs as compared to transaction prices, dealer quotes or vendor prices are classified as Level 2 in the hierarchy. Securities where inputs are unobservable are classified as Level 3 in the hierarchy.

Corporate and U.S. municipal bonds
The fair values of corporate and U.S. municipal bonds, which are included in Corporate debt and other debt, U.S. state, municipal and agencies debt and Obligations related to securities sold short in the fair value hierarchy table, are determined using either recently executed transaction prices, broker quotes, pricing services, or in certain instances discounted cash flow method using rate inputs such as benchmark yields (Canadian Dealer Offered Rate, LIBOR and other similar reference rates) and risk spreads of comparable securities. Securities with observable prices or rate inputs are classified as Level 2 in the hierarchy. Securities where inputs are unobservable are classified as Level 3 in the hierarchy.

Asset-backed securities and Mortgage-backed securities
Asset-backed securities (ABS) and MBS are included in Asset-backed securities, Mortgage-backed securities, Canadian government debt, U.S. state, municipal and agencies debt, and Obligations related to securities sold short in the fair value hierarchy table. ABS include collateralized debt obligations (CDO). Inputs for valuation of MBS and CDO are, when available, traded prices, dealer or lead manager quotes, broker quotes and vendor prices of the identical securities. When prices of the identical securities are not readily available, we use industry standard models with inputs such as discount margins, yields, default, prepayment and loss severity rates that are implied from transaction prices, dealer quotes or vendor prices of comparable instruments. Where security prices and inputs are observable, ABS and MBS are classified as Level 2 in the hierarchy. Otherwise, they are classified as Level 3 in the hierarchy.

Auction rate securities
Auction rate securities (ARS) are included in U.S. state, municipal and agencies debt, and Asset-backed securities in the fair value hierarchy table. The valuation of ARS involves discounting forecasted cash flows from the underlying student loan collateral and incorporating multiple inputs such as default, prepayment, deferment and redemption rates, and credit spreads. These inputs are unobservable, and therefore, ARS are classified as Level 3 in the hierarchy. All relevant data must be assessed and significant judgment is required to determine the appropriate valuation inputs.

Equities
Equities and Obligations related to securities sold short in the fair value hierarchy table consist of listed and unlisted common shares, private equities and hedge funds with certain redemption restrictions. The fair values of common shares are based on quoted prices in active markets, where available, and are classified as Level 1 in the hierarchy. Where quoted prices in active markets are not readily available, fair value is determined based on quoted market prices for similar securities or through valuation techniques, including multiples of earnings and discounted cash flow method with forecasted cash flows and discount rate as inputs. Private equities are classified as Level 3 in the hierarchy as their inputs are not observable. Hedge funds are valued using Net Asset Values (NAV). If we can redeem a hedge fund at NAV prior to the next quarter end, the fund is classified as Level 2 in the hierarchy. Otherwise, it is classified as Level 3 in the hierarchy.

Derivatives
The fair values of exchange-traded derivatives, such as interest rate and equity options and futures, are based on quoted market prices and are classified as Level 1 in the fair value hierarchy. OTC derivatives primarily consist of interest rate and cross currency swaps, interest rate options, foreign exchange forward contracts and options, and commodity options and swaps. The exchange-traded or OTC interest rate, foreign exchange and equity derivatives are included in Interest rate contracts, Foreign exchange contracts and Other contracts, respectively, in the fair value hierarchy table. The fair values of OTC derivatives are determined using valuation models when quoted market prices or third-party consensus pricing information are not available. The valuation models, such as discounted cash flow method or Black-Scholes option model, incorporate observable or unobservable inputs for interest and foreign exchange rates, equity and commodity prices (including indices), credit spreads, corresponding market volatility levels, and other market-based pricing factors. As previously discussed, other adjustments to fair value include bid-offer, CVA, FVA, OIS, parameter and model uncertainties, and unrealized gain or loss at inception of a transaction. A derivative instrument is classified as Level 2 in the hierarchy if observable market inputs are available or the unobservable inputs are not significant to the fair value. Otherwise, it is classified as Level 3 in the hierarchy.

Securities borrowed or purchased under resale agreements and securities loaned or sold under repurchase agreements
In the fair value hierarchy table, these instruments are included in Assets purchased under reverse repurchase agreements and securities borrowed, and Obligations related to assets sold under repurchase agreements and securities loaned. Fair value for these contracts is calculated using valuation techniques such as discounted cash flow method using interest rate curves as inputs. They are classified as Level 2 instruments in the hierarchy as the inputs are observable.

Deposits
A majority of our deposits are measured at amortized cost but we designated certain deposits as at FVTPL. These FVTPL deposits are composed of deposits taken, the issuance of certificates of deposits and promissory notes, interest rate and equity linked notes, and are included in Deposits in the fair value hierarchy table. The fair values for these instruments are determined using discounted cash flow method and derivative option valuation models. The inputs to the valuation models include benchmark yield curves, credit spreads, interest rates, interest rate and equity volatility, dividends and correlation, where applicable. They are classified as Level 2 or 3 instruments in the hierarchy, depending on the significance of the unobservable credit spreads, volatility, dividend and correlation rates.

Quantitative information about fair value measurements using significant unobservable inputs (Level 3 Instruments)

The following table presents fair values of our significant Level 3 financial instruments, valuation techniques used to determine their fair values, ranges and weighted averages of unobservable inputs.

As at October 31, 2015 (Millions of Canadian dollars, except for prices, percentages and ratios)

		Fair value				Range of input values (2), (3)		
Products	Reporting line in the fair value hierarchy table	Assets	Liabilities	Valuation techniques	Significant unobservable inputs (1)	Low	High	Weighted average / Inputs distribution (4)
Non-derivative financial instruments								
Asset-backed securities				Price-based	Prices	n.a.	n.a.	n.a.
	Asset-backed securities	$ 48		Discounted cash flows	Discount margins	3.43%	13.10%	8.27%
	Obligations related to securities sold short		$ –		Yields	1.39%	2.78%	1.79%
					Default rates	–%	5.00%	2.50%
					Prepayment rates	–%	30.00%	15.00%
					Loss severity rates	20.00%	70.00%	45.00%
Auction rate securities				Discounted cash flows	Discount margins	1.65%	4.50%	2.78%
	U.S. state, municipal and agencies debt	699			Default rates	9.00%	10.00%	9.96%
					Prepayment rates	4.00%	8.00%	4.35%
	Asset-backed securities	177			Recovery rates	40.00%	97.50%	91.66%
Corporate debt				Price-based	Prices	$ 47.61	$ 164.29	$ 96.57
	Corporate debt and other debt	198		Discounted cash flows	Yields	2.98%	8.00%	3.89%
	Loans	472			Capitalization rates	6.07%	8.50%	7.28%
	Obligations related to securities sold short		–		Liquidity discounts (5)	n.a.	n.a.	n.a.
Government debt and municipal bonds				Price-based	Prices	$ 64.98	$ 126.22	$ 84.50
	Canadian government debt	5		Discounted cash flows	Yields	0.27%	31.37%	3.89%
	U.S. state, municipal and agencies debt	114						
	Other OECD government debt	–						
	Corporate debt and other debt	1,750						
Bank funding and deposits				Discounted cash flows	Funding spreads	n.a.	n.a.	n.a.
	Deposits		–		Interest rate (IR)-IR correlations	n.a.	n.a.	n.a.
					Foreign exchange (FX)-FX correlations	n.a.	n.a.	n.a.
					FX-IR correlations	n.a.	n.a.	n.a.
Private equities, hedge fund investments and related equity derivatives				Market comparable	EV/EBITDA multiples	4.67X	15.50X	7.38X
	Equities	1,110		Price-based	P/E multiples	9.40X	22.40X	12.14X
	Derivative-related assets	3		Discounted cash flows	EV/Rev multiples	0.28X	5.90X	2.64X
	Derivative-related liabilities		218		Liquidity discounts (5)	15.00%	40.00%	27.34%
					Discount rate	12.00%	17.00%	16.46%
					Net asset values /prices (6)	n.a.	n.a.	n.a.
Derivative financial instruments								
Interest rate derivatives and interest-rate-linked structured notes (7)				Discounted cash flows	Interest rates	2.25%	2.27%	Even
	Derivative-related assets	428		Option pricing model	CPI swap rates	1.67%	1.90%	Even
	Deposits		–		IR-IR correlations	19.00%	67.00%	Even
	Derivative-related liabilities		822		FX-IR correlations	29.00%	56.00%	Even
					FX-FX correlations	68.00%	68.00%	Even
					IR volatilities (8)	0.11%	6.11%	Middle
Equity derivatives and equity-linked structured notes (7)				Discounted cash flows	Dividend yields	0.01%	29.09%	Lower
	Derivative-related assets	559		Option pricing model	Equity (EQ)-EQ correlations	13.90%	96.90%	Middle
	Deposits		389		EQ-FX correlations	(69.10)%	29.20%	Middle
	Derivative-related liabilities		569		EQ volatilities	1.70%	190.00%	Lower
Other (9)								
	Mortgage-backed securities	15						
	Corporate debt and other debt	–						
	Derivative-related assets	153						
	Deposits		8					
	Derivative-related liabilities		283					
	Other liabilities		47					
Total		$ 5,731	$ 2,336					

As at October 31, 2014 (Millions of Canadian dollars, except for prices, percentages and ratios)

		Fair value				Range of input values (2), (3)		
Products	Reporting line in the fair value hierarchy table	Assets	Liabilities	Valuation techniques	Significant unobservable inputs (1)	Low	High	Weighted average / Inputs distribution (4)
Non-derivative financial instruments								
Asset-backed securities				Price-based	Prices	$ 53.70	$ 90.50	$ 75.92
	Asset-backed securities	$ 478		Discounted cash flows	Discount margins	0.70%	9.48%	5.09%
	Obligations related to securities sold short		$ –		Yields	2.84%	5.36%	3.52%
					Default rates	1.00%	5.00%	2.00%
					Prepayment rates	15.00%	30.00%	20.00%
					Loss severity rates	30.00%	70.00%	50.00%
Auction rate securities				Discounted cash flows	Discount margins	1.32%	4.63%	2.26%
	U.S. state, municipal and agencies debt	979			Default rates	9.00%	10.00%	9.80%
					Prepayment rates	4.00%	8.00%	4.76%
	Asset-backed securities	166			Recovery rates	40.00%	97.50%	93.51%
Corporate debt				Price-based	Prices	$ 2.50	$ 119.52	$ 97.86
	Corporate debt and other debt	100		Discounted cash flows	Yields	2.75%	7.50%	3.84%
	Loans	461			Capitalization rates	6.43%	9.47%	7.95%
	Obligations related to securities sold short		4		Liquidity discounts (5)	10.00%	10.00%	10.00%
Government debt and municipal bonds				Price-based	Prices	$ 67.38	$ 100.00	$ 96.24
	Canadian government debt	–		Discounted cash flows	Yields	0.17%	30.15%	3.06%
	U.S. state, municipal and agencies debt	416						
	Other OECD government debt	11						
	Corporate debt and other debt	1,616						
Bank funding and deposits				Discounted cash flows	Funding spreads	n.a.	n.a.	n.a.
	Deposits		70		Interest rate (IR)-IR correlations	19.00%	67.00%	Even
					Foreign exchange (FX)-FX correlations	68.00%	68.00%	Even
					FX-IR correlations	29.00%	56.00%	Even
Private equities, hedge fund investments and related equity derivatives				Market comparable	EV/EBITDA multiples	4.00X	10.80X	8.73X
	Equities	1,194		Price-based	P/E multiples	8.79X	15.70X	11.79X
	Derivative-related assets	11		Discounted cash flows	EV/Rev multiples	0.45X	7.50X	4.97X
	Derivative-related liabilities		434		Liquidity discounts (5)	–%	50.00%	26.92%
					Discount rate	12.00%	17.00%	14.78%
					Net asset values /prices (6)	n.a.	n.a.	n.a.
Derivative financial instruments								
Interest rate derivatives and interest-rate-linked structured notes (7)				Discounted cash flows	Interest rates	2.96%	2.98%	Even
	Derivative-related assets	348		Option pricing model	CPI swap rates	1.73%	2.30%	Even
	Deposits		–		IR-IR correlations	19.00%	67.00%	Even
	Derivative-related liabilities		732		FX-IR correlations	29.00%	56.00%	Even
					FX-FX correlations	68.00%	68.00%	Even
					IR volatilities (8)	26.28%	28.28%	Even
Equity derivatives and equity-linked structured notes (7)				Discounted cash flows	Dividend yields	0.04%	18.11%	Lower
	Derivative-related assets	442		Option pricing model	Equity (EQ)-EQ correlations	0.50%	97.20%	Middle
	Deposits		497		EQ-FX correlations	(72.80)%	53.20%	Middle
	Derivative-related liabilities		529		EQ volatilities	1.00%	172.00%	Lower
Other (9)								
	Mortgage-backed securities	4						
	Corporate debt and other debt	6						
	Derivative-related assets	100						
	Deposits		–					
	Derivative-related liabilities		159					
	Other liabilities		20					
Total		$ 6,332	$ 2,445					

(1) The acronyms stand for the following: (i) Enterprise Value (EV); (ii) Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA); (iii) Price / Earnings (P/E); (iv) Revenue (Rev); and (v) Consumer Price Index (CPI).

(2) The low and high input values represent the actual highest and lowest level inputs used to value a group of financial instruments in a particular product category. These input ranges do not reflect the level of input uncertainty, but are affected by the different underlying instruments within the product category. The input ranges will therefore vary from period to period based on the characteristics of the underlying instruments held at each balance sheet date. Where provided, the weighted average of the input values is calculated based on the relative fair values of the instruments within the product category. The weighted averages for derivatives are not presented in the table as they would not provide a comparable metric; instead, distribution of significant unobservable inputs within the range for each product category is indicated in the table.

(3) Price-based inputs are significant for certain debt securities and are based on external benchmarks, comparable proxy instruments or pre-quarter-end trade data. For these instruments, the price input is expressed in dollars for each $100 par value. For example, with an input price of $105, an instrument is valued at a premium over its par value.

(4) The level of aggregation and diversity within each derivative instrument category may result in certain ranges of inputs being wide and inputs being unevenly distributed across the range. In the table, we indicated whether the majority of the inputs are concentrated toward the upper, middle, or lower end of the range, or evenly distributed throughout the range.

(5) Fair value of securities with liquidity discount inputs totalled $131 million (October 31, 2014 – $211 million).

(6) Net asset values (NAV) of a hedge fund is total fair value of assets less liabilities divided by the number of fund units. The NAV of the funds and the corresponding equity derivatives referenced to NAV are not considered observable as we cannot redeem certain of these hedge funds at NAV prior to the next quarter end. Private equities are valued based on NAV or valuation techniques. The range for NAV per unit or price per share has not been disclosed for the hedge funds or private equities due to the dispersion of prices given the diverse nature of the investments.

(7) The structured notes contain embedded equity or interest rate derivatives with unobservable inputs that are similar to those of the equity or interest rate derivatives.

(8) The reduction in the range of volatility inputs as at October 31, 2015 as compared to prior periods is due to the implementation of a valuation model which uses a different input convention.

(9) Other primarily includes certain insignificant instruments such as commodity derivatives, foreign exchange derivatives, credit derivatives, bank-owned life insurance and Bank funding and deposits.

n.a. not applicable

Sensitivity to unobservable inputs and interrelationships between unobservable inputs

Yield, credit spreads/discount margins

A financial instrument's yield is the interest rate used to discount future cash flows in a valuation model. An increase in the yield, in isolation, would result in a decrease in a fair value measurement and vice versa. A credit spread/discount margin is the difference between a debt instrument's yield and a benchmark instrument's yield. Benchmark instruments have high credit quality ratings, similar maturities and are often government bonds. The credit spread/discount margin therefore represents the discount rate used to determine the present value of future cash flows of an asset to reflect the market return required for uncertainty in the estimated cash flows. The credit spread/discount margin for an instrument forms part of the yield used in a discounted cash flow method. Generally, an increase in the credit spread or discount margin will result in a decrease in fair value, and vice versa.

Funding spread

Funding spreads are credit spreads specific to our funding or deposit rates. A decrease in funding spreads, on its own, will increase fair value of our liabilities, and vice versa.

Default rates

A default rate is the rate at which borrowers fail to make scheduled loan payments. A decrease in the default rate will typically increase the fair value of the loan, and vice versa. This effect will be significantly more pronounced for a non-government guaranteed loan than a government guaranteed loan.

Prepayment rates

A prepayment rate is the rate at which a loan will be repaid in advance of its expected amortization schedule. Prepayments change the future cash flows of a loan. An increase in the prepayment rate in isolation will result in an increase in fair value when the loan interest rate is lower than the then current reinvestment rate, and a decrease in the prepayment rate in isolation will result in a decrease in fair value when the loan interest rate is lower than the then current reinvestment rate. Prepayment rates are generally negatively correlated with interest rates.

Recovery and loss severity rates

A recovery rate is an estimation of the amount that can be collected in a loan default scenario. The recovery rate is the recovered amount divided by the loan balance due, expressed as a percentage. The inverse concept of recovery is loss severity. Loss severity is an estimation of the loan amount not collected when a loan defaults. The loss severity rate is the loss amount divided by the loan balance due, expressed as a percentage. Generally, an increase in the recovery rate or a decrease in the loss severity rate will increase the loan fair value, and vice versa.

Capitalization rates

A capitalization rate is a rate of return on a real estate property investment calculated by dividing a property's income by the property's value. A lower capitalization rate increases the property value, and vice versa.

Volatility rates

Volatility measures the potential variability of future prices and is often measured as the standard deviation of price movements. Volatility is an input to option pricing models used to value derivatives and issued structured notes. Volatility is used in valuing equity, interest rate, commodity and foreign exchange options. A higher volatility rate means that the underlying price or rate movements are more likely to occur. Higher volatility rates may increase or decrease an option's fair value depending on the option's terms. The determination of volatility rates is dependent on various factors, including but not limited to, the underlying's market price, the strike price and maturity.

Dividend yields

A dividend yield is the underlying equity's expected dividends expressed as an annual percentage of its price. Dividend yield is used as an input for forward equity price and option models. Higher dividend yields will decrease the forward price, and vice versa. A higher dividend yield will increase or decrease an option's value, depending on the option's terms.

Correlation rates

Correlation is the linear relationship between the movements in two different variables. Correlation is an input to the valuation of derivative contracts and issued structured notes when an instrument's payout is determined by correlated variables. When variables are positively correlated, an increase in one variable will result in an increase in the other variable. When variables are negatively correlated, an increase in one variable will result in a decrease in the other variable. The referenced variables can be within a single asset class or market (equity, interest rate, commodities, credit and foreign exchange) or between variables in different asset classes (equity to foreign exchange, or interest rate to foreign exchange). Changes in correlation will either increase or decrease a financial instrument's fair value depending on the terms of its contractual payout.

Interest rates

An interest rate is the percentage amount charged on a principal or notional amount. Increasing interest rates will decrease the discounted cash flow value of a financial instrument, and vice versa.

Consumer Price Index swap rates

A Consumer Price Index (CPI) swap rate is expressed as a percentage of an increase in the average price of a basket of consumer goods and services, such as transportation, food and medical care. An increase in the CPI swap rate will cause inflation swap payments to be larger, and vice versa.

EV/EBITDA multiples, P/E multiples, EV/Rev multiples, and liquidity discounts

Private equity valuation inputs include Enterprise Value / Earnings Before Interest, Taxes, Depreciation and Amortization (EV/EBITDA) multiples, Price / Earnings (P/E) multiples and Enterprise Value / Revenue (EV/Rev) multiples. These are used to calculate either enterprise value or share value of a company based on a multiple of earnings or revenue estimates. Higher multiples equate to higher fair values for all multiple types, and vice versa. A liquidity discount may be applied when few or no transactions exist to support the valuations.

Interrelationships between unobservable inputs
Unobservable inputs of ARS, including the above discount margin, default rate, prepayment rate, recovery and loss severity rates, may not be independent of each other. The discount margin of ARS can be affected by a change in default rate, prepayment rate, or recovery and loss severity rates. Discount margins will generally decrease when default rates decline or when recovery rates increase. Prepayments may cause fair value to either increase or decrease.

Changes in fair value measurement for instruments measured on a recurring basis and categorized in Level 3
The following tables present the changes in fair value measurements on a recurring basis for instruments included in Level 3 of the fair value hierarchy.

	For the year ended October 31, 2015								
(Millions of Canadian dollars)	Fair value November 1, 2014	Total realized/ unrealized gains (losses) included in earnings	Total unrealized gains (losses) included in other comprehensive income (1)	Purchases of assets/ issuances of liabilities	Sales of assets/ settlements of liabilities and other (2)	Transfers into Level 3	Transfers out of Level 3	Fair value October 31, 2015	Changes in unrealized gains (losses) included in earnings for assets and liabilities for the year ended October 31, 2015 for positions still held
Assets									
Securities									
Trading									
Canadian government debt									
Provincial and municipal	$ –	$ –	$ –	$ –	$ –	$ 5	$ –	$ 5	$ –
U.S. state, municipal and agencies debt	6	(1)	1	40	(30)	–	–	16	–
Other OECD government debt	–	–	–	–	–	20	(20)	–	–
Mortgage-backed securities	4	(4)	–	25	(27)	30	(13)	15	–
Asset-backed securities									
CDO	74	24	(18)	102	(146)	13	(44)	5	–
Non-CDO securities	364	(7)	47	137	(345)	24	(197)	23	(2)
Corporate debt and other debt	149	(1)	5	93	(143)	211	(123)	191	–
Equities	166	(29)	24	16	(75)	45	(24)	123	(28)
	763	(18)	59	413	(766)	348	(421)	378	(30)
Available-for-sale									
U.S. state, municipal and agencies debt	1,389	7	157	136	(846)	–	(46)	797	n.a.
Other OECD government debt	11	–	–	4	(2)	–	(13)	–	n.a.
Asset-backed securities									
CDO	24	–	3	30	–	–	(57)	–	n.a.
Non-CDO securities	182	(1)	40	–	(24)	–	–	197	n.a.
Corporate debt and other debt	1,573	–	246	2,524	(2,586)	37	(37)	1,757	n.a.
Equities	1,028	105	65	52	(225)	17	(55)	987	n.a.
	4,207	111	511	2,746	(3,683)	54	(208)	3,738	n.a.
Loans – Wholesale	461	(8)	47	605	(547)	1	(87)	472	–
Other									
Net derivative balances (3)									
Interest rate contracts	(370)	(89)	(2)	37	(7)	(11)	(4)	(446)	(15)
Foreign exchange contracts	9	46	6	34	(7)	7	(37)	58	36
Credit derivatives	(5)	(15)	(1)	–	19	(1)	2	(1)	(3)
Other contracts	(502)	(113)	(77)	28	216	(98)	233	(313)	124
Valuation adjustments	(85)	(3)	(2)	1	45	(3)	–	(47)	–
Other assets	–	–	–	–	–	–	–	–	–
	$ 4,478	$ (89)	$ 541	$ 3,864	$ (4,730)	$ 297	$ (522)	$ 3,839	$ 112
Liabilities									
Deposits									
Personal	$ (497)	$ 73	$ (41)	$ (545)	$ 88	$ (376)	$ 909	$ (389)	$ 45
Business and government	(70)	(5)	1	(78)	51	–	93	(8)	–
Other									
Obligations related to securities sold short	(4)	–	–	(11)	15	(1)	1	–	–
Other liabilities	(20)	(28)	(5)	–	6	–	–	(47)	(22)
Subordinated debentures	–	–	–	–	–	–	–	–	–
	$ (591)	$ 40	$ (45)	$ (634)	$ 160	$ (377)	$ 1,003	$ (444)	$ 23

(Millions of Canadian dollars)	For the year ended October 31, 2014								
	Fair value November 1, 2013	Total realized/ unrealized gains (losses) included in earnings	Total unrealized gains (losses) included in other comprehensive income (1)	Purchases of assets/ issuances of liabilities	Sales of assets/ settlements of liabilities and other (2)	Transfers into Level 3	Transfers out of Level 3	Fair value October 31, 2014	Changes in unrealized gains (losses) included in earnings for assets and liabilities for the year ended October 31, 2014 for positions still held
Assets									
Securities									
Trading									
Canadian government debt									
Provincial and municipal	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –	$ –
U.S. state, municipal and agencies debt	22	–	2	47	(61)	5	(9)	6	1
Other OECD government debt	370	–	(4)	–	–	–	(366)	–	–
Mortgage-backed securities	28	(3)	2	90	(83)	1	(31)	4	–
Asset-backed securities									
CDO	31	15	(9)	130	(85)	7	(15)	74	2
Non-CDO securities	260	(2)	20	2,083	(1,984)	16	(29)	364	(5)
Corporate debt and other debt	415	(2)	27	263	(487)	20	(87)	149	–
Equities	183	1	14	84	(77)	22	(61)	166	–
	1,309	9	52	2,697	(2,777)	71	(598)	763	(2)
Available-for-sale									
U.S. state, municipal and agencies debt	2,014	–	240	–	(856)	–	(9)	1,389	n.a.
Other OECD government debt	–	–	–	1	10	–	–	11	n.a.
Asset-backed securities									
CDO	103	–	9	–	(36)	24	(76)	24	n.a.
Non-CDO securities	180	(4)	23	–	(17)	–	–	182	n.a.
Corporate debt and other debt	1,673	–	130	1,760	(1,921)	–	(69)	1,573	n.a.
Equities	969	120	120	47	(228)	–	–	1,028	n.a.
	4,939	116	522	1,808	(3,048)	24	(154)	4,207	n.a.
Loans – Wholesale	414	3	32	31	(19)	–	–	461	(22)
Other									
Net derivative balances (3)									
Interest rate contracts	(458)	(100)	(2)	31	(13)	94	78	(370)	(108)
Foreign exchange contracts	(117)	(28)	3	3	–	2	146	9	(18)
Credit derivatives	(5)	(31)	(2)	–	33	–	–	(5)	(5)
Other contracts	(869)	43	(54)	(103)	93	(169)	557	(502)	20
Valuation adjustments	(105)	15	(1)	–	(73)	–	79	(85)	4
Other assets	11	–	–	–	–	–	(11)	–	–
	$ 5,119	$ 27	$ 550	$ 4,467	$ (5,804)	$ 22	$ 97	$ 4,478	$ (131)
Liabilities									
Deposits									
Personal	$ (1,043)	$ 11	$ (54)	$ (560)	$ 184	$ (299)	$ 1,264	$ (497)	$ 20
Business and government	(3,933)	(184)	(180)	(1,551)	265	–	5,513	(70)	(7)
Other									
Obligations related to securities sold short	(16)	1	(1)	(198)	202	–	8	(4)	–
Other liabilities	(3)	29	–	–	(50)	–	4	(20)	(22)
Subordinated debentures	(109)	–	(3)	–	–	–	112	–	–
	$ (5,104)	$ (143)	$ (238)	$ (2,309)	$ 601	$ (299)	$ 6,901	$ (591)	$ (9)

(1) These amounts include the foreign currency translation gains or losses arising on consolidation of foreign subsidiaries relating to the Level 3 instruments, where applicable. The unrealized losses on AFS securities recognized in OCI were $5 million for the year ended October 31, 2015 (October 31, 2014 – gains of $152 million), excluding the translation gains or losses arising on consolidation.

(2) Other includes amortization of premiums or discounts recognized in net income.

(3) Net derivatives as at October 31, 2015 included derivative assets of $1,143 million (October 31, 2014 – $901 million) and derivative liabilities of $1,892 million (October 31, 2014 – $1,854 million).

n.a. not applicable

Transfers between fair value hierarchy levels for instruments carried at fair value on a recurring basis

Transfers between Level 1 and Level 2, and transfers into and out of Level 3 are assumed to occur at the end of the period. For an asset or a liability that transfers into Level 3 during the period, the entire change in fair value for the period is excluded from the Total realized/unrealized gains (losses) included in earnings column of the above reconciliation, whereas for transfers out of Level 3 during the period, the entire change in fair value for the period is included in the same column of the above reconciliation.

Transfers between Level 1 and Level 2 are dependent on whether fair value is obtained on the basis of quoted market prices in active markets (Level 1) as opposed to fair value estimated using observable inputs in a discounted cash flow method (Level 2). The following transfers occurred for the year ended October 31, 2015:

- From Level 1 to 2: $284 million of Trading Canadian government debt (October 31, 2014 – $nil); $1,988 million of Trading and AFS U.S. state, municipal and agencies debt (October 31, 2014 – $1,905 million); and $641 million of Obligations related to securities sold short (October 31, 2014 – $1,027 million).
- From Level 2 to 1: $128 million of Trading Canadian government debt; $331 million of Trading U.S. state, municipal and agencies debt; $840 million of Trading and AFS Equities; $412 million of AFS Other OECD government debt; and $61 million of Obligations related to securities sold short. There were no similar levelling changes in 2014.

During the year ended October 31, 2015, significant transfers into and out of Level 3 occurred due to changes in the observability of inputs and included:

- From Level 2 to 3 (decreased observability): $211 million of corporate bonds in Trading Corporate debt and other debt.
- From Level 3 to 2 (increased observability): (i) $201 million of net OTC equity options in Other contracts; (ii) $197 million of collateralized loan obligations in Trading Non-CDO securities; and (iii) $123 million of corporate bonds in Trading Corporate debt and other debt.

During the year ended October 31, 2015, significant transfers into and out of Level 3 also occurred as a result of changes in the significance of unobservable inputs on the fair value of instruments as follows:

- From Level 2 to 3 (significant impact): $314 million of equity-linked structured notes in Personal deposits.
- From Level 3 to 2 (no significant impact): $909 million of equity-linked structured notes in Personal deposits.

During the year ended October 31, 2014, significant transfers into and out of Level 3 occurred due to changes in the observability of inputs and included:

- From Level 2 to 3 (decreased observability): $139 million of equity-linked structured notes in Personal deposits.
- From Level 3 to 2 (increased observability): (i) $366 million of Other OECD government debt; (ii) $112 million of net Interest rate contracts; (iii) $149 million of net Foreign exchange contracts; (iv) $515 million of net Other contracts; (v) $185 million of equity-linked structured notes in Personal deposits; and (vi) $5,494 million of Business and government deposits.

During the year ended October 31, 2014, significant transfers into and out of Level 3 also occurred as a result of changes in the significance of unobservable inputs on the fair value of instruments as follows:

- From Level 3 to 2 (no significant impact): $1,071 million of equity-linked structured notes in Personal deposits.

Total gains or losses of level 3 instruments recognized in earnings

	For the year ended October 31, 2015					
	Total realized/unrealized gains (losses) included in earnings			Changes in unrealized gains (losses) included in earnings for assets and liabilities for the year for positions still held		
(Millions of Canadian dollars)	Assets	Liabilities	Total	Assets	Liabilities	Total
Non-interest income						
Insurance premiums, investment and fee income	$ (1)	$ –	$ (1)	$ –	$ –	$ –
Trading revenue	461	(605)	(144)	283	(145)	138
Net gains on available-for-sale securities	111	–	111	–	–	–
Credit fees and Other	(3)	(12)	(15)	(3)	–	(3)
	$ 568	$ (617)	$ (49)	$ 280	$ (145)	$ 135

	For the year ended October 31, 2014					
	Total realized/unrealized gains (losses) included in earnings			Changes in unrealized gains (losses) included in earnings for assets and liabilities for the year for positions still held		
(Millions of Canadian dollars)	Assets	Liabilities	Total	Assets	Liabilities	Total
Non-interest income						
Insurance premiums, investment and fee income	$ 1	$ –	$ 1	$ –	$ –	$ –
Trading revenue	686	(882)	(196)	136	(208)	(72)
Net gains on available-for-sale securities	115	–	115	–	–	–
Credit fees and Other	(3)	(33)	(36)	11	(79)	(68)
	$ 799	$ (915)	$ (116)	$ 147	$ (287)	$ (140)

Positive and negative fair value movement of Level 3 financial instruments from using reasonably possible alternative assumptions

A financial instrument is classified as Level 3 in the fair value hierarchy if one or more of its unobservable inputs may significantly affect the measurement of its fair value. In preparing the financial statements, appropriate levels for these unobservable input parameters are chosen so that they are consistent with prevailing market evidence or management judgment. Due to the unobservable nature of the prices or rates, there may be uncertainty about valuation of these Level 3 financial instruments.

The following table summarizes the impact to fair values of Level 3 financial instruments using reasonably possible alternative assumptions. This sensitivity disclosure is intended to illustrate the potential impact of the relative uncertainty in the fair value of Level 3 financial instruments. In reporting the sensitivities below, we offset balances in instances where: (i) the move in valuation factor caused an offsetting positive and negative fair value movement, (ii) both offsetting instruments are in Level 3, and (iii) when exposures are managed and reported on a net basis. With respect to overall sensitivity, it is unlikely in practice that all reasonably possible alternative assumptions would simultaneously be realized.

	As at					
	October 31, 2015			October 31, 2014		
(Millions of Canadian dollars)	**Level 3 fair value**	**Positive fair value movement from using reasonably possible alternatives**	**Negative fair value movement from using reasonably possible alternatives**	Level 3 fair value	Positive fair value movement from using reasonably possible alternatives	Negative fair value movement from using reasonably possible alternatives
Securities						
Trading						
Canadian government debt						
Provincial and municipal	**$ 5**	**$ –**	**$ –**	$ –	$ –	$ –
U.S. state, municipal and agencies debt	**16**	**1**	**(1)**	6	–	–
Mortgage-backed securities	**15**	**1**	**(1)**	4	1	(1)
Asset-backed securities	**28**	**2**	**(3)**	438	10	(14)
Corporate debt and other debt	**191**	**2**	**(2)**	149	2	(2)
Equities	**123**	**–**	**–**	166	–	–
Available-for-sale						
U.S. state, municipal and agencies debt	**797**	**12**	**(36)**	1,389	23	(57)
Other OECD government debt	**–**	**–**	**–**	11	–	–
Asset-backed securities	**197**	**11**	**(16)**	206	12	(18)
Corporate debt and other debt	**1,757**	**11**	**(11)**	1,573	12	(10)
Equities	**987**	**76**	**(33)**	1,028	92	(23)
Loans	**472**	**8**	**(23)**	461	12	(11)
Derivatives	**1,143**	**16**	**(10)**	901	23	(21)
	$ 5,731	**$ 140**	**$ (136)**	$ 6,332	$ 187	$ (157)
Deposits	**$ (397)**	**$ 13**	**$ (13)**	$ (567)	$ 14	$ (14)
Derivatives	**(1,892)**	**33**	**(43)**	(1,854)	38	(59)
Other						
Securities sold short, other liabilities and subordinated debentures	**(47)**	**–**	**–**	(24)	–	–
	$ (2,336)	**$ 46**	**$ (56)**	$ (2,445)	$ 52	$ (73)

Sensitivity results

As at October 31, 2015, the effects of applying other reasonably possible alternative assumptions to the Level 3 asset positions would be an increase of $140 million and a reduction of $136 million in fair value, of which $110 million and $87 million would be recorded in Other components of equity, respectively. The effects of applying these assumptions to the Level 3 liability positions would result in a decrease of $46 million and an increase of $56 million in fair value.

Level 3 valuation inputs and approaches to developing reasonably possible alternative assumptions

The following is a summary of the unobservable inputs used in the valuation of the Level 3 instruments and our approaches to developing reasonably possible alternative assumptions used to determine sensitivity.

Financial assets or liabilities	**Sensitivity methodology**
Asset-backed securities, corporate debt, government debt and municipal bonds	Sensitivities are determined based on adjusting, plus or minus one standard deviation, the bid-offer spreads or input prices if a sufficient number of prices is received, or using high and low vendor prices as reasonably possible alternative assumptions.
Auction rate securities	Sensitivity of ARS is determined by decreasing the discount margin between 9% and 15% and increasing the discount margin between 18% and 30%, depending on the specific reasonable range of fair value uncertainty for each particular financial instrument's market. Changes to the discount margin reflect historical monthly movements in the student loan asset-backed securities market.
Private equities, hedge fund investments and related equity derivatives	Sensitivity of direct private equity investments is determined by (i) adjusting the discount rate by 2% when discounted cash flow method is used to determine fair value, (ii) adjusting the price multiples based on the range of multiples of comparable companies when price-based models are used, or (iii) using an alternative valuation approach. Net asset values of the private equity funds, hedge funds and related equity derivatives are provided by the fund managers, and as a result, there are no other reasonably possible alternative assumptions for these investments.
Interest rate derivatives	Sensitivities of interest rate and cross currency swaps are derived using plus or minus one standard deviation of the inputs, and an amount based on model and parameter uncertainty, where applicable.
Equity derivatives	Sensitivity of the Level 3 position is determined by shifting the unobservable model inputs by plus or minus one standard deviation of the pricing service market data including volatility, dividends or correlations, as applicable.
Bank funding and deposits	Sensitivities of deposits are calculated by shifting the funding curve by plus or minus certain basis points.
Structured notes	Sensitivities for interest-rate-linked and equity-linked structured notes are derived by adjusting inputs by plus or minus one standard deviation, and for other deposits, by estimating a reasonable move in the funding curve by plus or minus certain basis points.

Fair value for financial instruments that are carried at amortized cost and classified using the fair value hierarchy
The following tables present fair values of financial instruments that are carried at amortized cost and classified by the fair value hierarchy.

	As at October 31, 2015					
		Fair value may not approximate carrying value				
		Fair value measurements using				
(Millions of Canadian dollars)	Fair value always approximates carrying value (1)	Level 1	Level 2	Level 3	Total	Total fair value
Held-to-maturity securities (2)	$ –	$ 2	$ 8,750	$ 7	$ 8,759	$ 8,759
Assets purchased under reverse repurchase agreements and securities borrowed	39,587	–	20,484	–	20,484	60,071
Loans						
Retail	67,330	–	276,661	4,522	281,183	348,513
Wholesale	5,525	–	110,816	4,975	115,791	121,316
	72,855	–	387,477	9,497	396,974	469,829
Other assets	43,889	–	583	380	963	44,852
	156,331	2	417,294	9,884	427,180	583,511
Deposits						
Personal	148,570	–	54,400	1,049	55,449	204,019
Business and government	197,435	–	164,415	1,455	165,870	363,305
Bank	10,538	–	5,107	68	5,175	15,713
	356,543	–	223,922	2,572	226,494	583,037
Obligations related to assets sold under repurchase agreements and securities loaned	9,095	–	833	–	833	9,928
Other liabilities	38,344	–	381	4,471	4,852	43,196
Subordinated debentures	–	–	7,022	56	7,078	7,078
	$ 403,982	$ –	$ 232,158	$ 7,099	$ 239,257	$ 643,239

	As at October 31, 2014					
		Fair value may not approximate carrying value				
		Fair value measurements using				
(Millions of Canadian dollars)	Fair value always approximates carrying value (1)	Level 1	Level 2	Level 3	Total	Total fair value
Held-to-maturity securities (2)	$ –	$ 5	$ 1,522	$ 235	$ 1,762	$ 1,762
Assets purchased under reverse repurchase agreements and securities borrowed	29,198	–	21,090	–	21,090	50,288
Loans						
Retail	65,766	–	264,335	4,374	268,709	334,475
Wholesale	5,603	–	89,643	3,215	92,858	98,461
	71,369	–	353,978	7,589	361,567	432,936
Other assets	28,224	–	4,546	205	4,751	32,975
	128,791	5	381,136	8,029	389,170	517,961
Deposits						
Personal	139,209	–	55,924	831	56,755	195,964
Business and government	176,555	–	150,827	946	151,773	328,328
Bank	9,659	–	1,915	62	1,977	11,636
	325,423	–	208,666	1,839	210,505	535,928
Obligations related to assets sold under repurchase agreements and securities loaned	5,419	–	502	–	502	5,921
Other liabilities	27,280	–	5,699	3,783	9,482	36,762
Subordinated debentures	–	–	7,657	55	7,712	7,712
	$ 358,122	$ –	$ 222,524	$ 5,677	$ 228,201	$ 586,323

(1) Certain financial instruments have not been assigned to a level as the carrying amount always approximates their fair values due to the short-term nature (instruments that are receivable or payable on demand, or with original maturity of three months or less) and insignificant credit risk.
(2) Included in Securities – Available-for-sale on the Consolidated Balance Sheets.

Fair values of financial assets and liabilities carried at amortized cost and disclosed in the table above are determined using the following valuation techniques and inputs.

Held-to-maturity securities
Fair values of Canadian Federal and OECD government bonds, and corporate bonds are based on quoted prices. Fair values of certain Non-OECD government bonds are based on vendor prices or the discounted cash flow method with yield curves of other countries' government bonds as inputs.

Assets purchased under reverse repurchase agreements and securities borrowed, and Obligations related to assets sold under repurchase agreements and securities loaned
Valuation methods used for the long-term instruments are described in the Fair value of assets and liabilities measured on a recurring basis and classified using the fair value hierarchy section of this note. The carrying values of short-term instruments generally approximate their fair values.

Loans – Retail
Retail loans include residential mortgages, personal and small business loans and credit cards. For residential mortgages, and personal and small business loans, we segregate the portfolio based on certain attributes such as product type, contractual interest rate, term to maturity and credit scores, if applicable. Fair values of these loans are determined by the discounted cash flow method using applicable inputs such as prevailing interest rates, contractual and posted client rates, client discounts, credit spreads, prepayment rates and loan-to-value ratio. Fair values of credit card receivables are also calculated based on a discounted cash flow method with portfolio yields, charge off and monthly payment rates as inputs. The carrying values of short-term and variable rate loans generally approximate their fair values.

Loans – Wholesale
Wholesale loans include Business, Bank and Sovereign loans. Where market prices are available, loans are valued based on market prices. Otherwise, fair value is determined by the discounted cash flow method using the following inputs: market interest rates and market based spreads of assets with similar credit ratings and terms to maturity, expected default frequency implied from credit default swap prices, if available, and relevant pricing information such as contractual rate, origination and maturity dates, redemption price, coupon payment frequency and date convention.

Deposits
Deposits are comprised of demand, notice, and term deposits which include senior deposit notes we have issued to provide us with long-term funding. Fair values of term deposits are determined by one of several valuation techniques: (i) for term deposits and similar instruments, we segregate the portfolio based on term to maturity. Fair values of these instruments are determined by the discounted cash flow method using inputs such as client rates for new sales of the corresponding terms; and (ii) for senior deposit notes, we use actual traded prices, vendor prices or the discounted cash flow method using a market interest rate curve and our funding spreads as inputs. The carrying values of short-term term deposits, and demand and notice deposits generally approximate their fair values.

Other assets and Other liabilities
Other assets and Other liabilities include receivables and payables relating to certain commodities and option premiums. Fair values of the commodity receivables and payables are calculated by the discounted cash flow method using applicable inputs such as market interest rates, counterparties' credit spreads, our funding spreads, commodity forward prices and spot prices. The option premium receivables and payables are valued by the discounted cash flow models using market interest rates as inputs.

Subordinated debentures
Fair values of Subordinated debentures are based on recent transaction prices.

Note 4 Securities

Carrying value of securities

The following table presents the contractual maturities of the carrying values of financial instruments held at the end of the period:

	As at October 31, 2015						
	Term to maturity (1)						
(Millions of Canadian dollars)	Within 3 months	3 months to 1 year	1 year to 5 years	5 years to 10 years	Over 10 years	With no specific maturity	Total
Trading (2)							
Canadian government debt	$ 2,310	$ 9,737	$ 9,755	$ 3,618	$ 8,630	$ –	$ 34,050
U.S. state, municipal and agencies debt	1,450	12,867	7,906	3,056	9,176	–	34,455
Other OECD government debt	2,237	4,373	4,402	941	393	–	12,346
Mortgage-backed securities	–	20	42	33	2,827	–	2,922
Asset-backed securities (3)	90	64	263	846	468	–	1,731
Corporate debt and other debt							
Bankers' acceptances	104	1	–	–	–	–	105
Certificates of deposit	59	329	38	12	18	–	456
Other (4)	1,414	2,866	14,318	1,836	3,714	–	24,148
Equities	–	–	–	–	–	48,490	48,490
	7,664	30,257	36,724	10,342	25,226	48,490	158,703
Available-for-sale (2)							
Canadian government debt							
Federal							
Amortized cost	251	572	1,603	68	47	–	2,541
Fair value	251	574	1,605	68	46	–	2,544
Yield (5)	0.4%	0.9%	1.3%	2.9%	4.3%	–	1.2%
Provincial and municipal							
Amortized cost	–	11	1,271	64	253	–	1,599
Fair value	–	11	1,274	64	251	–	1,600
Yield (5)	–	3.3%	1.8%	3.1%	4.2%	–	2.2%
U.S. state, municipal and agencies debt							
Amortized cost	379	2,563	161	304	9,533	–	12,940
Fair value	379	2,563	154	302	9,450	–	12,848
Yield (5)	0.2%	0.6%	5.7%	1.6%	2.3%	–	1.9%
Other OECD government debt							
Amortized cost	3,946	503	7,491	338	–	–	12,278
Fair value	3,947	503	7,501	336	–	–	12,287
Yield (5)	0.0%	1.2%	1.0%	2.2%	–	–	0.7%
Mortgage-backed securities							
Amortized cost	–	–	57	–	258	–	315
Fair value	–	–	57	–	261	–	318
Yield (5)	–	–	1.8%	–	1.9%	–	1.9%
Asset-backed securities							
Amortized cost	–	6	644	702	1,291	–	2,643
Fair value	–	6	650	710	1,222	–	2,588
Yield (5)	–	2.2%	0.6%	0.9%	1.7%	–	1.2%
Corporate debt and other debt							
Amortized cost	1,164	1,603	10,545	369	490	–	14,171
Fair value	1,163	1,601	10,516	369	480	–	14,129
Yield (5)	1.2%	1.9%	1.7%	3.9%	4.4%	–	1.8%
Equities							
Cost	–	–	–	–	–	1,457	1,457
Fair value	–	–	–	–	–	1,756	1,756
Loan substitute securities							
Cost	–	–	–	–	–	95	95
Fair value	–	–	–	–	–	94	94
Yield (5)	–	–	–	–	–	5.1%	5.1%
Amortized cost	5,740	5,258	21,772	1,845	11,872	1,552	48,039
Fair value	5,740	5,258	21,757	1,849	11,710	1,850	48,164
Held-to-maturity (2)							
Amortized cost	889	334	3,175	4,133	110	–	8,641
Fair value	889	334	3,189	4,239	108	–	8,759
Total carrying value of securities (2)	$14,293	$ 35,849	$61,656	$ 16,324	$37,046	$50,340	$215,508

	As at October 31, 2014						
	Term to maturity (1)						
(Millions of Canadian dollars)	Within 3 months	3 months to 1 year	1 year to 5 years	5 years to 10 years	Over 10 years	With no specific maturity	Total
Trading (2)							
Canadian government debt	$ 3,050	$ 6,651	$ 7,594	$ 2,232	$ 5,987	$ –	$ 25,514
U.S. state, municipal and agencies debt	3,272	6,811	7,109	5,678	6,602	–	29,472
Other OECD government debt	1,637	3,205	6,223	1,594	2,666	–	15,325
Mortgage-backed securities	–	1	57	163	584	–	805
Asset-backed securities (3)	56	66	330	375	688	–	1,515
Corporate debt and other debt							
Bankers' acceptances	754	8	–	–	–	–	762
Certificates of deposit	17	342	574	30	17	–	980
Other (4)	470	5,501	13,093	3,004	3,788	–	25,856
Equities	–	–	–	–	–	51,151	51,151
	9,256	22,585	34,980	13,076	20,332	51,151	151,380
Available-for-sale (2)							
Canadian government debt							
Federal							
Amortized cost	626	615	8,195	2,197	–	–	11,633
Fair value	627	619	8,356	2,367	–	–	11,969
Yield (5)	1.8%	2.8%	2.2%	3.3%	–	–	2.4%
Provincial and municipal							
Amortized cost	–	–	644	130	18	–	792
Fair value	–	–	648	131	20	–	799
Yield (5)	–	–	2.4%	2.9%	4.9%	–	2.5%
U.S. state, municipal and agencies debt							
Amortized cost	108	385	80	213	5,544	–	6,330
Fair value	108	383	81	213	5,472	–	6,257
Yield (5)	0.0%	8.5%	0.7%	0.4%	0.7%	–	1.1%
Other OECD government debt							
Amortized cost	5,663	2,138	6,357	117	–	–	14,275
Fair value	5,663	2,139	6,374	117	–	–	14,293
Yield (5)	0.1%	0.2%	0.9%	0.4%	–	–	0.5%
Mortgage-backed securities							
Amortized cost	–	–	–	17	116	–	133
Fair value	–	–	–	17	121	–	138
Yield (5)	–	–	–	3.0%	1.8%	–	2.0%
Asset-backed securities							
Amortized cost	–	–	381	833	277	–	1,491
Fair value	–	–	387	849	208	–	1,444
Yield (5)	–	–	0.6%	0.5%	1.0%	–	0.6%
Corporate debt and other debt							
Amortized cost	1,625	822	5,820	727	255	–	9,249
Fair value	1,628	823	5,840	739	257	–	9,287
Yield (5)	1.1%	2.0%	1.6%	2.0%	4.2%	–	1.7%
Equities							
Cost	–	–	–	–	–	1,333	1,333
Fair value	–	–	–	–	–	1,696	1,696
Loan substitute securities							
Cost	–	–	–	–	–	124	124
Fair value	–	–	–	–	–	126	126
Yield (5)	–	–	–	–	–	3.9%	3.9%
Amortized cost	8,022	3,960	21,477	4,234	6,210	1,457	45,360
Fair value	8,026	3,964	21,686	4,433	6,078	1,822	46,009
Held-to-maturity (2)							
Amortized cost	163	110	38	1,448	–	–	1,759
Fair value	163	110	40	1,449	–	–	1,762
Total carrying value of securities (2)	$17,445	$ 26,659	$56,704	$ 18,957	$26,410	$52,973	$199,148

(1) Actual maturities may differ from contractual maturities shown above since borrowers may have the right to prepay obligations with or without prepayment penalties.
(2) Trading securities and AFS securities are recorded at fair value. Held-to-maturity securities are recorded at amortized cost.
(3) Includes CDO which are presented as Asset-backed securities – CDO in the table entitled Fair value of assets and liabilities measured on a recurring basis and classified using the fair value hierarchy in Note 3.
(4) Primarily composed of corporate debt, supra-national debt, and commercial paper.
(5) The weighted average yield is derived using the contractual interest rate and the carrying value at the end of the year for the respective securities.

Unrealized gains and losses on available-for-sale securities (1), (2)

	As at							
	October 31, 2015				October 31, 2014			
(Millions of Canadian dollars)	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Cost/ Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Canadian government debt								
Federal	$ 2,541	$ 7	$ (4)	$ 2,544	$ 11,633	$ 338	$ (2)	$11,969
Provincial and municipal	1,599	8	(7)	1,600	792	8	(1)	799
U.S. state, municipal and agencies debt (3)	12,940	14	(106)	12,848	6,330	9	(82)	6,257
Other OECD government debt	12,278	24	(15)	12,287	14,275	19	(1)	14,293
Mortgage-backed securities	315	4	(1)	318	133	5	–	138
Asset-backed securities								
CDO	1,506	12	(8)	1,510	857	26	(2)	881
Non-CDO securities	1,137	7	(66)	1,078	634	5	(76)	563
Corporate debt and other debt	14,171	39	(81)	14,129	9,249	49	(11)	9,287
Equities	1,457	314	(15)	1,756	1,333	369	(6)	1,696
Loan substitute securities	95	–	(1)	94	124	2	–	126
	$ 48,039	$ 429	$ (304)	$48,164	$ 45,360	$ 830	$ (181)	$46,009

(1) Excludes $8,641 million of held-to-maturity securities as at October 31, 2015 (October 31, 2014 – $1,759 million) that are carried at amortized cost.
(2) The majority of the mortgage-backed securities (MBS) are residential. Cost/Amortized cost, gross unrealized gains, gross unrealized losses and fair value related to commercial MBS are $243 million, $nil, $1 million and $242 million, respectively as at October 31, 2015 (October 31, 2014 – $33 million, $1 million, $nil, and $34 million).
(3) Includes securities issued by U.S. non-agencies backed by government insured assets, MBS and asset-backed securities issued by U.S. government agencies.

AFS securities are assessed for objective evidence of impairment at each reporting date and more frequently when conditions warrant. Depending on the nature of the securities under review, we apply specific methodologies to assess whether the cost/amortized cost of the security would be recovered. As at October 31, 2015, our gross unrealized losses on AFS securities were $304 million (October 31, 2014 – $181 million). Management believes that there is no objective evidence of impairment on our AFS securities that are in an unrealized loss position as at October 31, 2015.

The decrease in cost/amortized cost, gross unrealized gains and fair value of Canadian Federal government debt as compared to October 31, 2014 is primarily due to the reclassification of financial instruments as described below.

Net gains and losses on available-for-sale securities (1)

	For the year ended		
(Millions of Canadian dollars)	October 31 2015	October 31 2014	October 31 2013
Realized gains	$ 218	$ 232	$ 231
Realized losses	(20)	(15)	(17)
Impairment losses	(53)	(25)	(26)
	$ 145	$ 192	$ 188

(1) The following related to our insurance operations are excluded from Net gains on AFS securities and included in Insurance premiums, investment and fee income in the Consolidated Statements of Income for the year ended October 31, 2015: Realized gains of $22 million (October 31, 2014 – $12 million; October 31, 2013 – $3 million) and $6 million in impairment losses related to our insurance operations (October 31, 2014 – $nil; October 31, 2013 – $nil). There were no realized losses for the year ended October 31, 2015 (October 31, 2014 – $1 million; October 31, 2013 – $nil).

During the year ended October 31, 2015, $145 million of net gains were recognized in Non-interest income as compared to $192 million in the prior year. The current year reflects net realized gains of $198 million mainly comprised of distributions from, and gains on sales of certain Equities. Also included in the net gains are $53 million of impairment losses primarily on certain Equities and Loan substitute securities. This compares to net realized gains for the year ended October 31, 2014 of $217 million which was partially offset by $25 million of impairment losses.

Held-to-maturity securities

Held-to-maturity securities measured at amortized cost are subject to periodic impairment review and are classified as impaired when, in management's opinion, there is no longer reasonable assurance of the timely collection of the full amount of principal and interest. The impairment review of held-to-maturity securities is primarily based on the impairment model for loans. Management believes that there is no objective evidence of impairment on our held-to-maturity securities as at October 31, 2015.

Reclassification of financial instruments

On October 1, 2015, we reclassified certain debt securities from AFS to loans and receivables and from AFS to held-to-maturity with carrying amounts of $4,132 million and $5,240 million, respectively, as a result of a change in our intention to hold these securities until the foreseeable future or maturity. These debt securities were previously measured at fair value, with the increase in fair value recognized as part of the carrying amount (fair value premium) and in OCI. Upon reclassification, the previous carrying amount of these AFS securities became the new amortized cost of the loans and receivables and held-to-maturity securities. The net unrealized gains in Other components of equity at the reclassification date will be amortized to Net interest income over the remaining life of the reclassified securities using the effective interest method and this amortization will be offset by the amortization of the fair value premium of these securities.

On the date of reclassification, the debt securities reclassified to loans and receivables and held-to-maturity had weighted average effective interest rates of 1.67% and 3.13%, respectively, with estimated cash flows expected to be recovered, on an undiscounted basis, of $4,270 million and $5,487 million, respectively. As at October 31, 2015, the fair value and carrying value of the securities reclassified to loans and receivables were $4,078 million and $4,083 million, respectively, and the fair value and carrying value of the securities reclassified to held-to-maturity were $5,231 million and $5,231 million, respectively.

The following table provides information regarding debt securities that we reclassified in the current reporting period:

Financial instruments reclassified in the current period

	For the year ended	
	October 31, 2015	
(Millions of Canadian dollars)	**Unrealized gains (losses) during the period**	**Interest income/gains (losses) recognized in net income during the period** (1)
Available-for-sale securities reclassified to loans and receivables		
Canadian government debt – Federal (2)	$ 21	$ 83
Available-for-sale securities reclassified to held-to-maturity		
Canadian government debt – Federal (3)	48	159
	$ 69	$ 242

(1) Includes amortization of net unrealized gains associated with reclassified assets that were included in Other components of equity on the date of reclassification.
(2) The change in fair value of these debt securities recorded in OCI for the year ended October 31, 2015 was an unrealized gain of $29 million (October 31, 2014 – unrealized gain of $9 million, October 31, 2013 – unrealized gain of $9 million). Unrealized losses of $8 million would also have been recognized in OCI for the year ended October 31, 2015, had these debt securities not been reclassified.
(3) The change in fair value of these debt securities recorded in OCI for the year ended October 31, 2015 was an unrealized gain of $57 million (October 31, 2014 – unrealized gain of $13 million, October 31, 2013 – unrealized loss of $140 million). Unrealized losses of $9 million would also have been recognized in OCI for the year ended October 31, 2015, had these debt securities not been reclassified.

The following table provides information regarding certain debt securities that we reclassified in the prior reporting period:

Financial instruments reclassified in prior periods

	As at	
	October 31 2015	October 31 2014
(Millions of Canadian dollars)	**Total carrying value and fair value**	Total carrying value and fair value
Financial assets – FVTPL reclassified to available-for-sale (1)		
CDO	$ 561	$ 751
Mortgage-backed securities	19	44
	$ 580	$ 795

(1) On October 1, 2011 and November 1, 2011, we reclassified $1,872 million and $255 million, respectively, of certain CDO and U.S. non-agency MBS from classified as at FVTPL to AFS.

	For the year ended					
	October 31, 2015		October 31, 2014		October 31, 2013	
(Millions of Canadian dollars)	**Unrealized gains (losses) during the period** (1)	**Interest income/ gains (losses) recognized in net income during the period**	Unrealized gains (losses) during the period (1)	Interest income/ gains (losses) recognized in net income during the period	Unrealized gains (losses) during the period (1)	Interest income/ gains (losses) recognized in net income during the period
FVTPL reclassified to available-for-sale						
CDO	$ (17)	$ 28	$ (29)	$ 58	$ (5)	$ 59
Mortgage-backed securities	–	2	(2)	4	–	8
	$ (17)	$ 30	$ (31)	$ 62	$ (5)	$ 67

(1) This change represents the fair value gains or losses that would have been recognized in profit or loss had the assets not been reclassified.

Note 5 Loans

(Millions of Canadian dollars)	As at October 31, 2015 Canada	United States	Other International	Total	As at October 31, 2014 Canada	United States	Other International	Total
Retail (1)								
Residential mortgages	$ 229,987	$ 772	$ 3,216	$ 233,975	$ 215,624	$ 539	$ 3,094	$ 219,257
Personal	84,637	4,623	5,086	94,346	86,984	4,082	4,955	96,021
Credit cards	15,516	89	254	15,859	14,650	65	209	14,924
Small business (2)	4,003	–	–	4,003	4,067	–	–	4,067
	334,143	5,484	8,556	348,183	321,325	4,686	8,258	334,269
Wholesale (1)								
Business (3)	60,221	34,385	21,952	116,558	55,374	23,544	20,250	99,168
Bank (4)	530	115	1,155	1,800	413	30	758	1,201
Sovereign (5)	6,332	–	1,379	7,711	1,797	–	788	2,585
	67,083	34,500	24,486	126,069	57,584	23,574	21,796	102,954
Total loans	$ 401,226	$ 39,984	$ 33,042	$ 474,252	$ 378,909	$ 28,260	$ 30,054	$ 437,223
Allowance for loan losses	(1,416)	(131)	(482)	(2,029)	(1,466)	(100)	(428)	(1,994)
Total loans net of allowance for loan losses	$ 399,810	$ 39,853	$ 32,560	$ 472,223	$ 377,443	$ 28,160	$ 29,626	$ 435,229

(1) Geographic information is based on residence of borrower.
(2) Includes small business exposure managed on a pooled basis.
(3) Includes small business exposure managed on an individual client basis.
(4) Bank refers primarily to regulated deposit-taking institutions and securities firms.
(5) Sovereign refers to all central governments and agencies, central banks, as well as other qualifying public sector entities and multilateral development banks.

Loans maturity and rate sensitivity

(Millions of Canadian dollars)	As at October 31, 2015 — Maturity term (1): Under 1 year (2)	1 to 5 years	Over 5 years	Total	Rate sensitivity: Floating	Fixed Rate	Non-rate-sensitive	Total
Retail	$ 194,596	$ 143,352	$ 10,235	$ 348,183	$ 126,141	$ 216,841	$ 5,201	$ 348,183
Wholesale	101,922	19,505	4,642	126,069	53,799	70,827	1,443	126,069
Total loans	$ 296,518	$ 162,857	$ 14,877	$ 474,252	$ 179,940	$ 287,668	$ 6,644	$ 474,252
Allowance for loan losses				(2,029)				(2,029)
Total loans net of allowance for loan losses				$ 472,223				$ 472,223

(Millions of Canadian dollars)	As at October 31, 2014 — Maturity term (1): Under 1 year (2)	1 to 5 years	Over 5 years	Total	Rate sensitivity: Floating	Fixed Rate	Non-rate-sensitive	Total
Retail	$ 184,164	$ 140,566	$ 9,539	$ 334,269	$ 121,191	208,498	4,580	$ 334,269
Wholesale	83,746	15,745	3,463	102,954	44,068	57,742	1,144	102,954
Total loans	$ 267,910	$ 156,311	$ 13,002	$ 437,223	$ 165,259	$ 266,240	$ 5,724	$ 437,223
Allowance for loan losses				(1,994)				(1,994)
Total loans net of allowance for loan losses				$ 435,229				$ 435,229

(1) Generally, based on the earlier of contractual repricing or maturity date.
(2) Includes variable rate loans that can be repriced at the clients' discretion without penalty.

Allowance for credit losses

(Millions of Canadian dollars)	For the year ended October 31, 2015						
	Balance at beginning of period	Provision for credit losses	Write-offs	Recoveries	Unwind of discount	Exchange rate changes/ other	Balance at end of period
Retail							
Residential mortgages	$ 240	$ 46	$ (64)	$ 7	$ (23)	$ 36	$ 242
Personal	535	384	(494)	105	(16)	16	530
Credit cards	385	378	(497)	119	–	1	386
Small business	64	32	(40)	10	(2)	–	64
	1,224	840	(1,095)	241	(41)	53	1,222
Wholesale							
Business	768	258	(243)	33	(39)	28	805
Bank (1)	2	(1)	–	1	–	–	2
	770	257	(243)	34	(39)	28	807
Total allowance for loan losses	1,994	1,097	(1,338)	275	(80)	81	2,029
Allowance for off-balance sheet and other items (2)	91	–	–	–	–	–	91
Total allowance for credit losses	$ 2,085	$ 1,097	$ (1,338)	$ 275	$ (80)	$ 81	$ 2,120
Individually assessed	$ 214	$ 149	$ (132)	$ 18	$ (26)	$ 29	$ 252
Collectively assessed	1,871	948	(1,206)	257	(54)	52	1,868
Total allowance for credit losses	$ 2,085	$ 1,097	$ (1,338)	$ 275	$ (80)	$ 81	$ 2,120

(Millions of Canadian dollars)	For the year ended October 31, 2014						
	Balance at beginning of period	Provision for credit losses	Write-offs	Recoveries	Unwind of discount	Exchange rate changes/ other	Balance at end of period
Retail							
Residential mortgages	$ 151	$ 95	$ (30)	$ 2	$ (26)	$ 48	$ 240
Personal	583	444	(565)	106	(23)	(10)	535
Credit cards	385	353	(466)	114	–	(1)	385
Small business	61	44	(47)	9	(2)	(1)	64
	1,180	936	(1,108)	231	(51)	36	1,224
Wholesale							
Business	777	228	(221)	32	(36)	(12)	768
Bank (1)	2	–	–	–	–	–	2
	779	228	(221)	32	(36)	(12)	770
Total allowance for loan losses	1,959	1,164	(1,329)	263	(87)	24	1,994
Allowance for off-balance sheet and other items (2)	91	–	–	–	–	–	91
Total allowance for credit losses	$ 2,050	$ 1,164	$ (1,329)	$ 263	$ (87)	$ 24	$ 2,085
Individually assessed	$ 240	$ 160	$ (188)	$ 16	$ (24)	$ 10	$ 214
Collectively assessed	1,810	1,004	(1,141)	247	(63)	14	1,871
Total allowance for credit losses	$ 2,050	$ 1,164	$ (1,329)	$ 263	$ (87)	$ 24	$ 2,085

(Millions of Canadian dollars)	For the year ended October 31, 2013						
	Balance at beginning of period	Provision for credit losses	Write-offs	Recoveries	Unwind of discount	Exchange rate changes/ other	Balance at end of period
Retail							
Residential mortgages	$ 124	$ 41	$ (24)	$ 2	$ (24)	$ 32	$ 151
Personal	543	455	(498)	96	(17)	4	583
Credit cards	403	354	(466)	112	–	(18)	385
Small business	72	32	(35)	9	(2)	(15)	61
	1,142	882	(1,023)	219	(43)	3	1,180
Wholesale							
Business	852	355	(448)	51	(43)	10	777
Bank (1)	2	–	–	–	–	–	2
	854	355	(448)	51	(43)	10	779
Total allowance for loan losses	1,996	1,237	(1,471)	270	(86)	13	1,959
Allowance for off-balance sheet and other items (2)	91	–	–	–	–	–	91
Total allowance for credit losses	$ 2,087	$ 1,237	$ (1,471)	$ 270	$ (86)	$ 13	$ 2,050
Individually assessed	$ 298	$ 287	$ (346)	$ 31	$ (28)	$ (2)	$ 240
Collectively assessed	1,789	950	(1,125)	239	(58)	15	1,810
Total allowance for credit losses	$ 2,087	$ 1,237	$ (1,471)	$ 270	$ (86)	$ 13	$ 2,050

(1) Bank refers primarily to regulated deposit-taking institutions and securities firms.
(2) The allowance for off-balance sheet and other items is reported separately in Other liabilities – Provisions.

Net interest income after provision for credit losses

(Millions of Canadian dollars)	For the year ended		
	October 31 2015	October 31 2014	October 31 2013
Net interest income	**$ 14,771**	$ 14,116	$ 13,249
Provision for credit losses	**1,097**	1,164	1,237
Net interest income after provision for credit losses	**$ 13,674**	$ 12,952	$ 12,012

Loans past due but not impaired

(Millions of Canadian dollars)	As at							
	October 31, 2015				October 31, 2014			
	1 to 29 days	**30 to 89 days**	**90 days and greater**	**Total**	1 to 29 days	30 to 89 days	90 days and greater	Total
Retail	**$ 3,054**	**$ 1,298**	**$ 314**	**$4,666**	$ 3,055	$ 1,284	$ 316	$4,655
Wholesale	**417**	**184**	**–**	**601**	431	322	–	753
	$ 3,471	**$ 1,482**	**$ 314**	**$5,267**	$ 3,486	$ 1,606	$ 316	$5,408

Gross carrying value of loans individually determined to be impaired (1)

(Millions of Canadian dollars)	As at	
	October 31 2015	October 31 2014
Retail	**$ –**	$ –
Wholesale		
Business	**991**	631
Bank (2)	**2**	2
	$ 993	$ 633

(1) Average balance of gross individually assessed impaired loans for the year ended October 31, 2015 was $830 million (October 31, 2014 – $690 million).
(2) Bank refers primarily to regulated deposit-taking institutions and securities firms.

Note 6 Derecognition of financial assets

We enter into transactions in which we transfer financial assets such as loans or securities to structured entities or other third parties. The transferred financial assets are derecognized from our Consolidated Balance Sheets when we transfer substantially all of the risks and rewards of ownership of the financial assets. When we are exposed to substantially all of the risks and rewards of the assets, or when we have neither transferred nor retained substantially all of the risks and rewards but retain control of the financial assets, we continue to recognize the financial assets on our Consolidated Balance Sheets and a liability is recognized for the cash proceeds received.

The majority of assets transferred under repurchase agreements, securities lending agreements, and in our Canadian residential mortgage securitization transactions do not qualify for derecognition.

Transferred financial assets not derecognized

Securitization of Canadian residential mortgage loans

We securitize insured Canadian residential mortgage loans through the creation of MBS pools under the National Housing Act MBS (NHA MBS) program. All loans securitized under the NHA MBS program are required to be insured by the Canadian Mortgage Housing Corporation or a third-party insurer. We require the borrower to pay the insurance for mortgages in which the loan amount is greater than 80% of the original appraised value of the property (loan-to-value (LTV) ratio). For residential mortgage loans securitized under this program with an LTV ratio less than 80%, we are required to insure the mortgages at our own expense. Under the NHA MBS program, we are responsible for making all payments due on our issued MBS, regardless of whether we collect the necessary funds from the mortgagor or the insurer. When the borrower defaults on the mortgage payment, we submit a claim to the insurer if the amount recovered from the collection or foreclosure process is lower than the sum of the principal balance, accrued interest and collection costs on the outstanding loan. The insurance claim process is managed by the insurance provider in accordance with the insurer's policies and covers the entire unpaid loan balance plus generally up to 12 months of interest, selling costs and other eligible expenses. If an insurance claim is denied, a loss is recognized in Provision for credit losses in our Consolidated Statements of Income. The amount recorded as a loss is not significant to our Consolidated Financial Statements and no significant losses were incurred due to legal action arising from a mortgage default during 2015 and 2014.

We sell the NHA MBS pools primarily to a government-sponsored structured entity under the Canada Mortgage Bond (CMB) program. The entity periodically issues CMBs, which are guaranteed by the government, and sells them to third-party investors. Proceeds of the CMB issuances are used by the entity to purchase the NHA MBS pools from eligible NHA MBS issuers who participate in the issuance of a particular CMB series. Our continuing involvement includes servicing the underlying residential mortgage loans we have securitized, either ourselves or through a third-party servicer. We also act as counterparty in interest rate swap agreements where we pay the entity the interest due to CMB investors and receive the interest on the underlying MBS and reinvested assets. As part of the swap, we are also required to maintain a principal reinvestment account for principal payments received on the underlying mortgage loans to meet the repayment obligation upon maturity of the CMB. We reinvest the collected principal payments in permitted investments as outlined in the swap agreement.

We have determined that certain of the NHA MBS program loans transferred to the entity do not qualify for derecognition as we have not transferred substantially all of the risks and rewards of ownership. As a result, these transferred MBS continue to be classified as residential mortgage loans and recognized on our Consolidated Balance Sheets. The cash received for these transferred MBS is treated as a secured borrowing and a corresponding liability recorded in Deposits – Business and government on our Consolidated Balance Sheets.

Securities sold under repurchase agreements and securities loaned

We also enter into transactions such as repurchase agreements and securities lending agreements where we transfer assets under agreements to repurchase them on a future day and retain substantially all of the credit, price, interest rate and foreign exchange risks and rewards associated with the assets. These transferred assets remain on our Consolidated Balance Sheets and are accounted for as collateralized borrowing transactions.

The following table provides information on the carrying amount and fair value of the transferred assets that did not qualify for derecognition, and their associated liabilities.

	As at							
	October 31, 2015				October 31, 2014			
(Millions of Canadian dollars)	**Canadian residential mortgage loans (1), (2)**	**Securities sold under repurchase agreements (3)**	**Securities loaned (3)**	**Total**	Canadian residential mortgage loans (1) (2)	Securities sold under repurchase agreements (3)	Securities loaned (3)	Total
Carrying amount of transferred assets that do not qualify for derecognition	**$ 35,707**	**$ 78,327**	**$ 4,961**	**$ 118,995**	$ 36,972	$ 60,279	$ 4,052	$ 101,303
Carrying amount of associated liabilities	**36,130**	**78,327**	**4,961**	**119,418**	36,941	60,279	4,052	101,272
Fair value of transferred assets	**$ 35,770**	**$ 78,327**	**$ 4,961**	**$ 119,058**	$ 37,010	$ 60,279	$ 4,052	$ 101,341
Fair value of associated liabilities	**37,150**	**78,327**	**4,961**	**120,438**	37,769	60,279	4,052	102,100
Fair value of net position	**$ (1,380)**	**$ –**	**$ –**	**$ (1,380)**	$ (759)	$ –	$ –	$ (759)

(1) Includes Canadian residential mortgage loans transferred primarily to Canada Housing Trust at the initial securitization and other permitted investments used for funding requirements after the initial securitization.

(2) Canada Mortgage Bond (CMB) investors have legal recourse only to the transferred assets, and do not have recourse to our general assets.

(3) Does not include over-collateralization of assets pledged.

Note 7 Structured entities

In the normal course of business, we engage in a variety of financial transactions with structured entities to support our financing and investing needs as well as those of our customers. A structured entity is an entity in which voting or similar rights are not the dominant factor in deciding control. Structured entities are generally created to achieve a narrow and well defined objective with restrictions around their ongoing activities. We consolidate a structured entity when we control the entity in accordance with our accounting policy described in Note 2. In other cases, we may sponsor or have an interest in such an entity but not consolidate it.

Consolidated structured entities

We consolidate the following structured entities, whose assets and liabilities are recorded on our Consolidated Balance Sheets. Third-party investors in these structured entities generally have recourse only to the assets of the related entity and do not have recourse to our general assets unless we breach our contractual obligations to those entities. In the ordinary course of business, the assets of each consolidated structured entity can generally only be used to settle the obligations of that entity.

Credit card securitization vehicle

We securitize a portion of our credit card receivables through a structured entity on a revolving basis. The entity purchases co-ownership interests in a pool of credit card receivables and issues senior and subordinated term notes collateralized by the underlying pool of credit card receivables. Investors who purchase the term notes have recourse only to the underlying pool of credit card receivables.

We continue to service the credit card receivables sold and perform an administrative role for the entity. We also provide first-loss protection through our retained interest in the transferred assets, the cash reserve balance we fund from time to time, and also through certain subordinated notes which we retain. Additionally, we may own some senior notes as investments or for market-making activities; we provide subordinated loans to the entity to pay upfront expenses; and we act as counterparty to interest rate and cross currency swap agreements which hedge the entity's interest rate and currency risk exposure.

We consolidate the structured entity because we have decision making power over the timing and size of future issuances and other relevant activities which were predetermined by us at inception. We also obtain significant funding benefits and are exposed to the majority of the residual ownership risks through the credit support provided. As at October 31, 2015, $9.1 billion of notes issued by our credit card securitization vehicle were included in Deposits on our Consolidated Balance Sheets (October 31, 2014 – $8.5 billion).

Auto loan securitization vehicles

We obtained control of certain auto loan securitization vehicles as a result of the acquisition of the Canadian auto finance and deposit business of Ally Financial Inc. completed in 2013. These vehicles issued senior and subordinated notes collateralized by auto loan receivables originated and transferred to the entities by Ally Financial Inc. After the acquisition, we provided credit enhancement to the outstanding notes through overcollateralization, cash reserve accounts and our interest in the excess spread, which was subordinated to the noteholders. We also acted as swap counterparty for one entity's interest rate swap agreements which hedge its interest rate risk exposure.

We consolidate these vehicles because we have the decision making power over their investing and financing activities. As at October 31, 2015, all of the outstanding senior and subordinated notes issued by these vehicles have been repaid in full; therefore, $nil of such notes were included in Deposits on our Consolidated Balance Sheets (October 31, 2014 – $407 million).

Collateralized commercial paper vehicle

We established a funding vehicle that provides loans to us and finances those loans by issuing commercial paper to third-party investors. The structured entity's commercial paper carries an equivalent credit rating to RBC because we are obligated to advance funds to the entity in the event there are insufficient funds from other sources to settle maturing commercial paper. We pledge collateral to secure the loans and are exposed to the market and credits risks of the pledged securities. We administer the entity and earn an administration fee for providing these services.

We consolidate the structured entity because we have decision making power over the relevant activities, are the sole borrower from the structure, and are exposed to a majority of the residual ownership risks through the credit support provided. As at October 31, 2015, $11.8 billion of commercial paper issued by the vehicle was included in Deposits on our Consolidated Balance Sheets (October 31, 2014 – $7.8 billion).

Innovative capital vehicles

RBC Capital Trust was created to issue innovative capital instruments, the proceeds from which were used to purchase mortgages from RBC. We consolidate the trust as, through our roles as trustee, administrative agent and equity investor, we have the decision making power over the relevant activities of the trust and are exposed to variability from the performance of the underlying mortgages. Refer to Note 20 for further details on our innovative capital instruments.

Covered bonds

RBC Covered Bond Guarantor Limited Partnership (Guarantor LP) was created to issue guarantees of covered bonds that we issue. We periodically transfer mortgages to Guarantor LP to support funding activities and asset coverage requirements under our covered bond program. The covered bonds guaranteed by Guarantor LP are direct, unsecured and unconditional obligations of RBC; therefore, investors have a claim against the Bank which will continue if the covered bonds are not paid by the Bank and the mortgage assets in Guarantor LP are insufficient to satisfy the obligations owing on the covered bonds. We act as general partner, limited partner, swap counterparty, lender and liquidity provider to Guarantor LP and registered issuer of the covered bonds.

We consolidate Guarantor LP as we have the decision making power over the relevant activities through our role as general partner and are exposed to variability from the performance of the underlying mortgages. As at October 31, 2015, the total amount of mortgages transferred and outstanding was $54.5 billion (October 31, 2014 – $38.3 billion) and $37.2 billion of covered bonds were recorded as Deposits on our Consolidated Balance Sheets (October 31, 2014 – $26.4 billion).

Municipal bond TOB structures

We sell taxable and tax-exempt municipal bonds into Tender Option Bond (TOB) structures, which consist of a credit enhancement (CE) trust and a TOB trust. The CE trust purchases a bond from us, financed with a trust certificate issued to the TOB trust. The TOB trust then issues floating-rate certificates to short-term investors and a residual certificate that is held by us. We are the remarketing agent for the floating-rate certificates

and provide a liquidity facility to the TOB trust which requires us to purchase any certificates tendered but not successfully remarketed. We also provide a letter of credit to the CE trust under which we are required to extend funding if there are any losses on the underlying bonds. We earn interest on the residual certificate and receive market-based fees for acting as remarketing agent and providing the liquidity facility and letter of credit.

We consolidate both the CE trust and TOB trust when we are the holder of the residual certificate as we have decision making power over the relevant activities, including the selection of the underlying municipal bonds and the ability to terminate the structure, and are exposed to variability from the performance of the underlying municipal bonds. As at October 31, 2015, $6.0 billion of municipal bonds were included in AFS securities related to consolidated TOB structures (October 31, 2014 – $3.3 billion) and a corresponding $6.1 billion of floating rate certificates were included in Deposits on our Consolidated Balance Sheets (October 31, 2014 – $3.3 billion).

Non-RBC managed Investment funds

We enter into certain fee-based equity derivative transactions where our investments in the reference funds are held by an intermediate limited partnership entity (intermediate entity) in which we hold a substantial majority of the equity interests. We consolidate the intermediate entity because we have the decision making power to direct all the activities of the entity and are exposed to a majority of the risks and rewards through our equity investments. As at October 31, 2015, $227 million of Trading securities representing our investments in the reference funds were recorded on our Consolidated Balance Sheets (October 31, 2014 – $277 million).

RBC managed investment funds

We are sponsors and investment managers of mutual and pooled funds, which gives us the ability to direct the investment decisions of the funds. We consolidate those mutual and pooled funds in which our interests, which include direct investment in seed capital plus management or performance fees, indicate that we are acting as a principal. As at October 31, 2015, $586 million of Trading securities held in the consolidated funds (October 31, 2014 – $586 million) and $190 million of Other liabilities representing the fund units held by third parties (October 31, 2014 – $189 million) were recorded on our Consolidated Balance Sheets.

Unconsolidated structured entities

We have interests in certain structured entities that we do not consolidate but have recorded assets and liabilities on our Consolidated Balance Sheets related to our transactions and involvement with these entities.

The following table presents the assets and liabilities recorded on our Consolidated Balance Sheets and our maximum exposure to loss related to our interests in unconsolidated structured entities. It also presents the size of each class of unconsolidated structured entity, as measured by the total assets of the entities in which we have an interest.

	As at October 31, 2015						
(Millions of Canadian dollars)	Multi-seller conduits (1)	Structured finance	Non-RBC managed investment funds	RBC managed investment funds	Third-party securitization vehicles	Other	Total
On-balance sheet assets							
Securities	$ 17	$ –	$ 2,661	$ 275	$ –	$ 697	$ 3,650
Loans	764	1,323	–	–	5,447	–	7,534
Derivatives	19	2	–	–	3	54	78
Other assets	–	547	1	225	–	57	830
	$ 800	$ 1,872	$ 2,662	$ 500	$ 5,450	$ 808	$ 12,092
On-balance sheet liabilities							
Derivatives	$ 24	$ –	$ –	$ –	$ –	$ 11	$ 35
Other liabilities	–	–	33	–	–	2	35
	$ 24	$ –	$ 33	$ –	$ –	$ 13	$ 70
Maximum exposure to loss (2)	$ 37,789	$ 3,681	$ 3,440	$ 490	$ 9,694	$ 927	$ 56,021
Total assets of unconsolidated structured entities	$ 37,044	$ 21,621	$ 658,236	$ 278,474	$ 125,294	$ 67,658	$ 1,188,327

	As at October 31, 2014						
(Millions of Canadian dollars)	Multi-seller conduits (1)	Structured finance	Non-RBC managed investment funds	RBC managed investment funds	Third-party securitization vehicles	Other	Total
On-balance sheet assets							
Securities	$ 42	$ –	$ 3,343	$ 151	$ 1	$ 696	$ 4,233
Loans	864	–	–	–	1,463	–	2,327
Derivatives	–	3	–	–	–	8	11
Other assets	–	913	1	220	–	51	1,185
	$ 906	$ 916	$ 3,344	$ 371	$ 1,464	$ 755	$ 7,756
On-balance sheet liabilities							
Derivatives	$ 85	$ –	$ –	$ –	$ 2	$ –	$ 87
Other liabilities	–	–	5	–	–	3	8
	$ 85	$ –	$ 5	$ –	$ 2	$ 3	$ 95
Maximum exposure to loss (2)	$ 31,019	$ 2,158	$ 4,005	$ 203	$ 2,397	$ 873	$ 40,655
Total assets of unconsolidated structured entities	$ 30,428	$ 13,118	$ 621,938	$ 272,852	$ 27,095	$ 64,963	$ 1,030,394

(1) Total assets of unconsolidated structured entities represent the maximum assets that may have to be purchased by the conduits under purchase commitments outstanding. Of the purchase commitments outstanding, the conduits have purchased financial assets totalling $25.2 billion as at October 31, 2015 (October 31, 2014 – $19.8 billion).

(2) The maximum exposure to loss resulting from our interests in these entities consists mostly of investments, loans, fair value of derivatives, liquidity and credit enhancement facilities. The maximum exposure to loss of the multi-seller conduits is higher than the on-balance sheet assets primarily by the notional amounts of the backstop liquidity and credit enhancement facilities. Refer to Note 26.

Below is a description of our involvement with each significant class of unconsolidated structured entity.

Multi-seller conduits
We administer five multi-seller asset-backed commercial paper (ABCP) conduit programs (multi-seller conduits) – two in Canada and three in the U.S. These conduits primarily purchase financial assets from clients and finance those purchases by issuing ABCP.

We do not maintain any ownership or retained interests in the multi-seller conduits that we administer and have no rights to, or control of, their assets. As the administrative agent, we earn a residual fee for providing services such as coordinating funding activities, transaction structuring, documentation, execution and monitoring of transactions. The ABCP issued by each multi-seller conduit is in the conduit's own name with recourse to the financial assets owned by each multi-seller conduit, and is non-recourse to us except through our participation in liquidity and/or credit enhancement facilities. We may purchase ABCP issued by our multi-seller conduits from time to time in our capacity as placement agent in order to facilitate the overall program liquidity.

We provide transaction-specific and program-wide liquidity facilities to the multi-seller conduits. In addition, we provide program-wide credit enhancement to the multi-seller conduits which obligate us to purchase assets or advance funds in the event the multi-seller conduit does not otherwise have funds from other sources, such as from the liquidity facilities, to settle maturing ABCP. In some cases, we or another third party may provide transaction-specific credit enhancement which can take various forms. We receive market-based fees for providing these liquidity and credit facilities.

For certain transactions, we act as counterparty to foreign exchange rate forward contracts and interest rate swaps to facilitate our clients' securitization of fixed rate and/or foreign currency denominated assets through the conduits. These derivatives expose us to foreign exchange and interest rate risks that are centrally managed by our foreign exchange trading and swap desks, respectively, and credit risk on the underlying assets that is mitigated by the credit enhancement described below.

Each transaction is structured with transaction-specific first loss protection provided by the third-party seller. This enhancement can take various forms, including but not limited to overcollateralization, excess spread, subordinated classes of financial assets, guarantees or letters of credit. The amount of this enhancement varies but is generally sized to cover a multiple of loss experience.

An unrelated third party (expected loss investor) absorbs credit losses, up to a maximum contractual amount, that may occur in the future on the assets in the multi-seller conduits before the multi-seller conduits' debt holders and us. In return for assuming this multi-seller conduit first-loss position, each multi-seller conduit pays the expected loss investor a return commensurate with its risk position. The expected loss investor has substantive power to direct the majority of the activities which significantly impact the conduit's economic performance, including initial selection and approval of the asset purchase commitments and liquidity facilities, approval of renewal and amendment of these transactions and facilities, sale or transfer of assets, ongoing monitoring of asset performance, mitigation of credit losses, and management of the ABCP liabilities.

We do not consolidate these multi-seller conduits as we do not have the decision-making power to direct the relevant activities noted above.

Structured finance
We purchased U.S. ARS from certain trusts (U.S. ARS Trusts) which fund their long-term investments in student loans by issuing short-term senior and subordinated notes. We are subject to losses on these U.S. ARS Trusts if defaults are experienced on the underlying student loans; however, in the majority of these structures, the principal and accrued interest on the student loans is guaranteed by U.S. government agencies. We act as auction agent for some of these entities but have no legal obligation to purchase the notes issued by these entities in the auction process. We do not consolidate these U.S. ARS Trusts as we do not have decision making power over the investing and financing activities of the Trusts, which are the activities that most significantly affect the performance of the Trusts.

Additionally, we invest in certain municipal bond TOB structures that we do not consolidate. These structures are similar to those consolidated municipal bond TOB structures described above; however, the residual certificates are held by third-parties and we do not provide credit enhancement of the underlying assets. We only provide liquidity facilities on the floating-rate certificates which may be drawn if certificates are tendered but not able to be remarketed. We do not have decision making power over the relevant activities of the structures; therefore, we do not consolidate these structures. The assets transferred into these programs are derecognized from our Consolidated Balance Sheets.

We provide senior warehouse financing to structured entities that are established by third parties to acquire loans for the purposes of issuing a term collateralized loan obligation (CLO) transaction. Subordinated financing is provided during the warehouse phase by one or more third-party equity investors. We act as the arranger and placement agent for the term CLO transaction. Proceeds from the sale of the term CLO are used to repay our senior warehouse financing, at which point we have no further involvement with the transaction. We do not consolidate these CLO structures as we do not have decision making power over the relevant activities of the entity, which include the initial selection and subsequent management of the underlying debt portfolio.

Non-RBC managed investment funds
We enter into fee-based equity derivative transactions with third parties including mutual funds, unit investment trusts and other investment funds. These transactions provide their investors with the desired exposure to a reference fund, and we economically hedge our exposure to these derivatives by investing in those reference funds. We also act as custodian or administrator for several funds. We do not consolidate those reference funds that are managed by third parties as we do not have power to direct their investing activities.

We provide liquidity facilities to certain third-party investment funds. The funds issued unsecured variable-rate preferred shares and invest in portfolios of tax-exempt municipal bonds. Undrawn liquidity commitments expose us to liquidity risk of the preferred shares and drawn commitments expose us to the credit risk of the underlying municipal bonds. We do not consolidate these third-party managed funds as we do not have power to direct their investing activities.

RBC managed investment funds
We are sponsors and investment managers of mutual and pooled funds which gives us the ability to direct the investment decisions of the funds. We do not consolidate those mutual and pooled funds in which our interests indicate that we are exercising our decision making power as an agent of the other unit holders.

Third-party securitization vehicles
We hold interests in securitization vehicles that provide funding to certain third parties on whose behalf the entities were created. The activities of these entities are limited to the purchase and sale of specified assets from the sponsor and the issuance of asset-backed notes collateralized by those assets. The underlying assets are typically receivables, including auto loans and leases. We, as well as other financial institutions, are

obligated to provide funding up to our maximum commitment level and are exposed to credit losses on the underlying assets after various credit enhancements. Enhancement can take various forms, including but not limited to overcollateralization, excess spread, subordinated classes of financial assets, guarantees or letters of credit. The amount of this enhancement varies but is generally sized to cover a multiple of loss experience. We do not consolidate these entities as we do not have decision making power over the relevant activities, including the investing and financing activities.

Other
Other structured entities include credit investment products and tax credit funds.

We use structured entities to generally transform credit derivatives into cash instruments, to distribute credit risk and to create customized credit products to meet investors' specific requirements. We enter into derivative contracts, including credit derivatives, to purchase protection from these entities (credit protection) and convert various risk factors such as yield, currency or credit risk of underlying assets to meet the needs of the investors. We act as sole arranger and swap provider for certain entities and, in some cases, fulfill other administrative functions for the entities. We do not consolidate these credit investment product entities as we do not have decision making power over the relevant activities, which include selection of the collateral and reference portfolio, and are not exposed to a majority of the benefits or risks of the entities.

We created certain funds to pass through tax credits received from underlying low-income housing or historic rehabilitation real estate projects to third parties (tax credit funds). We are sponsors of the tax credit funds as a result of our responsibility to manage the funds, arrange the financing, and perform the administrative duties of these tax credit funds. We do not consolidate the tax credit funds as the investors in these funds have the decision making power to select the underlying investments and are exposed to the majority of the residual ownership and tax risks of the funds.

Other interests in unconsolidated structured entities
In the normal course of business, we buy and sell passive interests in certain third-party structured entities, including mutual funds, exchange traded funds, and government-sponsored asset backed securities vehicles. Our investments in these entities are managed as part of larger portfolios which are held for trading, liquidity or hedging purposes. We did not create or sponsor these entities and do not have any decision making power over their ongoing activities. Our maximum exposure to loss is limited to our on-balance sheet investments in these entities, which are not included in the table above. Refer to Note 3 and Note 4 for further details on our investment securities.

Sponsored entities
We are a sponsor of certain structured entities in which we have interests but do not consolidate. In determining whether we are a sponsor of a structured entity, we consider both qualitative and quantitative factors, including the purpose and nature of the entity, our initial and continuing involvement and whether we hold subordinated interests in the entity. We are considered to be the sponsor of certain credit investment products, tax credit entities, RBC-managed mutual funds and a commercial mortgage securitization vehicle. During the year ended October 31, 2015, we transferred commercial mortgages with a carrying amount of $195 million (October 31, 2014 – $173 million) to a sponsored securitization vehicle in which we did not have an interest as at the end of the reporting period.

Financial support provided to structured entities
During the years ended October 31, 2015, 2014 and 2013, we have not provided any financial or non-financial support to any consolidated or unconsolidated structured entities when we were not contractually obligated to do so. Furthermore, we have no intention to provide such support in the future.

Note 8 Derivative financial instruments and hedging activities

Derivative instruments are categorized as either financial or non-financial derivatives. Financial derivatives are financial contracts whose value is derived from an underlying interest rate, foreign exchange rate, credit risk, and equity or equity index. Non-financial derivatives are contracts whose value is derived from a precious metal, commodity instrument or index. The notional amount of derivatives represents the contract amount used as a reference point to calculate payments. Notional amounts are generally not exchanged by counterparties, and do not reflect our exposure at default.

Financial derivatives
Forwards and futures
Forward contracts are effectively non-standardized agreements that are transacted between counterparties in the OTC market, whereas futures are standardized contracts with respect to amounts and settlement dates, and are traded on regular futures exchanges. Examples of forwards and futures are described below.

Interest rate forwards (forward rate agreements) and futures are contractual obligations to buy or sell an interest-rate sensitive financial instrument on a predetermined future date at a specified price.

Foreign exchange forwards and futures are contractual obligations to exchange one currency for another at a specified price for settlement at a predetermined future date.

Equity forwards and futures are contractual obligations to buy or sell at a fixed value (the specified price) of an equity index, a basket of stocks or a single stock at a predetermined future date.

Swaps
Swaps are OTC contracts in which two counterparties exchange a series of cash flows based on agreed upon rates applied to a notional amount. Examples of swap agreements are described below.

Interest rate swaps are agreements where two counterparties exchange a series of payments based on different interest rates applied to a notional amount in a single currency. Cross currency swaps involve the exchange of fixed payments in one currency for the receipt of fixed payments in another currency. Cross currency interest rate swaps involve the exchange of both interest and notional amounts in two different currencies.

Equity swaps are contracts in which one counterparty agrees to pay or receive from the other cash flows based on changes in the value of an equity index, a basket of stocks or a single stock.

Options
Options are contractual agreements under which the seller (writer) grants the purchaser the right, but not the obligation, either to buy (call option) or sell (put option), a security, exchange rate, interest rate, or other financial instrument or commodity at a predetermined price, at or by a specified future date. The seller (writer) of an option can also settle the contract by paying the cash settlement value of the purchaser's right. The seller (writer) receives a premium from the purchaser for this right. The various option agreements that we enter into include but are not limited to interest rate options, foreign currency options, equity options and index options.

Credit derivatives
Credit derivatives are OTC contracts that transfer credit risk related to an underlying financial instrument (referenced asset) from one counterparty to another. Examples of credit derivatives are described below.

Credit default swaps provide protection against the decline in value of the referenced asset as a result of specified credit events such as default or bankruptcy. They are similar in structure to an option, whereby the purchaser pays a premium to the seller of the credit default swap in return for payment contingent on a credit event affecting the referenced asset.

Credit default baskets are similar to credit default swaps except that the underlying referenced financial instrument is a group of assets instead of a single asset.

Total return swaps are contracts where one counterparty agrees to pay or receive from the other cash flows based on changes in the value of the referenced asset.

Other derivative products
Certain warrants and loan commitments that meet the definition of derivative are also included as derivative instruments.

Non-financial derivatives
We also transact in non-financial derivative products including precious metal and commodity derivative contracts in both the OTC and exchange markets.

Derivatives issued for trading purposes
Most of our derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to clients to enable them to transfer, modify or reduce current or expected risks. Trading involves market-making, positioning and arbitrage activities. Market-making involves quoting bid and offer prices to other market participants with the intention of generating revenue based on spread and volume. Positioning involves managing market risk positions with the expectation of profiting from favourable movements in prices, rates or indices. Arbitrage activities involve identifying and profiting from price differentials between markets and products.

Derivatives issued for other-than-trading purposes
We also use derivatives for purposes other than trading, primarily for hedging, in conjunction with the management of interest rate, credit, equity and foreign exchange risk related to our funding, lending, investment activities and asset/liability management.

Interest rate swaps are used to manage our exposure to interest rate risk by modifying the repricing or maturity characteristics of existing and/or forecasted assets and liabilities, including funding and investment activities. Purchased options are used to hedge redeemable deposits and other options embedded in consumer products. We manage our exposure to foreign currency risk with cross currency swaps and foreign exchange forward contracts. We predominantly use credit derivatives to manage our credit exposures. We mitigate industry sector concentrations and single-name exposures related to our credit portfolio by purchasing credit derivatives to transfer credit risk to third parties.

Certain derivatives and cash instruments are specifically designated and qualify for hedge accounting. We apply hedge accounting to minimize volatility in earnings and capital caused by changes in interest rates or foreign exchange rates. Interest rate and currency fluctuations will either cause assets and liabilities to appreciate or depreciate in market value or cause variability in forecasted cash flows. When a hedging relationship is effective, gains, losses, revenue and expenses of the hedging instrument will offset the gains, losses, revenue and expenses of the hedged item. We largely assess and measure the effectiveness of a hedging relationship based on the change in fair value of the derivative hedging instrument relative to the change in fair value of the hedged item. When cash instruments are designated as hedges of currency risks, only changes in their value due to currency risk are included in the assessment and measurement of hedge effectiveness.

From time to time, we also enter into derivative transactions to economically hedge certain exposures that do not otherwise qualify for hedge accounting, or where hedge accounting is not considered economically feasible to implement. In such circumstances, changes in fair value are reflected in Non-interest income.

After-tax unrealized losses relating to de-designated hedges of $65 million (before-tax unrealized losses of $89 million) included in Other components of equity as at October 31, 2015, are expected to be reclassified to Net interest income within the next 12 months.

The following table presents the fair values of the derivative and non-derivative instruments categorized by their hedging relationships, as well as derivatives that are not designated in hedging relationships.

Derivatives and non-derivative instruments

	As at							
	October 31, 2015				October 31, 2014			
	Designated as hedging instruments in hedging relationships				Designated as hedging instruments in hedging relationships			
(Millions of Canadian dollars)	Cash flow hedges	Fair value hedges	Net investment hedges	Not designated in a hedging relationship	Cash flow hedges	Fair value hedges	Net investment hedges	Not designated in a hedging relationship
Assets								
Derivative instruments	$ 842	$ 1,814	$ 167	$ 102,803	$ 504	$ 1,392	$ 87	$ 85,419
Liabilities								
Derivative instruments	1,629	311	49	105,871	511	121	205	88,145
Non-derivative instruments	–	–	18,804	–	–	–	20,949	–

Results of hedge activities recorded in Net income and Other comprehensive income

(Millions of Canadian dollars)	For the year ended October 31, 2015			October 31, 2014			October 31, 2013		
	Net gains (losses) included in Non-interest income	Net gains (losses) included in Net interest income	After-tax unrealized gains (losses) included in OCI	Net gains (losses) included in Non-interest income	Net gains (losses) included in Net interest income	After-tax unrealized gains (losses) included in OCI	Net gains (losses) included in Non-interest income	Net gains (losses) included in Net interest income	After-tax unrealized gains (losses) included in OCI
Fair value hedges									
Gains (losses) on hedging instruments	$ 313	$ n.a.	$ n.a.	$ 216	$ n.a.	$ n.a.	$ (551)	$ n.a.	$ n.a.
Gains (losses) on hedged items attributable to the hedged risk	(424)	n.a.	n.a.	(329)	n.a.	n.a.	459	n.a.	n.a.
Ineffective portion (1)	(111)	n.a.	n.a.	(113)	n.a.	n.a.	(92)	n.a.	n.a.
Cash flow hedges									
Ineffective portion	3	n.a.	n.a.	(13)	n.a.	n.a.	(13)	n.a.	n.a.
Effective portion	n.a.	n.a.	(541)	n.a.	n.a.	(108)	n.a.	n.a.	(11)
Reclassified to income during the period (2)	n.a.	(447)	n.a.	n.a.	(38)	n.a.	n.a.	40	n.a.
Net investment hedges									
Ineffective portion	(1)	n.a.	n.a.	1	n.a.	n.a.	1	n.a.	n.a.
Foreign currency gains (losses)	n.a.	n.a.	5,885	n.a.	n.a.	2,743	n.a.	n.a.	1,402
Gains (losses) from hedges	n.a.	n.a.	(3,223)	n.a.	n.a.	(1,585)	n.a.	n.a.	(912)
	$ (109)	$ (447)	$ 2,121	$ (125)	$ (38)	$ 1,050	$ (104)	$ 40	$ 479

(1) Includes losses of $106 million (October 31, 2014 – $109 million; October 31, 2013 – $82 million) that are excluded from the assessment of hedge effectiveness. These amounts are recorded in Non-interest income and are offset by economic hedges.

(2) After-tax losses of $330 million were reclassified from Other components of equity to income during the year ended October 31, 2015 (October 31, 2014 – losses of $28 million; October 31, 2013 – gains of $30 million).

n.a. not applicable

Notional amount of derivatives by term to maturity (absolute amounts)

(Millions of Canadian dollars)	As at October 31, 2015					
	Term to maturity					
	Within 1 year	1 to 5 years	Over 5 years (1)	Total	Trading	Other than Trading
Over-the-counter contracts						
Interest rate contracts						
Forward rate agreements	$ 602,072	$ 26,334	$ –	$ 628,406	$ 628,406	$ –
Swaps	1,717,989	3,946,377	2,482,659	8,147,025	7,922,567	224,458
Options purchased	106,908	99,994	34,649	241,551	241,551	–
Options written	107,213	108,237	44,268	259,718	259,718	–
Foreign exchange contracts						
Forward contracts	1,273,434	45,591	1,275	1,320,300	1,271,428	48,872
Cross currency swaps	7,404	24,711	31,010	63,125	59,423	3,702
Cross currency interest rate swaps	246,668	609,751	323,403	1,179,822	1,129,357	50,465
Options purchased	25,921	13,773	4,274	43,968	43,968	–
Options written	24,933	12,168	4,677	41,778	41,778	–
Credit derivatives (2)	1,250	9,759	3,947	14,956	14,286	670
Other contracts (3)	75,723	57,344	24,819	157,886	154,504	3,382
Exchange-traded contracts						
Interest rate contracts						
Futures – long positions	18,934	10,469	10	29,413	29,413	–
Futures – short positions	36,589	25,939	2	62,530	62,530	–
Options purchased	17,282	9,119	–	26,401	26,401	–
Options written	1,281	956	–	2,237	2,237	–
Foreign exchange contracts						
Futures – long positions	308	–	–	308	308	–
Futures – short positions	714	13	–	727	727	–
Other contracts (3)	170,464	43,345	1,197	215,006	215,006	–
	$ 4,435,087	$ 5,043,880	$ 2,956,190	$ 12,435,157	$ 12,103,608	$ 331,549

(Millions of Canadian dollars)	As at October 31, 2014					
	Term to maturity					
	Within 1 year	1 to 5 years	Over 5 years (1)	Total	Trading	Other than Trading
Over-the-counter contracts						
Interest rate contracts						
Forward rate agreements	$ 324,707	$ 47,227	$ –	$ 371,934	$ 371,934	$ –
Swaps	1,626,852	3,301,834	1,852,349	6,781,035	6,579,940	201,095
Options purchased	98,085	101,493	23,930	223,508	223,508	–
Options written	97,259	104,445	32,258	233,962	233,962	–
Foreign exchange contracts						
Forward contracts	1,019,102	30,832	1,094	1,051,028	1,018,520	32,508
Cross currency swaps	7,371	15,102	20,415	42,888	42,156	732
Cross currency interest rate swaps	148,340	424,982	218,011	791,333	763,764	27,569
Options purchased	27,159	12,665	4,058	43,882	43,882	–
Options written	28,287	12,220	4,475	44,982	44,982	–
Credit derivatives (2)	1,702	16,188	8,124	26,014	24,707	1,307
Other contracts (3)	62,652	58,982	20,685	142,319	140,168	2,151
Exchange-traded contracts						
Interest rate contracts						
Futures – long positions	14,429	16,614	47	31,090	31,090	–
Futures – short positions	52,345	19,373	1	71,719	71,719	–
Options purchased	21,303	5,229	–	26,532	26,532	–
Options written	4,322	–	–	4,322	4,322	–
Foreign exchange contracts						
Futures – long positions	960	–	–	960	960	–
Futures – short positions	1,167	–	–	1,167	1,167	–
Other contracts (3)	132,399	33,755	420	166,574	166,571	3
	$ 3,668,441	$ 4,200,941	$ 2,185,867	$ 10,055,249	$ 9,789,884	$ 265,365

(1) Includes contracts maturing in over 10 years with a notional value of $876 billion (October 31, 2014 – $668 billion). The related gross positive replacement cost is $60 billion (October 31, 2014 – $39 billion).

(2) Credit derivatives include credit default swaps, total return swaps and credit default baskets. Credit derivatives with a notional value of $0.7 billion (October 31, 2014 – $1.3 billion) are economic hedges. Trading credit derivatives comprise protection purchased of $8.9 billion (October 31, 2014 – $13.3 billion) and protection sold of $5.3 billion (October 31, 2014 – $11.4 billion).

(3) Other contracts include precious metal, commodity, stable value and equity derivative contracts.

The following tables indicate the periods when the cash flows are expected to occur and when they are expected to affect profit or loss for cash flow hedges.

(Millions of Canadian dollars)	As at October 31, 2015					
	Within 1 year	**1 to 2 years**	**2 to 3 years**	**3 to 5 years**	**Over 5 years**	**Total**
Cash inflows from assets	**$ 156**	**$ 189**	**$ 192**	**$ 243**	**$ 12**	**$ 792**
Cash outflows from liabilities	**(1,004)**	**(282)**	**(730)**	**(3,556)**	**(151)**	**(5,723)**
Net cash flows	**$ (848)**	**$ (93)**	**$ (538)**	**$ (3,313)**	**$ (139)**	**$ (4,931)**

(Millions of Canadian dollars)	As at October 31, 2014					
	Within 1 year	1 to 2 years	2 to 3 years	3 to 5 years	Over 5 years	Total
Cash inflows from assets	$ 268	$ 287	$ 243	$ 325	$ 85	$ 1,208
Cash outflows from liabilities	(540)	(446)	(384)	(269)	(87)	(1,726)
Net cash flows	$ (272)	$ (159)	$ (141)	$ 56	$ (2)	$ (518)

Fair value of derivative instruments

	As at							
	October 31, 2015				October 31, 2014			
	Average fair value for year ended (1)		Year end fair value		Average fair value for year ended (1)		Year end fair value	
(Millions of Canadian dollars)	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Held or issued for trading purposes								
Interest rate contracts								
Forward rate agreements	$ 340	$ 303	$ 323	$ 291	$ 258	$ 206	$ 347	$ 357
Swaps	136,398	130,623	135,901	129,829	78,884	75,195	95,960	91,386
Options purchased	4,155	–	3,330	–	3,671	–	4,123	–
Options written	–	5,380	–	4,573	–	4,509	–	5,101
	140,893	136,306	139,554	134,693	82,813	79,910	100,430	96,844
Foreign exchange contracts								
Forward contracts	16,505	16,294	11,599	11,477	8,416	8,741	12,155	11,752
Cross currency swaps	3,039	3,254	3,844	4,109	1,732	1,155	1,788	1,506
Cross currency interest rate swaps	21,445	27,584	19,931	26,385	10,433	14,261	16,034	19,165
Options purchased	3,026	–	2,337	–	1,645	–	2,621	–
Options written	–	2,486	–	1,898	–	1,349	–	2,222
	44,015	49,618	37,711	43,869	22,226	25,506	32,598	34,645
Credit derivatives (2)	130	200	94	153	225	281	254	301
Other contracts (3)	9,431	12,868	10,704	12,866	7,052	10,662	8,525	12,373
	194,469	198,992	188,063	191,581	112,316	116,359	141,807	144,163
Held or issued for other than trading purposes								
Interest rate contracts								
Swaps			2,923	1,585			2,098	626
			2,923	1,585			2,098	626
Foreign exchange contracts								
Forward contracts			274	253			326	259
Cross currency swaps			20	506			–	45
Cross currency interest rate swaps			3,107	2,080			885	754
			3,401	2,839			1,211	1,058
Credit derivatives (2)			–	18			–	41
Other contracts (3)			69	69			112	112
			6,393	4,511			3,421	1,837
Total gross fair values before netting			194,456	196,092			145,228	146,000
Valuation adjustments determined on a pooled basis			(1,303)	(272)			(758)	(36)
Impact of netting agreements that qualify for balance sheet offset			(87,527)	(87,960)			(57,068)	(56,982)
			105,626	107,860			87,402	88,982
Impact of netting agreements that do not qualify for balance sheet offset (4)			(71,833)	(71,833)			(60,546)	(60,546)
			$ 33,793	$ 36,027			$ 26,856	$ 28,436

(1) Average fair value amounts are calculated based on monthly balances.
(2) Credit derivatives include credit default swaps, total return swaps and credit default baskets.
(3) Other contracts include precious metal, commodity, stable value and equity derivative contracts.
(4) Additional impact of offsetting credit exposures on contracts that do not qualify for balance sheet offset.

Fair value of derivative instruments by term to maturity

	As at							
	October 31, 2015				October 31, 2014			
(Millions of Canadian dollars)	Less than 1 year	1 to 5 years	Over 5 years	Total	Less than 1 year	1 to 5 years	Over 5 years	Total
Derivative assets	$ 24,920	$ 35,883	$ 44,823	$ 105,626	$ 19,485	$ 29,838	$ 38,079	$ 87,402
Derivative liabilities	26,092	40,380	41,388	107,860	19,980	32,640	36,362	88,982

Derivative-related credit risk

Credit risk from derivative transactions is generated by the potential for the counterparty to default on its contractual obligations when one or more transactions have a positive market value to us. Therefore, derivative-related credit risk is represented by the positive fair value of the instrument and is normally a small fraction of the contract's notional amount.

We subject our derivative transactions to the same credit approval, limit and monitoring standards that we use for managing other transactions that create credit exposure. This includes evaluating the creditworthiness of counterparties, and managing the size, diversification and maturity structure of the portfolio. Credit utilization for all products is compared with established limits on a continual basis and is subject to a standard exception reporting process. We use a single internal rating system for all credit risk exposure. In most cases, these internal ratings approximate the external risk ratings of public rating agencies.

Netting is a technique that can reduce credit exposure from derivatives and is generally facilitated through the use of master netting agreements. A master netting agreement provides for a single net settlement of all financial instruments covered by the agreement in the event of default. However, credit risk is reduced only to the extent that our financial obligations to the same counterparty can be set off against

obligations of the counterparty to us. We maximize the use of master netting agreements to reduce derivative-related credit exposure. Our overall exposure to credit risk that is reduced through master netting agreements may change substantially following the reporting date as the exposure is affected by each transaction subject to the agreement as well as by changes in underlying market rates. Measurement of our credit exposure arising out of derivative transactions is reduced to reflect the effects of netting in cases where the enforceability of that netting is supported by appropriate legal analysis as documented in our trading credit risk policies.

The use of collateral is another significant credit mitigation technique for managing derivative-related counterparty credit risk. Mark-to-market provisions in our agreements with some counterparties, typically in the form of a Credit Support Annex, provide us with the right to request that the counterparty pay down or collateralize the current market value of its derivatives positions when the value passes a specified threshold amount.

Replacement cost represents the total fair value of all outstanding contracts in a gain position after factoring in the master netting agreements. The credit equivalent amount is defined as the sum of the replacement cost plus an add-on amount for potential future credit exposure as defined by OSFI. The risk-weighted amount is determined by applying the standard OSFI defined measures of counterparty risk to the credit equivalent amount.

Derivative-related credit risk

	As at					
	October 31, 2015 (1)			October 31, 2014 (1)		
(Millions of Canadian dollars)	**Replacement cost**	**Credit equivalent amount** (2)	**Risk-weighted equivalent** (3)	Replacement cost	Credit equivalent amount (2)	Risk-weighted equivalent (3)
Over-the-counter contracts						
Interest rate contracts						
Forward rate agreements	$ 182	$ 233	$ 50	$ 183	$ 276	$ 70
Swaps	14,747	27,688	5,197	12,455	22,308	4,660
Options purchased	340	700	446	355	665	386
Foreign exchange contracts						
Forward contracts	5,041	11,254	3,202	5,731	11,049	3,201
Swaps	7,686	9,809	3,878	3,190	6,576	2,516
Options purchased	322	547	276	225	443	201
Credit derivatives (4)	34	913	204	178	2,053	1,136
Other contracts (5)	2,499	7,539	4,320	1,780	6,670	3,996
Exchange traded contracts	4,245	12,048	241	3,530	10,358	207
	$ 35,096	$ 70,731	$ 17,814	$ 27,627	$ 60,398	$ 16,373

(1) The amounts presented are net of master netting agreements in accordance with Basel III.
(2) The total credit equivalent amount includes collateral applied of $17.8 billion (October 31, 2014 – $11.4 billion).
(3) The risk-weighted balances are calculated in accordance with Basel III.
(4) Credit derivatives include credit default swaps, total return swaps and credit default baskets, and exclude credit derivatives issued for other-than trading purposes related to bought protection.
(5) Other contracts include precious metal, commodity, stable value, and equity derivatives contracts.

Replacement cost of derivative instruments by risk rating and by counterparty type

	As at October 31, 2015								
	Risk rating (1)					**Counterparty type** (2)			
(Millions of Canadian dollars)	**AAA, AA**	**A**	**BBB**	**BB or lower**	**Total**	**Banks**	**OECD governments**	**Other**	**Total**
Gross positive replacement cost	$ 30,824	$ 136,843	$ 16,191	$ 10,598	$ 194,456	$ 56,631	$ 16,374	$ 121,451	$ 194,456
Impact of master netting agreements	22,751	124,603	9,260	2,746	159,360	45,401	10,971	102,988	159,360
Replacement cost (after netting agreements)	$ 8,073	$ 12,240	$ 6,931	$ 7,852	$ 35,096	$ 11,230	$ 5,403	$ 18,463	$ 35,096

	As at October 31, 2014								
	Risk rating (1)					Counterparty type (2)			
(Millions of Canadian dollars)	AAA, AA	A	BBB	BB or lower	Total	Banks	OECD governments	Other	Total
Gross positive replacement cost	$ 25,765	$ 98,566	$ 13,995	$ 6,915	$ 145,241	$ 52,986	$ 12,427	$ 79,828	$ 145,241
Impact of master netting agreements	19,279	88,911	8,154	1,270	117,614	44,372	7,743	65,499	117,614
Replacement cost (after netting agreements)	$ 6,486	$ 9,655	$ 5,841	$ 5,645	$ 27,672	$ 8,614	$ 4,684	$ 14,329	$ 27,627

(1) Our internal risk ratings for major counterparty types approximate those of public ratings agencies. Ratings of AAA, AA, A and BBB represent investment grade ratings and ratings of BB or lower represent non-investment grade ratings.
(2) Counterparty type is defined in accordance with the capital adequacy requirements of OSFI.

Note 9 Premises and equipment

(Millions of Canadian dollars)	Land	Buildings	Computer equipment	Furniture, fixtures and other equipment	Leasehold improvements	Work in process	Total
Cost							
Balance at October 31, 2014	$ 137	$ 1,347	$ 1,278	$ 1,248	$ 2,192	$ 208	$ 6,410
Additions (1)	–	4	195	53	82	344	678
Transfers from work in process	–	11	52	61	212	(336)	–
Disposals	(25)	(95)	(101)	(108)	(98)	–	(427)
Foreign exchange translation	7	18	54	30	69	4	182
Other	4	9	30	8	7	(52)	6
Balance at October 31, 2015	$ 123	$ 1,294	$ 1,508	$ 1,292	$ 2,464	$ 168	$ 6,849
Accumulated depreciation							
Balance at October 31, 2014	$ –	$ 499	$ 925	$ 839	$ 1,463	$ –	$ 3,726
Depreciation	–	44	197	103	183	–	527
Disposals	–	(8)	(98)	(96)	(64)	–	(266)
Foreign exchange translation	–	6	42	21	42	–	111
Other	–	(7)	4	8	18	–	23
Balance at October 31, 2015	$ –	$ 534	$ 1,070	$ 875	$ 1,642	$ –	$ 4,121
Net carrying amount at October 31, 2015	$ 123	$ 760	$ 438	$ 417	$ 822	$ 168	$ 2,728

(Millions of Canadian dollars)	Land	Buildings	Computer equipment	Furniture, fixtures and other equipment	Leasehold improvements	Work in process	Total
Cost							
Balance at October 31, 2013	$ 134	$ 1,358	$ 1,516	$ 1,434	$ 2,040	$ 113	$ 6,595
Additions (1)	–	14	108	74	54	279	529
Transfers from work in process	1	17	43	34	90	(185)	–
Disposals	(2)	(1)	(412)	(303)	(67)	(1)	(786)
Foreign exchange translation	2	8	27	14	34	2	87
Other	2	(49)	(4)	(5)	41	–	(15)
Balance at October 31, 2014	$ 137	$ 1,347	$ 1,278	$ 1,248	$ 2,192	$ 208	$ 6,410
Accumulated depreciation							
Balance at October 31, 2013	$ –	$ 499	$ 1,155	$ 1,015	$ 1,290	$ –	$ 3,959
Depreciation	–	50	181	101	167	–	499
Disposals	–	(1)	(412)	(282)	(61)	–	(756)
Foreign exchange translation	–	3	21	9	20	–	53
Other	–	(52)	(20)	(4)	47	–	(29)
Balance at October 31, 2014	$ –	$ 499	$ 925	$ 839	$ 1,463	$ –	$ 3,726
Net carrying amount at October 31, 2014	$ 137	$ 848	$ 353	$ 409	$ 729	$ 208	$ 2,684

(1) At October 31, 2015, we had total contractual commitments of $157 million to acquire premises and equipment (October 31, 2014 – $216 million; October 31, 2013 – $122 million).

Note 10 Goodwill and other intangible assets

Goodwill

The following table presents changes in the carrying amount of goodwill by CGU for the years ended October 31, 2015 and 2014.

(Millions of Canadian dollars)	Canadian Banking	Caribbean Banking	Canadian Wealth Management	Global Asset Management	U.S. Wealth Management	International Wealth Management	Insurance	Investor & Treasury Services	Capital Markets	Total
At October 31, 2013	$ 2,527	$ 1,504	$ 548	$ 1,937	$ 539	$ 132	$ 118	$ 149	$ 878	$ 8,332
Dispositions	–	(51)	–	–	–	–	–	–	–	(51)
Currency translations	–	140	10	105	43	9	–	–	59	366
At October 31, 2014	$ 2,527	$ 1,593	$ 558	$ 2,042	$ 582	$ 141	$ 118	$ 149	$ 937	$ 8,647
Dispositions	–	(23)	–	–	–	(15)	–	–	–	(38)
Currency translations	–	250	21	177	91	16	–	–	125	680
At October 31, 2015	$ 2,527	$ 1,820	$ 579	$ 2,219	$ 673	$ 142	$ 118	$ 149	$ 1,062	$ 9,289

We perform our annual impairment test by comparing the carrying amount of each CGU to its recoverable amount. The recoverable amount of a CGU is represented by its value in use, except in circumstances where the carrying amount of a CGU exceeds its value in use. In such cases, we determine the CGU's fair value less costs of disposal and its recoverable amount is the greater of its value in use and fair value less costs of disposal. Our annual impairment test is performed as at August 1.

In our 2015 and 2014 annual impairment tests, the recoverable amounts of our Caribbean Banking and International Wealth Management CGUs were based on fair value less costs of disposal. The recoverable amounts of all other CGUs tested were based on value in use.

Value in use

We calculate value in use using a five-year discounted cash flow method. Future cash flows are based on financial plans agreed by management for a five-year period, estimated based on forecast results, business initiatives, capital required to support future cash flows and returns to shareholders. Key drivers of future cash flows include net interest margins and average interest-earning assets. The values assigned to these drivers over the forecast period are based on past experience, external and internal economic forecasts, and management's expectations of the impact of economic conditions on our financial results. Beyond the initial five-year period, cash flows are assumed to increase at a constant rate using a nominal long-term growth rate (terminal growth rate). Terminal growth rates are based on the current market assessment of gross domestic product and inflation for the countries within which the CGU operates. The discount rates used to determine the present value of each CGU's projected future cash flows are based on the bank-wide cost of capital, adjusted for the risks to which each CGU is exposed. CGU-specific risks include: country risk, business/operational risk, geographic risk (including political risk, devaluation risk, and government regulation), currency risk, and price risk (including product pricing risk and inflation).

The estimation of value in use involves significant judgment in the determination of inputs to the discounted cash flow model and is most sensitive to changes in future cash flows, discount rates and terminal growth rates applied to cash flows beyond the forecast period. These key inputs and assumptions used to determine the recoverable amount of each CGU using value in use were tested for sensitivity by applying a reasonably possible change to those assumptions. The post-tax discount rates were increased by 1%, terminal growth rates were decreased by 1%, and future cash flows were reduced by 10%. As at August 1, 2015, no change in an individual key input or assumption, as described, would result in a CGU's carrying amount exceeding its recoverable amount based on value in use.

The terminal growth rates and pre-tax discount rates used in our discounted cash flow models are summarized below.

	As at			
	August 1, 2015		August 1, 2014	
	Discount rate (1)	**Terminal growth rate**	Discount rate (1)	Terminal growth rate
Group of cash generating units				
Canadian Banking	**10.6%**	**3.0%**	10.6%	3.0%
Caribbean Banking	**13.2**	**4.3**	13.0	4.2
Canadian Wealth Management	**11.9**	**3.0**	11.9	3.0
Global Asset Management	**11.7**	**3.0**	11.6	3.0
U.S. Wealth Management	**16.3**	**3.0**	15.7	3.0
International Wealth Management	**11.9**	**3.0**	10.3	3.0
Insurance	**11.2**	**3.0**	10.1	3.0
Investor & Treasury Services	**12.4**	**3.0**	12.8	3.0
Capital Markets	**15.7**	**3.0**	15.9	3.0

(1) Pre-tax discount rates are determined implicitly based on post-tax discount rates.

Fair value less costs of disposal – Caribbean Banking

For our Caribbean Banking CGU, we calculated fair value less costs of disposal using a discounted cash flow method that projects future cash flows over a 5-year period. Cash flows are based on management forecasts, adjusted to approximate the considerations of a prospective third-party buyer. Cash flows beyond the initial 5-year period are assumed to increase at a constant rate using a nominal long-term growth rate. Future cash flows, terminal growth rates, and discount rates are based on the same factors noted above. This fair value measurement is categorized as level 3 in the fair value hierarchy as certain significant inputs are not observable.

The estimation of fair value less costs of disposal involves significant judgment in the determination of inputs to the discounted cash flow model and is most sensitive to changes in future cash flows, discount rates and terminal growth rates applied to cash flows beyond the forecast period. These key inputs and assumptions were tested for sensitivity by applying a reasonably possible change to those assumptions. The post-tax discount rates were increased by 1%, terminal growth rates were decreased by 1%, and future cash flows were reduced by 10%. As at August 1, 2015, no reasonably possible change in an individual key input or assumption, as described, would result in the CGU's carrying amount exceeding its recoverable amount based on fair value less costs of disposal.

Fair value less costs of disposal – International Wealth Management
For our International Wealth Management CGU, we calculated fair value less costs of disposal using a multiples-based approach. Each business within the CGU was valued using either a Price-to-assets-under-administration (P/AUA) or Price-to-revenue (P/Rev) multiple, as appropriate, to reflect the considerations of a prospective third-party buyer. In 2015 and 2014, we applied a P/AUA multiple of 2.5% to AUA as at August 1 and a P/Rev multiple of 2.5x to revenue for the 12 months preceding the testing date. These multiples represent our best estimate from a range of reasonably possible inputs based on precedent transactions for comparable businesses. This fair value measurement is categorized as level 3 in the fair value hierarchy as certain significant inputs are not observable.

The estimation of fair value less costs of disposal involves significant judgment in the determination of the appropriate valuation approach and inputs and is most sensitive to changes in the P/AUA and P/Rev multiples. These key inputs were tested for sensitivity by reducing each multiple to the low end of the range of reasonably possible inputs considered. As at August 1, 2015, no reasonably possible change in an individual key input or assumption, as described, would result in the CGU's carrying amount exceeding its recoverable amount based on fair value less costs of disposal.

Other intangible assets
The following table presents the carrying amount of our other intangible assets.

	As at October 31, 2015					
(Millions of Canadian dollars)	Internally generated software	Other software	Core deposit intangibles	Customer list and relationships	In process software	Total
Gross carrying amount						
Balance at October 31, 2014	$ 3,402	$ 1,186	$ 168	$ 1,511	$ 487	$ 6,754
Additions	50	75	–	–	615	740
Transfers	503	19	–	–	(522)	–
Dispositions	(98)	(132)	–	(30)	–	(260)
Impairment losses	–	–	–	(22)	–	(22)
Currency translations	84	49	26	79	17	255
Other changes	(12)	(4)	–	–	(17)	(33)
Balance at October 31, 2015	$ 3,929	$ 1,193	$ 194	$ 1,538	$ 580	$ 7,434
Accumulated amortization						
Balance at October 31, 2014	$ (2,293)	$ (888)	$ (151)	$ (647)	$ –	$ (3,979)
Amortization charge for the year	(494)	(81)	(18)	(119)	–	(712)
Dispositions	97	125	–	9	–	231
Impairment losses	(3)	–	–	18	–	15
Currency translations	(60)	(30)	(25)	(41)	–	(156)
Other changes	3	(19)	–	(3)	–	(19)
Balance at October 31, 2015	$ (2,750)	$ (893)	$ (194)	$ (783)	$ –	$ (4,620)
Net balance, at October 31, 2015	$ 1,179	$ 300	$ –	$ 755	$ 580	$ 2,814

Note 10 Goodwill and other intangible assets (continued)

(Millions of Canadian dollars)	As at October 31, 2014					
	Internally generated software	Other software	Core deposit intangibles	Customer list and relationships	In process software	Total
Gross carrying amount						
Balance at October 31, 2013	$ 2,554	$ 1,128	$ 157	$ 1,509	$ 711	$ 6,059
Additions	48	57	–	–	545	650
Transfers	750	22	–	–	(772)	–
Dispositions	(4)	(2)	(3)	–	–	(9)
Impairment losses	–	–	–	(8)	–	(8)
Currency translations	32	15	14	48	8	117
Other changes	22	(34)	–	(38)	(5)	(55)
Balance at October 31, 2014	$ 3,402	$ 1,186	$ 168	$ 1,511	$ 487	$ 6,754
Accumulated amortization						
Balance at October 31, 2013	$ (1,815)	$ (811)	$ (117)	$ (539)	$ –	$(3,282)
Amortization charge for the year	(460)	(60)	(22)	(124)	–	(666)
Dispositions	4	1	–	–	–	5
Impairment losses	–	–	–	–	–	–
Currency translations	(22)	(13)	(12)	(22)	–	(69)
Other changes	–	(5)	–	38	–	33
Balance at October 31, 2014	$ (2,293)	$ (888)	$ (151)	$ (647)	$ –	$(3,979)
Net balance, at October 31, 2014	$ 1,109	$ 298	$ 17	$ 864	$ 487	$ 2,775

Note 11 Significant acquisition and dispositions

Acquisition

Wealth Management

On January 22, 2015, we announced a definitive agreement to acquire City National Corporation (City National), the holding company for City National Bank. City National Bank provides banking, investment and trust services throughout the United States and comprises substantially all of the business of City National.

During the fourth quarter, we received formal regulatory approval for the acquisition, which we completed on November 2, 2015. The results of the acquired business will be consolidated from the date of close. Refer to Note 36 for further details on the close of this transaction.

Dispositions

Personal & Commercial Banking

On July 31, 2015, we completed the sale of RBC Royal Bank (Suriname) N.V., announced on April 1, 2015. As a result of the transaction, we recorded a total loss on disposal of $19 million (before and after-tax), consisting of a loss of $23 million in the second quarter included in Non-interest expense – Other, and a gain of $4 million in the third quarter primarily relating to foreign currency translation gains reclassified from Other components of equity.

On June 27, 2014, we completed the sale of RBC Royal Bank (Jamaica) Limited and RBTT Securities Jamaica Limited to Sagicor Group Jamaica Limited, as announced on January 29, 2014. As a result of the transaction, we recorded a total loss on disposal of $100 million (before and after-tax), including a loss of $60 million in the first quarter and $40 million primarily relating to foreign currency translation losses reclassified from Other components of equity in the third quarter of 2014. The loss on disposal has been included in Non-Interest expense – Other.

Wealth Management

On August 28, 2015, we completed the sale of Royal Bank of Canada (Suisse) SA, announced on July 14, 2015. The transaction did not have a significant impact on our Consolidated Statements of Income.

Note 12 Joint ventures and associated companies

The following table summarizes the carrying value of our interests in joint ventures and associated companies accounted for under the equity method as well as our share of the income of those entities.

	Joint ventures			Associated companies		
	As at and for the year ended					
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014	October 31 2013	**October 31 2015**	October 31 2014	October 31 2013
Carrying amount	**$ 223**	$ 180	$ 135	**$ 137**	$ 115	$ 112
Share of:						
Net income	**119**	131	133	**30**	31	26
Other comprehensive income	**8**	5	5	**2**	–	–
	$ 127	$ 136	$ 138	**$ 32**	$ 31	$ 26

We do not have any joint ventures or associated companies that are individually material to our financial results.

During the year ended October 31, 2015, we recognized an impairment loss of $3 million with respect of our interests in associated companies (October 31, 2014 – $nil; October 31, 2013 – $20 million) and no gains on sales of associated companies (October 31, 2014 – $62 million; October 31, 2013 – $nil).

Note 13 Other assets

	As at	
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014
Cash collateral and margin deposits	**$ 23,018**	$ 12,481
Accounts receivable and prepaids	**2,843**	3,773
Receivable from brokers, dealers and clients	**2,608**	2,354
Insurance-related assets		
Collateral loans	**1,176**	1,121
Policy loans	**106**	113
Reinsurance assets	**683**	512
Other	**576**	400
Deferred income tax asset	**2,072**	2,382
Accrued interest receivable	**1,757**	1,554
Taxes receivable	**2,343**	1,620
Precious metals	**106**	223
Other	**3,979**	4,162
	$ 41,267	$ 30,695

Note 14 Deposits

The following table details our deposit liabilities.

	As at							
	October 31, 2015				October 31, 2014			
(Millions of Canadian dollars)	**Demand** (1)	**Notice** (2)	**Term** (3)	**Total**	Demand (1)	Notice (2)	Term (3)	Total
Personal	**$ 128,101**	**$ 19,758**	**$ 72,707**	**$ 220,566**	$ 120,444	$ 17,793	$ 70,980	$ 209,217
Business and government	**175,931**	**6,854**	**272,793**	**455,578**	162,988	3,038	220,634	386,660
Bank	**7,711**	**23**	**13,349**	**21,083**	5,771	11	12,441	18,223
	$ 311,743	**$ 26,635**	**$ 358,849**	**$ 697,227**	$ 289,203	$ 20,842	$ 304,055	$ 614,100
Non-interest-bearing (4)								
Canada (5)	**$ 70,286**	**$ 3,754**	**$ –**	**$ 74,040**	$ 62,468	$ 3,478	$ –	$ 65,946
United States	**1,158**	**31**	**–**	**1,189**	1,777	15	–	1,792
Europe (6)	**1,172**	**–**	**–**	**1,172**	3,314	1	–	3,315
Other International	**6,706**	**6**	**–**	**6,712**	5,057	279	–	5,336
Interest-bearing (4)								
Canada (5)	**192,736**	**13,529**	**269,395**	**475,660**	178,478	10,895	241,902	431,275
United States	**4,177**	**4,966**	**67,710**	**76,853**	3,497	2,144	45,359	51,000
Europe (6)	**31,554**	**606**	**12,270**	**44,430**	31,118	418	9,282	40,818
Other International	**3,954**	**3,743**	**9,474**	**17,171**	3,494	3,612	7,512	14,618
	$ 311,743	**$ 26,635**	**$ 358,849**	**$ 697,227**	$ 289,203	$ 20,842	$ 304,055	$ 614,100

(1) Deposits payable on demand include all deposits for which we do not have the right to notice of withdrawal. These deposits include both savings and chequing accounts.
(2) Deposits payable after notice include all deposits for which we can legally require notice of withdrawal. These deposits are primarily savings accounts.
(3) Term deposits include deposits payable on a fixed date. These deposits include term deposits, guaranteed investment certificates and similar instruments. As at October 31, 2015, the balance of term deposits also includes senior deposit notes we have issued to provide long-term funding of $191 billion (October 31, 2014 - $150 billion).
(4) The geographical splits of the deposits are based on the point of origin of the deposits and where the revenue is recognized. As at October 31, 2015, deposits denominated in U.S. dollars, Sterling, Euro and other foreign currencies were $235 billion, $13 billion, $32 billion and $28 billion, respectively (October 31, 2014 – $183 billion, $11 billion, $23 billion and $22 billion).
(5) Certain amounts have been revised from those previously reported.
(6) Europe includes the United Kingdom, Luxembourg and the Channel Islands.

Note 14 Deposits (continued)

The following table presents the contractual maturities of our term deposit liabilities.

(Millions of Canadian dollars)	As at October 31 2015	As at October 31 2014
Within 1 year:		
less than 3 months	$ 78,735	$ 57,840
3 to 6 months	49,900	32,880
6 to 12 months	61,096	50,300
1 to 2 years	43,674	54,354
2 to 3 years	39,809	31,559
3 to 4 years	26,792	28,946
4 to 5 years	30,184	24,673
Over 5 years	28,659	23,503
	$ 358,849	$ 304,055
Aggregate amount of term deposits in denominations of one hundred thousand dollars or more	$ 331,000	$ 270,000

The following table presents the average deposit balances and average rates of interest.

(Millions of Canadian dollars, except for percentage amounts)	For the year ended October 31, 2015 Average balances	October 31, 2015 Average rates	October 31, 2014 Average balances	October 31, 2014 Average rates	October 31, 2013 Average balances	October 31, 2013 Average rates
Canada	$ 526,544	0.98%	$ 477,316	1.13%	$ 435,842	1.20%
United States	70,100	0.31	52,058	0.30	44,512	0.38
Europe (1)	48,173	0.28	43,429	0.21	38,791	0.27
Other International	22,630	0.95	20,299	1.03	18,571	0.95
	$ 667,447	0.86%	$ 593,102	0.99%	$ 537,716	1.06%

(1) Europe includes the United Kingdom, Luxembourg and the Channel Islands.

Note 15 Insurance

Risk management

Insurance risk is the risk of fluctuations in the timing, frequency or severity of insured events, relative to our expectations at the time of underwriting. We do not have a high degree of concentration risk due to our geographic diversity and business mix. Concentration risk is not a major concern for the life and health insurance business as it does not have a material level of regional specific characteristics like those exhibited in the property and casualty insurance business. Exposure to concentrations of insurance risks for the property and casualty business is primarily mitigated through prudent underwriting practices and diversification by product offerings and geographical areas. Reinsurance is also used for all insurance businesses to lower our risk profile and limit the liability on a single claim. We manage underwriting and pricing risk through the use of underwriting guidelines which detail the class, nature and type of business that may be accepted, pricing policies by product line and centralized control of policy wordings. The risk that claims are handled or paid inappropriately is mitigated using a range of IT system controls and manual processes conducted by experienced staff. These, together with a range of detailed policies and procedures, ensure that all claims are handled in a timely, appropriate and accurate manner.

Reinsurance

In the ordinary course of business, our insurance operations reinsure risks to other insurance and reinsurance companies in order to lower our risk profile, limit loss exposure to large risks, and provide additional capacity for future growth. These ceding reinsurance arrangements do not relieve our insurance subsidiaries from their direct obligations to the insureds. We evaluate the financial condition of the reinsurers and monitor our concentrations of credit risks to minimize our exposure to losses from reinsurer insolvency. Reinsurance amounts (ceded premiums) included in Non-interest income are shown in the table below.

Net premiums and claims

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Gross premiums	$ 4,721	$ 4,962	$ 4,785
Premiums ceded to reinsurers	(1,214)	(1,220)	(1,111)
Net premiums	$ 3,507	$ 3,742	$ 3,674
Gross claims and benefits	$ 3,237	$ 3,692	$ 2,768
Reinsurers' share of claims and benefits	(496)	(498)	(442)
Net claims	$ 2,741	$ 3,194	$ 2,326

Insurance claims and policy benefit liabilities
All actuarial assumptions are set in conjunction with Canadian Institute of Actuaries Standards of Practice and OSFI requirements. The assumptions that have the greatest effect on the measurement of insurance liabilities, the processes used to determine them and the assumptions used as at October 31, 2015 are as follows:

Life insurance
Mortality and morbidity – Mortality estimates are based on standard industry insured mortality tables, adjusted where appropriate to reflect our own experience. Morbidity assumptions are made with respect to the rates of claim incidence and claim termination for health insurance policies and are based on a combination of industry and our own experience.

Future investment yield – Assumptions are based on the current yield rate, a reinvestment assumption and an allowance for future credit losses for each line of business, and are developed using interest rate scenario testing, including prescribed scenarios for determination of minimum liabilities as set out in the actuarial standards.

Policyholder behaviour – Under certain policies, the policyholder has a contractual right to change benefits and premiums, as well as convert policies to permanent forms of insurance. All policyholders have the right to terminate their policies through lapse. Lapses represent the termination of policies due to non-payment of premiums. Lapse assumptions are primarily based on our recent experience adjusted for emerging industry experience where applicable.

Non-life insurance
Assumptions related to unpaid claims concern the patterns of development of claims from inception to ultimate settlement. The reserving assumptions, based on historical paid/incurred development patterns adjusted for changes in products, claims processes and legislative trends, result in a collective loss ratio when compared with earned premium.

The portfolio assumptions that have the greatest effect on the net liabilities included in our Consolidated Balance Sheets are listed below:

Significant insurance assumptions

	As at	
	October 31 2015	October 31 2014
Life Insurance		
Canadian Insurance		
Mortality rates (1)	**0.12%**	0.12%
Morbidity rates (2)	**1.69**	1.82
Reinvestment yield (3)	**3.45**	3.15
Lapse rates (4)	**0.50**	0.50
International Insurance		
Mortality rates (1)	**0.46**	0.43
Reinvestment yield (3)	**2.75**	2.19
Non-life Insurance		
Expected loss ratio (5)	**60.47**	60.16

(1) Average annual death rate for the largest portfolio of insured policies.
(2) Average net settlement rate for the individual and group disability insurance portfolio.
(3) Ultimate reinvestment rate of the insurance operations.
(4) Ultimate policy termination rate (lapse rate) for the largest permanent life insurance portfolio that relies on higher termination rate to maintain its profitability (lapse-supported policies).
(5) Ratio of incurred claim losses and claim expenses to net premiums of the property and casualty business, measuring the profitability or loss experience on our total book of business.

The following table summarizes our gross and reinsurers' share of insurance liabilities at the end of the year.

Insurance claims and policy benefit liabilities

	As at					
	October 31, 2015			October 31, 2014		
(Millions of Canadian dollars)	**Gross**	**Ceded**	**Net**	Gross	Ceded	Net
Life insurance policyholder liabilities						
Life, health and annuity	**$ 8,084**	**$ 519**	**$ 7,565**	$ 7,555	$ 390	$ 7,165
Investment contracts (1)	**10**	**–**	**10**	5	–	5
	$ 8,094	**$ 519**	**$ 7,575**	$ 7,560	$ 390	$ 7,170
Non-life insurance policyholder liabilities						
Unearned premium provision (1)	**$ 450**	**$ –**	**$ 450**	$ 419	$ –	$ 419
Unpaid claims provision	**1,026**	**38**	**988**	1,010	29	981
	$ 1,476	**$ 38**	**$ 1,438**	$ 1,429	$ 29	$ 1,400
	$ 9,570	**$ 557**	**$ 9,013**	$ 8,989	$ 419	$ 8,570

(1) Insurance claims and policy benefit liabilities include investment contracts and unearned premium provision, both of which are reported in Other liabilities on the Consolidated Balance Sheets.

Reconciliation of life insurance policyholder liabilities

(Millions of Canadian dollars)	October 31, 2015 Gross	Ceded	Net	October 31, 2014 Gross	Ceded	Net
Balances, beginning of the year	$ 7,560	$ 390	$ 7,170	$ 7,030	$ 300	$ 6,730
New and in-force policies	598	129	469	621	90	531
Changes in assumption and methodology	(69)	–	(69)	(95)	–	(95)
Net change in investment contracts	5	–	5	4	–	4
Balances, end of the year	**$ 8,094**	**$ 519**	**$ 7,575**	$ 7,560	$ 390	$ 7,170

Reconciliation of non-life insurance policyholder liabilities

(Millions of Canadian dollars)	October 31, 2015 Gross	Ceded	Net	October 31, 2014 Gross	Ceded	Net
Balances, beginning of the year	$ 1,429	$ 29	$ 1,400	$ 1,415	$ 21	$ 1,394
Changes in unearned premiums provision						
Written premiums	937	39	898	942	91	851
Less: Net premiums earned	(906)	(39)	(867)	(933)	(91)	(842)
Changes in unpaid claims provision and adjustment expenses						
Incurred claims	614	27	587	595	38	557
Less: Claims paid	(598)	(18)	(580)	(590)	(30)	(560)
Balances, end of the year	**$ 1,476**	**$ 38**	**$ 1,438**	$ 1,429	$ 29	$ 1,400

The net increase in Insurance claims and policy benefit liabilities over the prior year was comprised of the net increase in life and health, reinsurance and property and casualty liabilities attributable to business growth and market movements on assets backing life and health liabilities. During the year, we reviewed all key actuarial methods and assumptions which are used in determining the policy benefit liabilities resulting in a $67 million net decrease to insurance liabilities comprised of: (i) a decrease of $70 million for assumption updates due to net favourable interest rate and equity market changes; (ii) a decrease of $22 million due to liability impacts of significant business projects; (iii) a decrease of $12 million due to valuation system and data changes; and (iv) an increase of $37 million arising from insurance risk related assumption updates largely due to mortality, morbidity, maintenance, property and casualty margin for adverse deviation and expense assumptions. Changes in Insurance claims and policy benefit liabilities are included in Insurance policyholder benefits, claims and acquisition expenses in our Consolidated Statements of Income in the period in which the estimates changed.

Sensitivity analysis

The following table presents the sensitivity of the level of insurance policyholder liabilities disclosed in this note to reasonably possible changes in the actuarial assumptions used to calculate them. The percentage change in variable is applied to a range of existing actuarial modelling assumptions to derive the possible impact on net income. The disclosure is not intended to explain the impact of a percentage change in the insurance assets and liabilities disclosed above. The analyses are performed where a single assumption is changed while holding other assumptions constant, which is unlikely to occur in practice.

Sensitivity

(Millions of Canadian dollars, except for percentage amounts)	Change in variable	Net income impact for year ended October 31 2015	October 31 2014
Increase in market interest rates (1)	1%	$ –	$ 1
Decrease in market interest rates (1)	1	14	(3)
Increase in equity market values	10	3	6
Decrease in equity market values	10	(2)	(3)
Increase in maintenance expenses	5	(28)	(25)
Life Insurance			
Adverse change in annuitant mortality rates	2	(117)	(72)
Adverse change in assurance mortality rates	2	(48)	(47)
Adverse change in morbidity rates	5	(156)	(156)
Adverse change in lapse rates	10	(206)	(192)
Non-life Insurance			
Increase in expected loss ratio	5	(9)	(10)

(1) Sensitivities for market interest rates have been calculated by increasing or decreasing 100 basis points at all points on the yield curve, with changes persisting for one year.

Note 16 Segregated funds

We offer certain individual variable insurance contracts that allow policyholders to invest in segregated funds. The investment returns on these funds are passed directly to the policyholders. Amounts invested are at the policyholders' risk, except where the policyholders have selected options providing maturity and death benefit guarantees. A liability for the guarantees is recorded in Insurance claims and policy benefit liabilities.

Segregated funds net assets are recorded at fair value. All of our segregated funds net assets are categorized as Level 1 in the fair value hierarchy. The fair value of the segregated funds liabilities is equal to the fair value of the segregated funds net assets. Segregated funds net assets and segregated funds liabilities are presented on separate lines on the Consolidated Balance Sheets. The following tables present the composition of net assets and the changes in net assets for the year.

Segregated funds net assets

	As at	
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014
Cash	**$ –**	$ 1
Investment in mutual funds	**832**	675
Other liabilities, net	**(2)**	(1)
	$ 830	$ 675

Changes in net assets

	For the year ended	
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014
Net assets, beginning of year	**$ 675**	$ 513
Additions (deductions):		
Deposits from policyholders	**321**	239
Net realized and unrealized gains	**2**	52
Interest and dividend	**26**	19
Payment to policyholders	**(173)**	(132)
Management and administrative fees	**(21)**	(16)
Net assets, end of year	**$ 830**	$ 675

Note 17 Employee benefits - Pension and other post-employment benefits

Plan characteristics

We sponsor a number of programs that provide pension and post-employment benefits to eligible employees. The pension plans are administered by separate trustees that are legally segregated from the Bank. The majority of beneficiaries of the pension plans are located in Canada and other beneficiaries of the pension plans are primarily located in the United States, the United Kingdom and the Caribbean. The pension arrangements including investment, plan benefits and funding decisions are governed by local pension committees, trustees (U.K.), or management. Significant plan changes require the approval of the Board of Directors.

Our defined benefit pension plans provide pension benefits based on years of service, contributions and average earnings at retirement. Our principal defined benefit pension plans are closed to new members. New employees are generally eligible to join defined contribution pension plans. The specific features of these plans vary by location. We also provide supplemental non-registered (non-qualified) pension plans for certain executives and senior management that are typically unfunded or partially funded.

Our defined contribution pension plans provide pension benefits based on accumulated employee and Bank contributions. The Bank contributions are based on a percentage of an employee's annual earnings and a portion of the Bank contribution is dependent on the amount being contributed by the employee and their years of service.

Our primary other post-employment benefit plans provide health, dental, disability and life insurance coverage and cover a number of current and retired employees who are mainly located in Canada. These plans are unfunded unless required by legislation.

We measure our benefit obligations and pension assets as at October 31 each year. All plans are valued using the projected unit-credit method. We fund our registered defined benefit pension plans in accordance with actuarially determined amounts required to satisfy employee benefit obligations under current pension regulations. For our primary pension plan, the most recent funding actuarial valuation was completed on January 1, 2015, and the next valuation will be completed on January 1, 2016.

For the year ended October 31, 2015, total Bank contributions to our pension plans (defined benefit and defined contribution plans) and other post-employment benefit plans were $391 million and $56 million (October 31, 2014 – $537 million and $63 million), respectively. For 2016, total contributions to our pension plans and other post-employment benefit plans are expected to be $411 million and $62 million, respectively.

Risks

By their design, the defined benefit pension and other post-employment plans expose the Bank to various risks such as investment performance, reductions in discount rates used to value the obligations, increased longevity of plan members, future inflation levels impacting future salary increases as well as future increases in healthcare costs. By closing membership in our principal defined benefit pension and other post-employment plans and migrating to defined contribution plans, the volatility associated with the aforementioned risks will reduce over time.

The following table presents the financial position related to all of our material pension and other post-employment benefit plans worldwide, including executive retirement arrangements.

	As at			
	October 31, 2015		October 31, 2014	
(Millions of Canadian dollars)	Defined benefit pension plans	Other post-employment benefit plans	Defined benefit pension plans	Other post-employment benefit plans
Canada				
Fair value of plan assets	$ 10,847	$ 11	$ 10,419	$ 4
Present value of defined benefit obligation	10,840	1,569	10,767	1,754
Net surplus (deficit)	$ 7	$ (1,558)	$ (348)	$ (1,750)
International				
Fair value of plan assets	$ 1,049	$ –	$ 932	$ –
Present value of defined benefit obligation	1,134	88	1,038	78
Net (deficit)	$ (85)	$ (88)	$ (106)	$ (78)
Total				
Fair value of plan assets	$ 11,896	$ 11	$ 11,351	$ 4
Present value of defined benefit obligation	11,974	1,657	11,805	1,832
Total net (deficit)	$ (78)	$ (1,646)	$ (454)	$ (1,828)
Amounts recognized in our Consolidated Balance Sheets				
Employee benefit assets	$ 245	$ –	$ 138	$ –
Employee benefit liabilities	(323)	(1,646)	(592)	(1,828)
Total net (deficit)	$ (78)	$ (1,646)	$ (454)	$ (1,828)

The following table presents an analysis of the movement in the financial position related to all of our material pension and other post-employment benefit plans worldwide, including executive retirement arrangements.

	As at or for the year ended			
	October 31, 2015		October 31, 2014	
(Millions of Canadian dollars)	Defined benefit pension plans (1)	Other post-employment benefit plans	Defined benefit pension plans (1)	Other post-employment benefit plans
Change in fair value of plan assets				
Opening fair value of plan assets	$ 11,351	$ 4	$ 10,266	$ 3
Interest income	460	–	472	–
Remeasurements				
Return on plan assets (excluding interest income)	243	11	647	–
Change in foreign currency exchange rate	113	–	60	–
Contributions – Employer	235	56	400	63
Contributions – Plan participant	51	16	52	13
Payments	(513)	(76)	(456)	(75)
Payments – amount paid in respect of any settlements	(31)	–	(78)	–
Other	(13)	–	(12)	–
Closing fair value of plan assets	$ 11,896	$ 11	$ 11,351	$ 4
Change in present value of benefit obligation				
Opening benefit obligation	$ 11,805	$ 1,832	$ 10,413	$ 1,722
Current service costs	345	34	315	31
Past service costs	(16)	–	97	–
Interest expense	490	75	486	80
Remeasurements				
Actuarial losses (gains) from demographic assumptions	7	(176)	76	(58)
Actuarial losses (gains) from financial assumptions	(296)	(33)	830	119
Actuarial losses (gains) from experience adjustments	(7)	(27)	6	7
Change in foreign currency exchange rate	139	15	67	6
Contributions – Plan participant	51	16	52	13
Payments	(513)	(76)	(456)	(75)
Payments – amount paid in respect of any settlements	(31)	–	(78)	–
Business combinations/Disposals	–	(3)	–	(11)
Other	–	–	(3)	(2)
Closing benefit obligation	$ 11,974	$ 1,657	$ 11,805	$ 1,832
Unfunded obligation	$ 33	$ 332	$ 28	$ 1,670
Wholly or partly funded obligation	11,941	1,325	11,777	162
Total benefit obligation	$ 11,974	$ 1,657	$ 11,805	$ 1,832

(1) For pension plans with funding deficits, the benefit obligations and fair value of plan assets as at October 31, 2015 were $1,020 million and $709 million, respectively (October 31, 2014 – $10,180 million and $9,587 million, respectively).

Pension and other post-employment benefit expense
The following table presents the composition of our pension and other post-employment benefit expense.

	For the year ended					
	Pension plans			Other post-employment benefit plans		
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014	October 31 2013	**October 31 2015**	October 31 2014	October 31 2013
Current service costs	**$ 345**	$ 315	$ 298	**$ 34**	$ 31	$ 28
Past service costs	**(16)**	97	(2)	**–**	–	(2)
Net interest expense	**30**	14	30	**75**	80	73
Remeasurements of other long term benefits	**–**	–	–	**2**	9	(5)
Administrative expense	**12**	13	11	**–**	–	–
Defined benefit pension expense	**$ 371**	$ 439	$ 337	**$ 111**	$ 120	$ 94
Defined contribution pension expense	**156**	137	117	**–**	–	–
	$ 527	$ 576	$ 454	**$ 111**	$ 120	$ 94

Total service costs for the year ended October 31, 2015 totalled $335 million (October 31, 2014 – $307 million; October 31, 2013 – $284 million) for pension plans in Canada and $(6) million (October 31, 2014 – $105 million; October 31, 2013 – $12 million) for International plans. Net interest expense for the year ended October 31, 2015 totalled $25 million (October 31, 2014 – $10 million; October 31, 2013 – $26 million) for pension plans in Canada and $5 million (October 31, 2014 – $4 million; October 31, 2013 – $4 million) for International plans.

Remeasurements of employee benefit plans
The following table presents the composition of our remeasurements recorded in OCI.

	For the year ended					
	Defined benefit pension plans			Other post-employment benefit plans		
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014	October 31 2013	**October 31 2015**	October 31 2014	October 31 2013
Actuarial (gains) losses:						
Changes in demographic assumptions	**$ 7**	$ 76	$ 382	**$ (174)**	$ (54)	$ 53
Changes in financial assumptions	**(296)**	830	(265)	**(30)**	113	(62)
Experience adjustments	**(7)**	6	49	**(34)**	–	4
Return on plan assets (excluding interest based on discount rate)	**(243)**	(647)	(601)	**(11)**	–	–
	$ (539)	$ 265	$ (435)	**$ (249)**	$ 59	$ (5)

Total remeasurements recorded in OCI for the year ended October 31, 2015 were gains of $526 million (October 31, 2014 – losses of $238 million; October 31, 2013 – gains of $424 million) for pension plans in Canada and gains of $13 million (October 31, 2014 – losses of $27 million; October 31, 2013 – gains of $11 million) for International plans.

Investment policy and strategies
Defined benefit pension plan assets are invested prudently in order to meet our longer term pension obligations. The pension plan's investment strategy is to hold a diversified mix of investments by asset class and geographic location, in order to reduce investment-specific risk to the funded status while maximizing the expected returns to meet pension obligations. Investment of the plan's assets is conducted with careful consideration of the pension obligation's exposure to interest rates, credit spreads and inflation which are key risk factors impacting the obligation. The asset mix policy is therefore consistent with an asset/liability framework. Factors taken into consideration in developing our asset mix include but are not limited to the following:

(i) the nature of the underlying benefit obligations, including the duration and term profile of the liabilities;
(ii) the member demographics, including expectations for normal retirements, terminations, and deaths;
(iii) the financial position of the pension plans;
(iv) the diversification benefits obtained by the inclusion of multiple asset classes; and
(v) expected asset returns, including asset and liability volatility and correlations.

To implement our asset mix policy, we may invest in equity securities, debt securities, alternative investments and derivative instruments. Our holdings in certain investments, including common shares, emerging market equity and debt, debt securities rated lower than BBB and residential and commercial mortgages, cannot exceed a defined percentage of the market value of our defined benefit pension plan assets. We may use derivative instruments as either a synthetic investment to more efficiently replicate the performance of an underlying security, or as a hedge against financial risks associated with the underlying portfolio. To manage our credit risk exposure, counterparties of our derivative instruments are required to meet minimum credit ratings and enter into collateral agreements.

Our defined benefit pension plan assets are primarily comprised of equity and debt securities. Our equity securities generally have unadjusted quoted market prices in an active market (Level 1) and our debt securities generally have quoted market prices for similar assets in an active market (Level 2). Alternative investments and other includes cash, hedge funds, and private fund investments including infrastructure, real estate leases, private equity and derivative financial instruments. In the case of private fund investments, no quoted market prices are usually available (Level 2 or Level 3). These fund assets are either valued by an independent valuator or priced using observable market inputs.

During the year, investment changes and risk factor diversification continued in support of our efforts to reduce variability in the funded status. As a result, equity risk was reduced through redeployment of equity investments into a diverse mix of quality alternative investments with low correlation to equity markets, including investments in hedge funds, infrastructure, private equity and real estate. In addition, an increasing allocation to debt securities is used to reduce asset liability duration mismatch and hence variability of the plan's funded status due to interest rate changes. Longer maturity debt securities, given their price sensitivity to movements in interest rates, are considered to be a good economic

hedge to risk associated with the plan's liabilities, which are discounted using predominately long maturity bond interest rates as inputs. We expect to continue to move towards a higher weighting of debt securities as market conditions permit, to further reduce risk of variability in the funded status.

Asset allocation of defined benefit pension plans (1)

	As at					
	October 31, 2015			October 31, 2014		
(Millions of Canadian dollars, except percentages)	Fair value	Percentage of total plan assets	Quoted in active market (2)	Fair value	Percentage of total plan assets	Quoted in active market (2)
Equity securities						
Domestic	$ 1,277	11%	100%	$ 1,623	14%	100%
Foreign	2,645	22	98	2,530	22	100
Debt securities						
Domestic government bonds	2,232	19	–	2,199	19	–
Foreign government bonds	561	5	–	530	5	–
Corporate and other bonds	2,548	21	–	2,097	19	–
Alternative investments and other	2,633	22	8	2,372	21	11
	$ 11,896	100%	34%	$ 11,351	100%	39%

(1) The asset allocation is based on the underlying investments held directly and indirectly through the funds as this is how we manage our investment policy and strategies.
(2) If our assessment of quoted in an active market was based on the direct investments, 36% of our total plan assets would be classified as quoted in an active market (October 31, 2014 – 45%).

The allocation to equity securities of our pension plans in Canada is 34% (October 31, 2014 – 38%) and that of our International plans is 17% (October 31, 2014 – 18%). The allocation to debt securities of our pension plans in Canada is 44% (October 31, 2014 – 41%) and that of our International plans is 57% (October 31, 2014 – 58%). The allocation to alternative investments and other in our pension plans in Canada is 22% (October 31, 2014 – 21%) and that of our International plans is 26% (October 31, 2014 – 24%).

As at October 31, 2015, the plan assets include 1 million (October 31, 2014 – 1 million) of our common shares with a fair value of $85 million (October 31, 2014 – $107 million) and $71 million (October 31, 2014 – $39 million) of our debt securities. For the year ended October 31, 2015, dividends received on our common shares held in the plan assets were $4 million (October 31, 2014 – $4 million).

Maturity profile

The following table presents the maturity profile of our defined benefit pension plan obligation.

	As at		
	October 31, 2015		
(Millions of Canadian dollars, except participants and years)	Canada	International	Total
Number of plan participants	73,869	9,864	83,733
Actual benefit payments 2015	$ 447	$ 97	$ 544
Benefits expected to be paid 2016	514	50	564
Benefits expected to be paid 2017	540	45	585
Benefits expected to be paid 2018	564	47	611
Benefits expected to be paid 2019	587	48	635
Benefits expected to be paid 2020	607	52	659
Benefits expected to be paid 2021-2025	3,312	313	3,625
Weighted average duration of defined benefit payments	14.6 years	18.0 years	14.9 years

Significant assumptions

Our methodologies to determine significant assumptions used in calculating the defined benefit pension and other post-employment benefit expense are as follows:

Discount rate

For the Canadian pension and other post-employment benefit plans, all future expected benefit payments at each measurement date are discounted at spot rates from a derived Aa corporate bond yield curve. The derived curve is based on observed rates for Aa corporate bonds with maturities less than six years and a projected Aa corporate curve based on spreads between observed Aa corporate bonds and Aa provincial bonds for periods greater than six years. For the International pension and other post-employment benefit plans, all future expected benefit payments at each measurement date are discounted at spot rates from an Aa corporate bond yield curve. Spot rates beyond 30 years are set to equal the 30-year spot rate. The discount rate is the equivalent single rate that produces the same discounted value as that determined using the entire discount curve. This valuation methodology does not rely on assumptions regarding reinvestment returns.

Rate of increase in future compensation

The assumptions for increases in future compensation are developed separately for each plan, where relevant. Each assumption is set based on the price inflation assumption and compensation policies in each market, as well as relevant local statutory and plan-specific requirements.

Healthcare cost trend rates
Healthcare cost calculations are based on both short and long term trend assumptions established based on the plan's recent trend experience as well as on market expectations.

	As at					
	Defined benefit pension plans			Other post-employment benefit plans		
	October 31 2015	October 31 2014	October 31 2013	**October 31 2015**	October 31 2014	October 31 2013
Weighted average assumptions to determine benefit obligation						
Discount rate	**4.30%**	4.10%	4.60%	**4.40%**	4.20%	4.70%
Rate of increase in future compensation	**3.30%**	3.30%	3.30%	**n.a.**	n.a.	n.a.
Healthcare cost trend rates (1)						
– Medical	**n.a.**	n.a.	n.a.	**4.10%**	3.50%	3.80%
– Dental	**n.a.**	n.a.	n.a.	**4.00%**	4.00%	4.00%

(1) For our other post-employment benefit plans, the 2015 assumed trend rates used to measure the expected benefit costs of the defined benefit obligations are also the ultimate trend rates.
n.a. not applicable

Mortality assumptions
Mortality assumptions are significant in measuring our obligations under the defined benefit pension plans. These assumptions have been set based on country specific statistics. Future longevity improvements have been considered and included where appropriate. The following table summarizes the mortality assumptions used for major plans.

	As at							
	October 31, 2015				October 31, 2014			
	Life expectancy at 65 for a member currently at				Life expectancy at 65 for a member currently at			
	Age 65		**Age 45**		Age 65		Age 45	
(In years)	**Male**	**Female**	**Male**	**Female**	Male	Female	Male	Female
Country								
Canada	**23.1**	**23.6**	**24.1**	**24.5**	23.0	23.5	24.0	24.5
United States	**21.2**	**23.2**	**21.7**	**24.1**	20.6	22.9	21.1	23.4
United Kingdom	**24.0**	**25.9**	**26.0**	**28.2**	23.9	25.2	26.1	27.6

Sensitivity analysis
Assumptions adopted can have a significant effect on the obligations for defined benefit pension and other post-employment benefit plans. The increase (decrease) in obligation in the following table has been determined assuming all other assumptions are held constant. In practice, this is unlikely to occur, as changes in some of the assumptions may be correlated. The following table presents the sensitivity analysis of key assumptions for 2015.

(Millions of Canadian dollars)	**Defined benefit pension plans – Increase (decrease) in obligation**	**Other post-employment benefit plans – Increase (decrease) in obligation**
Discount rate		
Impact of 50bps increase in discount rate	**$ (839)**	**$ (110)**
Impact of 50bps decrease in discount rate	**930**	**124**
Rate of increase in future compensation		
Impact of 50bps increase in rate of increase in future compensation	**57**	**n.a.**
Impact of 50bps decrease in rate of increase in future compensation	**(57)**	**n.a.**
Mortality rate		
Impact of an increase in longevity by one additional year	**275**	**29**
Healthcare cost trend rate		
Impact of 100bps increase in healthcare cost trend rate	**n.a.**	**101**
Impact of 100bps decrease in healthcare cost trend rate	**n.a.**	**(82)**

n.a. not applicable

Note 18 Other liabilities

(Millions of Canadian dollars)	As at October 31 2015	As at October 31 2014
Cash collateral	$ 15,249	$ 10,500
Accounts payable and accrued expenses	999	2,386
Payroll and related compensation	6,358	6,582
Payable to brokers, dealers and clients	2,981	2,063
Negotiable instruments	2,309	2,416
Accrued interest payable	1,679	1,748
Deferred income	2,028	1,937
Taxes payable	1,533	1,691
Precious metals certificates	420	572
Dividends payable	1,194	1,127
Insurance related liabilities	735	617
Deferred income taxes	201	204
Provisions	512	500
Other	5,309	4,966
	$ 41,507	$ 37,309

Note 19 Subordinated debentures

The debentures are unsecured obligations and are subordinated in right of payment to the claims of depositors and certain other creditors. All redemptions, cancellations and exchanges of subordinated debentures are subject to the consent and approval of OSFI. The amounts presented below include the impact of fair value hedging for interest rate risk and are net of our holdings in these securities which have not been cancelled and are still outstanding.

(Millions of Canadian dollars, except percentage and foreign currency) Maturity	Earliest par value redemption date	Interest rate	Denominated in foreign currency (millions)	As at October 31 2015	As at October 31 2014
November 14, 2014 (1)		10.00%		$ –	$ 200
November 4, 2018	November 4, 2013 (2)	5.45% (3)		–	–
June 15, 2020	June 15, 2015 (4)	4.35% (5)		–	1,491
November 2, 2020	November 2, 2015 (6)	3.18% (7)		1,500	1,483
June 8, 2023		9.30%		110	110
July 17, 2024 (8)	July 17, 2019	3.04% (9)		1,014	1,002
December 6, 2024	December 6, 2019	2.99% (10)		2,061	1,992
June 4, 2025 (8)	June 4, 2020	2.48% (11)		1,004	–
September 29, 2026 (8)	September 29, 2021	3.45% (12)		1,055	1,009
November 1, 2027	November 1, 2022	4.75%	TT$300	62	53
June 26, 2037	June 26, 2017	2.86%	JPY 10,000	112	106
October 1, 2083	Any interest payment date	(13)		224	224
June 29, 2085	Any interest payment date	(14)	US$174	227	196
June 18, 2103	June 18, 2009 (15)	5.95% (16)		–	–
				$ 7,369	$ 7,866
Deferred financing costs				(7)	(7)
				$ 7,362	$ 7,859

The terms and conditions of the debentures are as follows:

(1) All $200 million outstanding 10.00% subordinated debentures matured on November 14, 2014.
(2) All $1 billion outstanding subordinated debentures were redeemed on November 4, 2013 for 100% of their principal amount plus accrued interest to the redemption date.
(3) Interest at stated interest rate until earliest par value redemption date, and thereafter at a rate of 1.00% above the 90-day Bankers' Acceptance rate.
(4) All $1.5 billion outstanding subordinated debentures were redeemed on June 15, 2015 for 100% of their principal amount plus accrued interest to the redemption date.
(5) Interest at stated interest rate until earliest par value redemption date, and thereafter at a rate of 1.41% above the 90-day Bankers' Acceptance rate.
(6) All $1.5 billion outstanding subordinated debentures were redeemed on November 2, 2015 for 100% of their principal amount plus accrued interest to the redemption date.
(7) Interest at stated interest rate until earliest par value redemption date, and thereafter at a rate of 1.21% above the 90-day Bankers' Acceptance rate.
(8) The notes include non-viability contingency capital (NVCC) provisions, necessary for the notes to qualify as Tier 2 regulatory capital under Basel III. NVCC provisions require the conversion of the instrument into a variable number of common shares in the event that OSFI deems the Bank non-viable or a federal or provincial government in Canada publicly announces that the Bank has accepted or agreed to accept a capital injection. In such an event, each note is convertible into common shares pursuant to an automatic conversion formula with a multiplier of 1.5 and a conversion price based on the greater of: (i) a floor price of $5.00 and (ii) the current market price of our common shares based on the volume weighted average trading price of our common shares on the Toronto Stock Exchange. The number of shares issued is determined by dividing the par value of the note (including accrued and unpaid interest on such note) by the conversion price and then times the multiplier.
(9) Interest at stated interest rate until earliest par value redemption date, and thereafter at a rate of 1.08% above the 90-day Bankers' Acceptance rate.
(10) Interest at stated interest rate until earliest par value redemption date, and thereafter at a rate of 1.10% above the 90-day Bankers' Acceptance rate.
(11) Interest at stated interest rate until earliest par value redemption date, and thereafter at a rate of 1.10% above the 90-day Bankers' Acceptance rate.
(12) Interest at stated interest rate until earliest par value redemption date, and thereafter at a rate of 1.12% above the 90-day Bankers' Acceptance rate.
(13) Interest at a rate of 40 basis points above the 30-day Bankers' Acceptance rate.
(14) Interest at a rate of 25 basis points above the U.S. dollar 3-month London Interbank Mean Rate (LIMEAN). In the event of a reduction of the annual dividend we declare on our common shares, the interest payable on the debentures is reduced pro rata to the dividend reduction and the interest reduction is payable with the proceeds from the sale of newly issued common shares.
(15) All $600 million outstanding subordinated debentures were redeemed on June 18, 2014 for 100% of their principal amount plus accrued interest to the redemption date.
(16) Interest at stated interest rate until earliest par value redemption date and every 5 years thereafter at a rate of 1.72% above the 5-year Government of Canada yield.

Maturity schedule

The aggregate maturities of subordinated debentures, based on the maturity dates under the terms of issue, are as follows:

(Millions of Canadian dollars)	October 31 2015
5 to 10 years	$ 5,689
Thereafter	1,680
	$ 7,369

Note 20 Trust capital securities

We issued innovative capital instruments, RBC Trust Capital Securities (RBC TruCS), through two structured entities: RBC Capital Trust (Trust) and RBC Capital Trust II (Trust II). Trust II was wound up in 2014 after the redemption of the RBC TruCS Series 2013 (RBC TruCS 2013) on December 31, 2013.

The Trust has issued non-voting RBC TruCS Series 2010, 2011, 2015 and 2008-1 (RBC TruCS 2010, 2011, 2015 and 2008-1). RBC TruCS 2010 and 2011 were redeemed in 2010 and 2011, respectively.

The holders of RBC TruCS 2015 and 2008-1 do not have any conversion rights or any other redemption rights. As a result, upon consolidation of the Trust, RBC TruCS 2015 and 2008-1 are classified as non-controlling interests. Holders of RBC TruCS 2015 and 2008-1 are eligible to receive semi-annual non-cumulative fixed cash distributions until December 31, 2015 and June 30, 2018, respectively, and a floating-rate cash distribution thereafter.

No cash distributions will be payable by the Trust on RBC TruCS if we fail to declare regular dividends (i) on our preferred shares, or (ii) on our common shares if no preferred shares are then outstanding. In this case, the net distributable funds of the Trust will be distributed to us as holders of residual interest in the Trust. Should the Trust fail to pay the semi-annual distributions in full, we will not declare dividends of any kind on any of our preferred or common shares for a specified period of time.

The table below presents the significant terms and conditions of RBC TruCS.

Significant terms and conditions of RBC Trust Capital Securities

						As at	
				Earliest redemption date	Conversion date	October 31 2015	October 31 2014
(Millions of Canadian dollars, except for percentage amounts)	Issuance date	Distribution dates	Annual yield	At the option of the issuer	At the option of the holder	Principal amount	Principal amount
RBC Capital Trust (1),(2),(3),(4),(5),(6),(7)							
Included in Non-controlling interests							
1,200,000 Trust Capital Securities – Series 2015	October 28, 2005	June 30, December 31	4.87% (8)	December 31, 2010	n.a.	$ 1,200	$ 1,200
500,000 Trust Capital Securities – Series 2008-1	April 28, 2008	June 30, December 31	6.82% (8)	June 30, 2013	n.a.	500	500
RBC Capital Trust II (2),(3),(4),(5),(6),(7),(9)							
Included in Deposits							
900,000 Trust Capital Securities – Series 2013 (10)	July 23, 2003	June 30, December 31	5.812%	December 31, 2008	Any time	$ –	$ –

The significant terms and conditions of the RBC TruCS are as follows:

(1) Subject to the approval of OSFI, the Trust may, on the earliest redemption date specified above, and on any distribution date thereafter, redeem in whole (but not in part) the RBC TruCS 2008-1 and 2015, without the consent of the holders.

(2) Subject to the approval of OSFI, upon occurrence of a special event as defined, prior to the earliest redemption date specified above, the trusts may redeem in whole (but not in part) the RBC TruCS 2008-1, 2013 or 2015 without the consent of the holders.

(3) Issuer Redemption Price: The RBC TruCS 2008-1 may be redeemed for cash equivalent to (i) the Early Redemption Price if the redemption occurs prior to June 30, 2018 or (ii) the Redemption Price if the redemption occurs on or after June 30, 2018. The RBC TruCS 2013 and 2015 may be redeemed for cash equivalent to (i) the Early Redemption Price if the redemption occurs prior to December 31, 2013 and 2015, respectively, or (ii) the Redemption Price if the redemption occurs on or after December 31, 2013 and 2015, respectively. Redemption Price refers to an amount equal to $1,000 plus the unpaid distributions to the redemption date. Early Redemption Price refers to an amount equal to the greater of (i) the Redemption Price and (ii) the price calculated to provide an annual yield, equal to the yield on a Government of Canada bond issued on the redemption date with a maturity date of June 30, 2018, plus 77 basis points, for RBC TruCS 2008-1, and a maturity date of December 31, 2013 and 2015, plus 23 basis points and 19.5 basis points, for RBC TruCS 2013 and 2015, respectively.

(4) Automatic Exchange Event: Without the consent of the holders, each RBC TruCS 2008-1, 2013 and 2015 will be exchanged automatically for 40 of our non-cumulative redeemable First Preferred Shares Series AI, T and Z, respectively, upon occurrence of any one of the following events: (i) proceedings are commenced for our winding-up; (ii) OSFI takes control of us; (iii) we have Tier 1 capital ratio of less than 5% or Total capital ratio of less than 8%; or (iv) OSFI has directed us to increase our capital or provide additional liquidity and we elect such automatic exchange or we fail to comply with such direction. The First Preferred Shares Series AI, T and Z pay semi-annual non-cumulative cash dividends and Series T is convertible at the option of the holder into a variable number of common shares.

(5) From time to time, we purchase some of the innovative capital instruments and hold them temporarily. As at October 31, 2015, we held an insignificant amount of RBC TruCS 2015 (October 31, 2014 –$9 million) and $6 million of the RBC TruCS 2008-1 (October 31, 2014 – $3 million) as treasury holdings which were deducted from regulatory capital.

(6) Regulatory capital: In accordance with OSFI Capital Adequacy Requirements, effective January 2013, RBC TruCS no longer qualify as additional Tier 1 capital due to their lack of non-viability contingent capital terms and conditions. As such, outstanding RBC TruCS are being phased out of regulatory capital in accordance with OSFI guidelines.

(7) Holder Exchange Right: Holders of RBC TruCS 2013 may, at any time, exchange all or part of their holdings for 40 non-cumulative redeemable First Preferred Shares Series U, for each RBC TruCS 2013 held. The First Preferred Shares Series U pay semi-annual non-cumulative cash dividends as and when declared by our Board of Directors and are convertible at the option of the holder into a variable number of common shares. Holders of RBC TruCS 2008-1 and RBC TruCS 2015 do not have similar exchange rights.

(8) The non-cumulative cash distribution on the RBC TruCS 2015 will be 4.87% paid semi-annually until December 31, 2015, and at one half of the sum of 180-day Bankers' Acceptance rate plus 1.5%, thereafter. The non-cumulative cash distribution on the RBC TruCS 2008-1 will be 6.82% paid semi-annually until June 30, 2018, and at one half of the sum of 180-day Bankers' Acceptance rate plus 3.5% thereafter.

(9) Subject to the approval of OSFI, Trust II may, in whole or in part, on the redemption date specified above, and on any distribution date thereafter, redeem any outstanding RBC TruCS 2013 without the consent of the holders.

(10) On December 31, 2013, Trust II redeemed all $900 million principal amount of RBC TruCS 2013 for cash at a redemption price of $1,000 per unit.

n.a. not applicable

Note 21 Equity

Share capital

Authorized share capital

Preferred – An unlimited number of First Preferred Shares and Second Preferred Shares without nominal or par value, issuable in series; the aggregate consideration for which all the First Preferred Shares and all the Second Preferred Shares that may be issued may not exceed $20 billion and $5 billion, respectively.

Common – An unlimited number of shares without nominal or par value may be issued.

Outstanding share capital

The following table details our common and preferred shares outstanding.

	As at					
	October 31, 2015			October 31, 2014		
(Millions of Canadian dollars, except the number of shares and dividends per share)	Number of shares (thousands)	Amount	Dividends declared per share	Number of shares (thousands)	Amount	Dividends declared per share
Preferred shares						
First preferred (1)						
Non-cumulative, fixed rate						
Series W	12,000	$ 300	$ 1.23	12,000	$ 300	$ 1.23
Series AA	12,000	300	1.11	12,000	300	1.11
Series AB	12,000	300	1.18	12,000	300	1.18
Series AC	8,000	200	1.15	8,000	200	1.15
Series AD	10,000	250	1.13	10,000	250	1.13
Series AE	10,000	250	1.13	10,000	250	1.13
Series AF	8,000	200	1.11	8,000	200	1.11
Series AG	10,000	250	1.13	10,000	250	1.13
Series BH	6,000	150	0.58	–	–	–
Series BI	6,000	150	0.42	–	–	–
Series BJ	6,000	150	–	–	–	–
Non-cumulative, 5-Year Rate Reset						
Series AJ (2)	13,579	339	0.88	13,579	339	0.97
Series AL	12,000	300	1.07	12,000	300	1.15
Series AN (3)	–	–	–	–	–	0.39
Series AP (3)	–	–	–	–	–	0.39
Series AR (3)	–	–	–	–	–	0.39
Series AT (4)	–	–	–	–	–	1.17
Series AV (4)	–	–	–	–	–	1.17
Series AX (5)	–	–	–	13,000	325	1.53
Series AZ	20,000	500	1.00	20,000	500	0.50
Series BB	20,000	500	0.98	20,000	500	0.46
Series BD	24,000	600	0.73	–	–	–
Series BF	12,000	300	0.63	–	–	–
Non-cumulative, floating rate						
Series AK (2)	2,421	61	0.67	2,421	61	0.53
		$ 5,100			$ 4,075	
Common shares						
Balance at beginning of year	1,442,233	$14,511		1,441,056	$14,377	
Issued under the stock option plan (6)	1,190	62		2,723	150	
Purchased for cancellation (7)	–	–		(1,546)	(16)	
Balance at end of year	1,443,423	$14,573	$ 3.08	1,442,233	$14,511	$ 2.84
Treasury shares – Preferred shares						
Balance at beginning of year	1	$ –		47	$ 1	
Sales	4,736	117		4,919	124	
Purchases	(4,800)	(119)		(4,965)	(125)	
Balance at end of year	(63)	$ (2)		1	$ –	
Treasury shares – Common shares						
Balance at beginning of year	892	$ 71		666	$ 41	
Sales	78,852	6,098		70,684	5,333	
Purchases	(79,212)	(6,131)		(70,458)	(5,303)	
Balance at end of year	532	$ 38		892	$ 71	

(1) First Preferred Shares Series were issued at $25 per share.
(2) On February 24, 2014, we issued 2.4 million Non-Cumulative Floating Rate First Preferred Shares, Series AK, totalling $61 million through a holder option, one-for-one conversion of some of our Non-Cumulative 5-Year Rate Reset First Preferred Shares, Series AJ.
(3) On February 24, 2014, we redeemed all issued and outstanding Non-Cumulative 5-Year Rate Reset First Preferred Shares, Series AN (9 million shares), Series AP (11 million shares), and Series AR (14 million shares) for cash at a redemption price of $25 per share.
(4) On August 24, 2014, we redeemed all issued and outstanding Non-Cumulative 5-Year Rate Reset First Preferred Shares, Series AT (11 million shares) and Series AV (16 million shares) for cash at a redemption price of $25 per share.
(5) On November 24, 2014, we redeemed all 13 million of issued and outstanding Non-Cumulative 5-year Rate Reset First Preferred Shares Series AX for cash at a redemption price of $25 per share.
(6) Includes fair value adjustments to stock options of $7 million (2014 – $16 million).
(7) During the year ended October 31, 2015, we did not purchase any common shares for cancellation. During the year ended October 31, 2014, we purchased for cancellation common shares at an average cost of $72.64 per share with a book value of $10.03 per share.

Significant terms and conditions of preferred shares

As at October 31, 2015	Initial Period Annual Yield	Premium	Current Dividend per share (1)	Earliest redemption date (2)	Issue Date	Redemption price (2), (3)
Preferred shares						
First preferred						
Non-cumulative, fixed rate						
Series W (4)	4.90%		$.306250	February 24, 2010	January 31, 2005	$ 25.00
Series AA	4.45%		.278125	May 24, 2011	April 4, 2006	25.00
Series AB	4.70%		.293750	August 24, 2011	July 20, 2006	25.00
Series AC	4.60%		.287500	November 24, 2011	November 1, 2006	25.25
Series AD	4.50%		.281250	February 24, 2012	December 13, 2006	25.25
Series AE	4.50%		.281250	February 24, 2012	January 19, 2007	25.25
Series AF	4.45%		.278125	May 24, 2012	March 14, 2007	25.25
Series AG	4.50%		.281250	May 24, 2012	April 26, 2007	25.25
Series BH (5)	4.90%		.577260	November 24, 2020	June 5, 2015	26.00
Series BI (5)	4.90%		.419520	November 24, 2020	July 22, 2015	26.00
Series BJ (5)	5.25%		–	February 24, 2021	October 2, 2015	26.00
Non-cumulative, 5-Year Rate Reset (6)						
Series AJ	5.00%	1.93%	.220000	February 24, 2014	September 16, 2008	25.00
Series AL	5.60%	2.67%	.266250	February 24, 2014	November 3, 2008	25.00
Series AZ (5)	4.00%	2.21%	.250000	May 24, 2019	January 30, 2014	25.00
Series BB (5)	3.90%	2.26%	.243750	August 24, 2019	June 3, 2014	25.00
Series BD (5)	3.60%	2.74%	.225000	May 24, 2020	January 30, 2015	25.00
Series BF (5)	3.60%	2.62%	.225000	November 24, 2020	March 13, 2015	25.00
Non-cumulative, floating rate						
Series AK (7)		1.93%	.156463	February 24, 2019	February 24, 2014	25.00

(1) Non-cumulative preferential dividends of each Series are payable quarterly, as and when declared by the Board of Directors, on or about the 24th day of February, May, August and November.

(2) Subject to the consent of OSFI and the requirements of the *Bank Act* (Canada), we may, on or after the dates specified above, redeem First Preferred Shares. In the case of Series AJ, AL, AZ, BB, BD, BF and AK, these may be redeemed for cash at a price per share of $25 if redeemed on the earliest redemption date and on the same date every fifth year thereafter. In the case of Series W, AA, AB, AC, AD, AE, AF, AG, BH, BI and BJ, these may be redeemed for cash at a price per share of $26 if redeemed during the 12 months commencing on the earliest redemption date and decreasing by $0.25 each 12-month period thereafter to a price per share of $25 if redeemed four years from the earliest redemption date or thereafter.

(3) Subject to the consent of OSFI and the requirements of the *Bank Act* (Canada), we may purchase the First Preferred Shares of each Series for cancellation at the lowest price or prices at which, in the opinion of the Board of Directors, such shares are obtainable.

(4) Subject to the approval of the Toronto Stock Exchange, we may, on or after February 24, 2010, convert First Preferred Shares Series W into our common shares. First Preferred Shares Series W may be converted into that number of common shares determined by dividing the current redemption price by the greater of $2.50 and 95% of the weighted average trading price of common shares at such time.

(5) The preferred shares include non-viability contingency capital (NVCC) provisions, necessary for the shares to qualify as Tier 1 regulatory capital under Basel III. NVCC provisions require the conversion of the instrument into a variable number of common shares in the event that OSFI deems the Bank non-viable or a federal or provincial government in Canada publicly announces that the Bank has accepted or agreed to accept a capital injection. In such an event, each preferred share is convertible into common shares pursuant to an automatic conversion formula with a conversion price based on the greater of: (i) a floor price of $5.00 and (ii) the current market price of our common shares based on the volume weighted average trading price of our common shares on the Toronto Stock Exchange. The number of shares issued is determined by dividing the preferred share value ($25.00 plus declared and unpaid dividends) by the conversion price.

(6) The dividend rate will reset on the earliest redemption date and every fifth year thereafter at a rate equal to the 5-year Government of Canada bond yield plus the premium indicated. The holders have the option to convert their shares into non-cumulative floating rate First Preferred Shares subject to certain conditions on the earliest redemption date and every fifth year thereafter at a rate equal to the three-month Government of Canada Treasury Bill rate plus the premium indicated.

(7) The dividend rate is equal to the three-month Government of Canada Treasury Bill rate plus the premium indicated. The holders have the option to convert their shares into non-cumulative First Preferred Shares, Series AJ subject to certain conditions on February 24, 2019 and every fifth year thereafter.

Restrictions on the payment of dividends

We are prohibited by the *Bank Act* (Canada) from declaring any dividends on our preferred or common shares when we are, or would be placed as a result of the declaration, in contravention of the capital adequacy and liquidity regulations or any regulatory directives issued under the Act. We may not pay dividends on our common shares at any time unless all dividends to which preferred shareholders are then entitled have been declared and paid or set apart for payment. We have agreed that if the Trust fails to pay any required distribution on the trust capital securities in full, we will not declare dividends of any kind on any of our preferred or common shares. Refer to Note 20.

Currently, these limitations do not restrict the payment of dividends on our preferred or common shares.

Dividend reinvestment plan

Our dividend reinvestment plan (DRIP) provides common and preferred shareholders with a means to receive additional common shares rather than cash dividends. The plan is only open to shareholders residing in Canada or the United States. The requirements of our DRIP are satisfied through either open market share purchases or shares issued from treasury. During 2015 and 2014, the requirements of our DRIP were satisfied through open market share purchases.

Shares available for future issuances

As at October 31, 2015, 43.3 million common shares are available for future issue relating to our DRIP and potential exercise of stock options outstanding. In addition, we may issue up to 38.9 million common shares from treasury under the RBC Umbrella Savings and Securities Purchase Plan that was approved by shareholders on February 26, 2009.

Note 21 Equity (continued)

Non-controlling interests

(Millions of Canadian dollars)	As at October 31 2015	As at October 31 2014
RBC Trust Capital Securities (1)		
Series 2015	$ 1,219	$ 1,211
Series 2008-1	505	508
Other	74	94
	$ 1,798	$ 1,813

(1) As at October 31, 2015, RBC TruCS Series 2015 includes $20 million of accrued interest (October 31, 2014 – $20 million), net of an insignificant amount of treasury holdings (October 31, 2014 – $9 million). Series 2008-1 includes $11 million of accrued interest (October 31, 2014 – $11 million), net of $6 million of treasury holdings (October 31, 2014 – $3 million).

Note 22 Share-based compensation

Stock option plans

We have stock option plans for certain key employees. Under the plans, options are periodically granted to purchase common shares. The exercise price for each grant is determined as the higher of the volume-weighted average of the trading prices per board lot (100 shares) of our common shares on the Toronto Stock Exchange (i) on the day preceding the day of grant; and (ii) the five consecutive trading days immediately preceding the day of grant. The options vest over a four-year period for employees, and are exercisable for a period not exceeding 10 years from the grant date.

The compensation expense recorded for the year ended October 31, 2015, in respect of the stock option plans was $6 million (October 31, 2014 – $7 million; October 31, 2013 – $7 million). The compensation expense related to non-vested options was $3 million at October 31, 2015 (October 31, 2014 – $4 million; October 31, 2013 – $5 million), to be recognized over the weighted average period of 1.8 years (October 31, 2014 – 1.4 years; October 31, 2013 – 1.1 years).

Analysis of the movement in the number and weighted average exercise price of options is set out below:

A summary of our stock option activity and related information

	October 31, 2015		October 31, 2014		October 31, 2013	
(Canadian dollars per share except share amounts)	Number of options (thousands)	Weighted average exercise price	Number of options (thousands)	Weighted average exercise price	Number of options (thousands)	Weighted average exercise price
Outstanding at beginning of year	8,579	$ 52.36	10,604	$ 50.39	12,304	$ 48.12
Granted	803	78.59	705	69.17	906	58.65
Exercised (1), (2)	(1,190)	46.44	(2,723)	49.03	(2,528)	42.22
Forfeited in the year	(10)	70.25	(7)	52.92	(78)	53.27
Outstanding at end of year	8,182	$ 55.78	8,579	$ 52.36	10,604	$ 50.39
Exercisable at end of year	5,231	$ 50.75	4,987	$ 49.60	5,711	$ 47.80
Available for grant	10,649		11,443		12,140	

(1) Cash received for options exercised during the year was $55 million (October 31, 2014 – $133 million; October 31, 2013 – $107 million) and the weighted average share price at the date of exercise was $76.87 (October 31, 2014 – $74.27; October 31, 2013 – $63.17).

(2) New shares were issued for all stock options exercised in 2015, 2014 and 2013. See Note 21.

Options outstanding as at October 31, 2015 by range of exercise price:

	Options outstanding			Options exercisable	
(Canadian dollars per share except share amounts)	Number outstanding (thousands)	Weighted average exercise price (1)	Weighted average remaining contractual life (years)	Number exercisable (thousands)	Weighted average exercise price (1)
$35.37 – $48.93	1,799	$ 43.11	4.78	1,236	$ 40.46
$50.55 – $52.94	1,908	52.67	3.87	1,908	52.67
$54.99 – $57.90	2,087	55.09	3.40	2,087	55.09
$58.65 – $78.59	2,388	68.41	8.08	–	–
	8,182	$ 55.78	5.18	5,231	$ 50.75

(1) The weighted average exercise prices have been revised to reflect the conversion of foreign currency-denominated options at the exchange rate as of October 31, 2015.

The weighted average fair value of options granted during the year ended October 31, 2015 was estimated at $6.75 (October 31, 2014 – $7.19; October 31, 2013 – $5.33). This was determined by applying the Black-Scholes model on the date of grant, taking into account the specific terms and conditions under which the options are granted, such as the vesting period and expected share price volatility estimated by considering both historic average share price volatility and implied volatility derived from traded options over our common shares of similar maturity to those of the employee options. The following assumptions were used to determine the fair value of options granted:

Weighted average assumptions

(Canadian dollars per share except percentages)	For the year ended October 31 2015	October 31 2014	October 31 2013
Share price at grant date	$ 77.58	$ 68.75	$ 58.65
Risk-free interest rate	1.40%	1.95%	1.38%
Expected dividend yield	3.76%	3.94%	4.19%
Expected share price volatility	17%	18%	18%
Expected life of option	6 years	6 years	6 years

Employee savings and share ownership plans

We offer many employees an opportunity to own our common shares through savings and share ownership plans. Under these plans, the employees can generally contribute between 1% and 10% of their annual salary or benefit base for commissioned based employees. For each contribution between 1% and 6%, we will match 50% of the employee contributions in our common shares. For the RBC Dominion Securities Savings Plan, our maximum annual contribution is $4,500 per employee. For the RBC U.K. Share Incentive Plan, our maximum annual contribution is £1,500 per employee. For the year ended October 31, 2015, we contributed $88 million (October 31, 2014 – $85 million; October 31, 2013 – $77 million), under the terms of these plans, towards the purchase of our common shares. As at October 31, 2015, an aggregate of 37 million common shares were held under these plans (October 31, 2014 – 38 million common shares; October 31, 2013 – 38 million common shares).

Deferred share and other plans

We offer deferred share unit plans to executives, non-employee directors and to certain key employees. Under these plans, the executives or directors may choose to receive all or a percentage of their annual variable short-term incentive bonus or directors' fee in the form of deferred share units (DSUs). The executives or directors must elect to participate in the plan prior to the beginning of the year. DSUs earn dividend equivalents in the form of additional DSUs at the same rate as dividends on common shares. The participant is not allowed to convert the DSUs until retirement, permanent disability or termination of employment/directorship. The cash value of the DSUs is equivalent to the market value of common shares when conversion takes place.

We have a deferred bonus plan for certain key employees within Capital Markets. The deferred bonus is invested as RBC share units and a specified percentage vests on each of the three anniversary dates following the grant date. Each vested amount is paid in cash and is based on the original number of RBC share units plus accumulated dividends valued using the average closing price of RBC common shares during the five trading days immediately preceding the vesting date.

We offer performance deferred share award plans to certain key employees, all of which vest at the end of three years. Upon vesting, the award is paid in cash and is based on the original number of RBC share units granted plus accumulated dividends valued using the average closing price of RBC common shares during the five trading days immediately preceding the vesting date. A portion of the award under certain plans can be increased or decreased up to 25%, depending on our total shareholder return compared to a defined peer group of global financial institutions. We previously offered deferred compensation to certain employees in the form of common shares that were held in trust and accumulated dividends during the three year vesting period.

We maintain a non-qualified deferred compensation plan for key employees in the United States under an arrangement called the RBC U.S. Wealth Accumulation Plan. This plan allows eligible employees to defer a portion of their annual income and allocate the deferrals among various fund choices, which include a share unit fund that tracks the value of our common shares. Certain deferrals may also be eligible for matching contributions, all of which are allocated to the RBC share unit fund.

Our liabilities for the awards granted under the deferred share and other plans are measured at fair value, determined based on the quoted market price of our common shares. The following tables present our obligations under the deferred share and other plans, and the related compensation expenses (recoveries) recognized for the year.

Obligation under deferred share and other plans

	October 31, 2015			October 31, 2014			October 31, 2013		
	Units granted during the year		Units outstanding at the end of the year	Units granted during the year		Units outstanding at the end of the year	Units granted during the year		Units outstanding at the end of the year
(Millions of Canadian dollars except units and per unit amounts)	Number granted (thousands)	Weighted average fair value	Carrying amount	Number granted (thousands)	Weighted average fair value	Carrying amount	Number granted (thousands)	Weighted average fair value	Carrying amount
Deferred share unit plans	343	$ 69.68	$ 334	315	$ 71.57	$ 333	265	$ 60.83	$ 307
Deferred bonus plan	5,849	75.60	1,442	5,339	78.97	1,585	5,215	69.45	1,517
Performance deferred share award plans	2,049	77.69	429	2,181	68.09	503	2,337	58.62	440
RBC U.S. Wealth Accumulation Plan	64	79.52	313	69	74.68	343	374	61.23	301
Other share-based plans	879	76.44	114	845	70.32	118	809	60.47	76
	9,184	$ 75.95	$ 2,632	8,749	$ 75.12	$ 2,882	9,000	$ 65.23	$ 2,641

Note 22 Share-based compensation (continued)

Compensation expenses recognized under deferred share and other plans

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Deferred share unit plans	$ (1)	$ 61	$ 53
Deferred bonus plan	(139)	121	284
Performance deferred share award plans	135	243	249
RBC U.S. Wealth Accumulation Plan	36	147	211
Other share-based plans	39	65	46
	$ 70	$ 637	$ 843

Note 23 Income and expenses from selected financial instruments

Gains and losses arising from financial instruments held at FVTPL, except for those supporting our insurance operations, are reported in Non-interest income. Related interest and dividend income are reported in Net interest income.

Net gains (losses) from financial instruments held at fair value through profit or loss (1)

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Net gains (losses)			
Classified as at fair value through profit or loss (2)	$ (218)	$ 922	$ 875
Designated as at fair value through profit or loss (3)	750	(132)	(30)
	$ 532	$ 790	$ 845
By product line			
Interest rate and credit	$ 149	$ 603	$ 593
Equities	(89)	(190)	(55)
Foreign exchange and commodities	472	377	307
	$ 532	$ 790	$ 845

(1) The following related to our insurance operations are excluded from Non-interest income and included in Insurance premiums, investment and fee income in the Consolidated Statements of Income: Net gains (losses) from financial instruments designated as at FVTPL of $51 million (October 31, 2014 – $515 million; October 31, 2013 – $(496) million).
(2) Excludes derivatives designated in a hedging relationship. Refer to Note 8 for net gains (losses) on these derivatives.
(3) For the year ended October 31, 2015, $1,118 million of net fair value gains on financial liabilities designated as at FVTPL, other than those attributable to changes in our own credit risk, were included in Non-interest income (October 31, 2014 – losses of $414 million).

Net interest income from financial instruments (1)

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Interest income			
Financial instruments held as at fair value through profit or loss	$ 4,810	$ 4,246	$ 3,959
Other categories of financial instruments (2)	17,919	17,773	17,189
	22,729	22,019	21,148
Interest expense			
Financial instruments held as at fair value through profit or loss	$ 2,621	$ 2,198	$ 2,260
Other categories of financial instruments	5,337	5,705	5,639
	7,958	7,903	7,899
Net interest income	$ 14,771	$ 14,116	$ 13,249

(1) The following related to our insurance operations are excluded from Net-interest income and included in Insurance premiums, investment and fee income in the Consolidated Statements of Income: Interest income of $449 million (October 31, 2014 – $435 million; October 31, 2013 – $470 million), and Interest expense of $3 million (October 31, 2014 – $nil; October 31, 2013 – $nil).
(2) Refer to Note 5 for interest income accrued on impaired financial assets.

Income from other categories of financial instruments (1), (2)

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Net gains (losses) arising from financial instruments measured at amortized cost (3)	$ (6)	$ (7)	$ –
Net fee income which does not form an integral part of the effective interest rate of financial assets and liabilities	4,604	4,190	3,869
Net fee income arising from trust and other fiduciary activities	9,587	9,138	7,990

(1) Refer to Note 4 for net gains (losses) on AFS securities.
(2) Refer to Note 4 for impairment losses on AFS and held-to-maturity securities, and Note 5 for impairment losses on loans.
(3) Financial instruments measured at amortized cost include held-to-maturity securities, loans and financial liabilities measured at amortized cost.

Note 24 Income taxes

The components of tax expense are as follows.

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Income taxes (recoveries) in Consolidated Statements of Income			
Current tax			
Tax expense for current year	$ 2,244	$ 2,858	$ 2,516
Adjustments for prior years	91	(64)	(289)
Recoveries arising from previously unrecognized tax loss, tax credit or temporary difference of a prior period	(5)	(4)	(2)
	2,330	2,790	2,225
Deferred tax			
Origination and reversal of temporary difference	312	(156)	(100)
Effects of changes in tax rates	35	(3)	(1)
Adjustments for prior years	(74)	74	(5)
Recoveries arising from previously unrecognized tax loss, tax credit or temporary difference of a prior period	(6)	(3)	(46)
Write-down	–	4	32
	267	(84)	(120)
	2,597	2,706	2,105
Income taxes (recoveries) in Consolidated Statements of Comprehensive Income and Changes in Equity			
Other comprehensive income			
Net unrealized gains (losses) on available-for-sale securities	(22)	70	3
Reclassification of net losses (gains) on available-for-sale securities to income	(12)	(12)	(20)
Unrealized foreign currency translation gains (losses)	8	5	2
Net foreign currency translation gains (losses) from hedging activities	(1,140)	(561)	(322)
Reclassification of losses (gains) on net investment hedging activities to income	38	1	–
Net gains (losses) on derivatives designated as cash flow hedges	(193)	(39)	(4)
Reclassification of losses (gains) on derivatives designated as cash flow hedges to income	117	10	(11)
Remeasurements of employee benefit plans	206	(88)	121
Net fair value change due to credit risk on financial liabilities designated as at fair value through profit or loss	127	(22)	–
Issuance costs	(7)	(7)	–
	(878)	(643)	(231)
Total income taxes	$ 1,719	$ 2,063	$ 1,874

Our effective tax rate changed from 23.1% for 2014 to 20.6% for 2015, principally due to net favourable tax adjustments related to prior years recorded in 2015, which are presented in Other in the table below.

The following is an analysis of the differences between the income tax expense reflected in the Consolidated Statements of Income and the amounts calculated at the Canadian statutory rate.

Reconciliation to statutory tax rate

(Millions of Canadian dollars, except for percentage amounts)	For the year ended October 31, 2015		October 31, 2014		October 31, 2013	
Income taxes at Canadian statutory tax rate	$ 3,320	26.3%	$ 3,080	26.3%	$ 2,737	26.2%
Increase (decrease) in income taxes resulting from						
Lower average tax rate applicable to subsidiaries	(116)	(0.9)	(272)	(2.3)	(190)	(1.8)
Tax-exempt income from securities	(452)	(3.6)	(386)	(3.3)	(294)	(2.8)
Tax rate change	35	0.3	(3)	–	(1)	–
Effect of previously unrecognized tax loss, tax credit or temporary differences	(11)	(0.1)	(7)	(0.1)	(48)	(0.5)
Other	(179)	(1.4)	294	2.5	(99)	(1.0)
Income taxes in Consolidated Statements of Income / effective tax rate	$ 2,597	20.6%	$ 2,706	23.1%	$ 2,105	20.1%

Deferred tax assets and liabilities result from tax loss carryforwards and temporary differences between the tax basis of assets and liabilities and their carrying amounts on our Consolidated Balance Sheets.

Significant components of deferred tax assets and liabilities

(Millions of Canadian dollars)	As at October 31, 2015						
	Net Asset November 1, 2014	Change through equity	Change through profit or loss	Exchange rate differences	Acquisitions/ disposals	Other	Net Asset October 31, 2015
Net deferred tax asset/(liability)							
Allowance for credit losses	$ 376	$ –	$ (2)	$ (2)	$ –	$ –	$ 372
Deferred compensation	1,513	–	(375)	158	–	–	1,296
Business realignment charges	9	–	(4)	1	–	–	6
Tax loss carryforwards	44	2	4	4	–	–	54
Deferred income	120	–	27	–	–	–	147
Available-for-sale securities	30	(8)	(13)	3	–	–	12
Premises and equipment	(322)	–	50	2	1	–	(269)
Deferred expense	(98)	9	3	–	–	–	(86)
Pension and post-employment related	566	(201)	46	1	–	–	412
Intangibles	(282)	–	31	(19)	–	–	(270)
Other	222	–	(34)	10	(1)	–	197
	$ 2,178	$ (198)	$ (267)	$ 158	$ –	$ –	$ 1,871
Comprising							
Deferred tax assets	$ 2,382						$ 2,072
Deferred tax liabilities	(204)						(201)
	$ 2,178						$ 1,871

(Millions of Canadian dollars)	As at October 31, 2014						
	Net Asset November 1, 2013	Change through equity	Change through profit or loss	Exchange rate differences	Acquisitions/ disposals	Other	Net Asset October 31, 2014
Net deferred tax asset/(liability)							
Allowance for credit losses	$ 413	$ –	$ (37)	$ –	$ –	$ –	$ 376
Deferred compensation	1,290	–	151	72	–	–	1,513
Business realignment charges	6	–	3	–	–	–	9
Tax loss carryforwards	62	–	(19)	1	–	–	44
Deferred income	42	–	78	–	–	–	120
Available-for-sale securities	102	(49)	(19)	(4)	–	–	30
Premises and equipment	(227)	–	(99)	4	–	–	(322)
Deferred expense	(80)	7	(25)	–	–	–	(98)
Pension and post-employment related	492	88	(16)	2	–	–	566
Intangibles	(279)	–	5	(8)	–	–	(282)
Other	150	–	62	10	–	–	222
	$ 1,971	$ 46	$ 84	$ 77	$ –	$ –	$ 2,178
Comprising							
Deferred tax assets	$ 2,141						$ 2,382
Deferred tax liabilities	(170)						(204)
	$ 1,971						$ 2,178

The tax loss carryforwards amount of deferred tax assets relates to losses in our Caribbean, U.K., U.S. and Japanese operations. Deferred tax assets of $54 million were recognized at October 31, 2015 (October 31, 2014 – $44 million) in respect of tax losses incurred in current or preceding years for which recognition is dependent on the projection of future taxable profits. Management's forecasts support the assumption that it is probable that the results of future operations will generate sufficient taxable income to utilize the deferred tax assets. The forecasts rely on continued liquidity and capital support to our business operations, including tax planning strategies implemented in relation to such support.

As at October 31, 2015, unused tax losses, tax credits and deductible temporary differences of $525 million, $356 million and $6 million (October 31, 2014 – $532 million, $267 million and $7 million) available to be offset against potential tax adjustments or future taxable income were not recognized as deferred tax assets. This amount includes unused tax losses of $158 million which expire within one year (October 31, 2014 – $nil), $28 million which expire in two to four years (October 31, 2014 - $167 million), and $339 million which expire after four years (October 31, 2014 – $365 million). There are $11 million of tax credits that will expire in two to four years (October 31, 2014 - $6 million) and $345 million that will expire after four years (October 31, 2014 – $261 million). In addition, there are deductible temporary differences of $1 million that will expire within one year (October 31, 2014 - $nil) and $5 million that will expire after four years (October 31, 2014 – $7 million).

The amount of temporary differences associated with investments in subsidiaries, branches and associates and interests in joint ventures for which deferred tax liabilities have not been recognized in the parent bank is $11.2 billion as at October 31, 2015 (October 31, 2014 – $9.0 billion).

Note 25 Earnings per share

(Millions of Canadian dollars, except share and per share amounts)	For the year ended October 31 2015	October 31 2014	October 31 2013
Basic earnings per share			
Net Income	$ 10,026	$ 9,004	$ 8,342
Preferred share dividends	(191)	(213)	(253)
Net income attributable to non-controlling interest	(101)	(94)	(98)
Net income available to common shareholders	9,734	8,697	7,991
Weighted average number of common shares (in thousands)	1,442,935	1,442,553	1,443,735
Basic earnings per share (in dollars)	$ 6.75	$ 6.03	$ 5.53
Diluted earnings per share			
Net income available to common shareholders	$ 9,734	$ 8,697	$ 7,991
Dilutive impact of exchangeable shares	15	21	53
Net income available to common shareholders including dilutive impact of exchangeable shares	9,749	8,718	8,044
Weighted average number of common shares (in thousands)	1,442,935	1,442,553	1,443,735
Stock options (1)	2,446	2,938	2,320
Issuable under other share-based compensation plans	–	–	74
Exchangeable shares (2)	4,128	6,512	20,400
Average number of diluted common shares (in thousands)	1,449,509	1,452,003	1,466,529
Diluted earnings per share (in dollars)	$ 6.73	$ 6.00	$ 5.49

(1) The dilutive effect of stock options was calculated using the treasury stock method. When the exercise price of options outstanding is greater than the average market price of our common shares, the options are excluded from the calculation of diluted earnings per share. For the year ended October 31, 2015, an average of 703,808 outstanding options with an average exercise price of $78.59 were excluded from the calculation of diluted earnings per share; for the years ended October 31, 2014 and 2013 – no outstanding options were excluded from the calculation of diluted earnings per share.

(2) Includes exchangeable preferred shares and trust capital securities.

Note 26 Guarantees, commitments, pledged assets and contingencies

Guarantees and commitments

We use guarantees and other off-balance sheet credit instruments to meet the financing needs of our clients.

The table below summarizes our maximum exposure to credit losses related to our guarantees and commitments provided to third parties. The maximum exposure to credit risk relating to a guarantee is the maximum risk of loss if there was a total default by the guaranteed parties, without consideration of possible recoveries under recourse provisions, insurance policies or from collateral held or pledged. The maximum exposure to credit risk relating to a loan commitment is the full amount of the commitment. In both cases, the maximum risk exposure is significantly greater than the amount recognized as a liability in our Consolidated Balance Sheets.

(Millions of Canadian dollars)	Maximum exposure to credit losses As at October 31 2015	October 31 2014
Financial guarantees		
Financial standby letters of credit	$ 17,494	$ 17,208
Commitments to extend credit		
Backstop liquidity facilities (1)	40,387	32,183
Credit enhancements (1)	3,348	2,530
Documentary and commercial letters of credit	216	180
Other commitments to extend credit	172,924	137,623
Other credit-related commitments		
Securities lending indemnifications	74,239	62,319
Performance guarantees	6,042	6,115
Other	221	110

(1) Amounts have been revised from those previously reported.

Our credit review process, our policy for requiring collateral security, and the types of collateral security held are generally the same for guarantees and commitments as for loans. Our clients generally have the right to request settlement of, or draw on, our guarantees and commitments within one year. However, certain guarantees can only be drawn if specified conditions are met. These conditions, along with collateral requirements, are described below. We believe that it is highly unlikely that all or substantially all of the guarantees and commitments will be drawn or settled within one year, and contracts may expire without being drawn or settled.

Financial guarantees

Financial standby letters of credit

Financial standby letters of credit represent irrevocable assurances that we will make payments in the event that a client cannot meet its obligations to the third party. For certain guarantees, the guaranteed party can request payment from us even though the client has not defaulted on its obligations. The term of these guarantees can range up to eight years.

Our policy for requiring collateral security with respect to these instruments and the types of collateral security held is generally the same as for loans. When collateral security is taken, it is determined on an account-by-account basis according to the risk of the borrower and the specifics of the transaction. Collateral security may include cash, securities and other assets pledged.

Commitments to extend credit

Backstop liquidity facilities

Backstop liquidity facilities are provided to asset-backed commercial paper conduit programs administered by us and third parties, as an alternative source of financing in the event that such programs are unable to access commercial paper markets, or in limited circumstances, when predetermined performance measures of the financial assets owned by these programs are not met. The average remaining term of these liquidity facilities is approximately three years.

Backstop liquidity facilities are also provided to non-asset backed programs such as variable rate demand notes issued by third parties. These standby facilities provide liquidity support to the issuer to buy the notes if the issuer is unable to remarket the notes, as long as the instrument and/or the issuer maintain the investment grade rating.

The terms of the backstop liquidity facilities do not require us to advance money to these programs in the event of bankruptcy or insolvency events and generally do not require us to purchase non-performing or defaulted assets.

Credit enhancements

We provide partial credit enhancement to multi-seller programs administered by us to protect commercial paper investors in the event that the collection on the underlying assets, the transaction-specific credit enhancement or the liquidity proves to be insufficient to pay for maturing commercial paper. Each of the asset pools is structured to achieve a high investment-grade credit profile through credit enhancements from us and other third parties related to each transaction. The average remaining term of these credit facilities is approximately three years.

Documentary and commercial letters of credit

Documentary and commercial letters of credit, which are written undertakings by us on behalf of a client authorizing a third party to draw drafts on us up to a stipulated amount under specific terms and conditions, are collateralized by the underlying shipment of goods to which they relate.

Other commitments to extend credit

Commitments to extend credit represent unused portions of authorizations to extend credit in the form of loans, bankers' acceptances or letters of credit.

Other credit-related commitments

Securities lending indemnifications

In securities lending transactions, we act as an agent for the owner of a security, who agrees to lend the security to a borrower for a fee, under the terms of a pre-arranged contract. The borrower must fully collateralize the security loaned at all times. As part of this custodial business, an indemnification may be provided to securities lending customers to ensure that the fair value of securities loaned will be returned in the event that the borrower fails to return the borrowed securities and the collateral held is insufficient to cover the fair value of those securities. These indemnifications normally terminate without being drawn upon. The term of these indemnifications varies, as the securities loaned are recallable on demand. Collateral held for our securities lending transactions typically includes cash or securities that are issued or guaranteed by the Canadian government, U.S. government or other OECD countries.

Performance guarantees

Performance guarantees represent irrevocable assurances that we will make payments to third-party beneficiaries in the event that a client fails to perform under a specified non-financial contractual obligation. Such obligations typically include works and service contracts, performance bonds, and warranties related to international trade. The term of these guarantees can range up to eight years.

Our policy for requiring collateral security with respect to these instruments and the types of collateral security held is generally the same as for loans. When collateral security is taken, it is determined on an account-by-account basis according to the risk of the borrower and the specifics of the transaction. Collateral security may include cash, securities and other assets pledged.

Indemnifications

In the normal course of our operations, we provide indemnifications which are often standard contractual terms to counterparties in transactions such as purchase and sale contracts, fiduciary, agency, licensing, custodial and service agreements, director/officer contracts and leasing transactions. These indemnification agreements may require us to compensate the counterparties for costs incurred as a result of changes in laws and regulations (including tax legislation) or as a result of litigation claims or statutory sanctions that may be suffered by the counterparty as a consequence of the transaction. The terms of these indemnification agreements will vary based on the contract. The nature of the indemnification agreements prevents us from making a reasonable estimate of the maximum potential amount we could be required to pay to counterparties. Historically, we have not made any significant payments under such indemnifications.

Uncommitted amounts

Uncommitted amounts represent undrawn credit facilities for which we have the ability to unilaterally withdraw the credit extended to the borrower. These include both retail and commercial commitments. As at October 31, 2015, the total balance of uncommitted amounts was $209 billion (October 31, 2014 – $195 billion).

Other commitments

We act as underwriter for certain new issuances under which we alone or together with a syndicate of financial institutions purchase the new issuances for resale to investors. In connection with these activities, our commitments were $353 million as at October 31, 2015 (October 31, 2014 – $1,109 million).

Pledged assets and collateral

In the ordinary course of business, we pledge assets and enter in collateral agreements with terms and conditions that are usual and customary to our regular lending, borrowing and trading activities recorded on our Consolidated Balance Sheets. The following are examples of our general terms and conditions on pledged assets and collateral:

- The risks and rewards of the pledged assets reside with the pledgor.
- The pledged asset is returned to the pledgor when the necessary conditions have been satisfied.
- The right of the pledgee to sell or re-pledge the asset is dependent on the specific agreement under which the collateral is pledged.
- If there is no default, the pledgee must return the comparable asset to the pledgor upon satisfaction of the obligation.

We are also required to provide intraday pledges to the Bank of Canada when we use the Large Value Transfer System (LVTS), which is a real-time electronic wire transfer system that continuously processes all Canadian dollar large-value or time-critical payments throughout the day. The pledged assets earmarked for LVTS activities are normally released back to us at the end of the settlement cycle each day. Therefore, the pledged assets amount is not included in the table below. For the year ended October 31, 2015, we had on average of $3.5 billion of assets pledged intraday to the Bank of Canada on a daily basis (October 31, 2014 – $3.1 billion). There are infrequent occasions where we are required to take an overnight advance from the Bank of Canada to cover a settlement requirement, in which case an equivalent value of the pledged assets would be used to secure the advance. There were no overnight advances taken on October 31, 2015 and October 31, 2014.

Details of assets pledged against liabilities and collateral assets held or re-pledged are shown in the following tables:

	As at	
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014
Sources of pledged assets and collateral		
Bank assets		
Cash and due from banks	**$ –**	$ 243
Interest-bearing deposits with banks	**1**	90
Loans	**81,397**	72,191
Securities	**63,761**	59,476
Other assets	**22,305**	11,887
	167,464	143,887
Client assets		
Collateral received and available for sale or re-pledging	**232,499**	189,229
Less: not sold or re-pledged	**(74,471)**	(67,747)
	158,028	121,482
	$ 325,492	$ 265,369
Uses of pledged assets and collateral		
Securities lent	**$ 21,767**	$ 21,550
Securities borrowed	**33,306**	25,150
Obligations related to securities sold short	**47,658**	50,345
Obligations related to securities lent or sold under repurchase agreements	**88,834**	61,184
Securitization	**44,203**	45,089
Covered bonds	**36,422**	26,589
Derivative transactions	**27,411**	17,068
Foreign governments and central banks	**2,770**	2,167
Clearing systems, payment systems and depositories	**4,017**	4,947
Other	**19,104**	11,280
	$ 325,492	$ 265,369

Lease commitments

Finance lease commitments

We lease computer equipment from third parties under finance lease arrangements. The leases have various terms, escalation and renewal rights. The future minimum lease payments under the finance leases are as follows:

	As at					
	October 31, 2015			October 31, 2014		
(Millions of Canadian dollars)	**Total future minimum lease payments**	**Future interest charges**	**Present value of finance lease commitments**	Total future minimum lease payments	Future interest charges	Present value of finance lease commitments
Future minimum lease payments						
No later than one year	**$ 38**	**$ (4)**	**$ 34**	$ 59	$ (6)	$ 53
Later than one year and no later than five years	**22**	**(3)**	**19**	51	(6)	45
	$ 60	**$ (7)**	**$ 53**	$ 110	$ (12)	$ 98

The net carrying amount of computer equipment held under finance lease as at October 31, 2015 was $65 million (October 31, 2014 – $113 million).

Note 26 Guarantees, commitments, pledged assets and contingencies (continued)

Operating lease commitments
We are obligated under a number of non-cancellable operating leases for premises and equipment. These leases have various terms, escalation and renewal rights. The minimum future lease payments under non-cancellable operating leases are as follows.

	As at			
	October 31, 2015		October 31, 2014	
(Millions of Canadian dollars)	**Land and buildings**	**Equipment**	Land and buildings	Equipment
Future minimum lease payments				
No later than one year	**$ 590**	**$ 131**	$ 536	$ 134
Later than one year and no later than five years	**1,822**	**80**	1,663	200
Later than five years	**1,811**	**–**	1,294	–
	4,223	**211**	3,493	334
Less: Future minimum sublease payments to be received	**(14)**	**–**	(17)	–
Net future minimum lease payments	**$ 4,209**	**$ 211**	$ 3,476	$ 334

Note 27 Litigation

We are a large global institution that is subject to many different complex legal and regulatory requirements that continue to evolve. As a result, Royal Bank of Canada and its subsidiaries are and have been subject to a variety of legal proceedings, including civil claims and lawsuits, regulatory examinations, investigations, audits and requests for information by various governmental regulatory agencies and law enforcement authorities in various jurisdictions. Some of these matters may involve novel legal theories and interpretations and may be advanced under criminal as well as civil statutes, and some proceedings could result in the imposition of civil, regulatory enforcement or criminal penalties. Management reviews the status of all proceedings on an ongoing basis and will exercise its judgment in resolving them in such manner as management believes to be in the Bank's best interest. This is an area of significant judgment and uncertainty and the extent of our financial and other exposure to these proceedings could be material to our results of operations in any particular period. The following is a description of our significant legal proceedings.

Rural/Metro litigation
On October 14, 2014, the Delaware Court of Chancery (the Court of Chancery) in a class action brought by former shareholders of Rural/Metro Corporation, held RBC Capital Markets, LLC liable for aiding and abetting a breach of fiduciary duty by three Rural/Metro directors, but did not make an additional award for attorney's fees. A final judgment was entered on February 19, 2015 in the amount of US$93 million plus post-judgment interest. RBC Capital Markets, LLC appealed the Court of Chancery's determination of liability and quantum of damages, and the plaintiffs cross-appealed the ruling on additional attorneys' fees. On November 30, 2015, the Delaware Supreme Court affirmed the Court of Chancery with respect to both the appeal and cross-appeal. RBC Capital Markets, LLC is cooperating with an investigation by the U.S. Securities and Exchange Commission relating to this matter.

LIBOR regulatory investigations and litigation
Various regulators and competition and enforcement authorities around the world, including in Canada, the United Kingdom, and the U.S., are conducting investigations related to certain past submissions made by panel banks in connection with the setting of the U.S. dollar London interbank offered rate (LIBOR). These investigations focus on allegations of collusion between the banks that were on the panel to make submissions for certain LIBOR rates. As Royal Bank of Canada is a member of certain LIBOR panels, including the U.S. dollar LIBOR panel, we have been the subject of regulatory demands for information and are cooperating with those investigations. In addition, Royal Bank of Canada and other U.S. dollar panel banks have been named as defendants in private lawsuits filed in the U.S. with respect to the setting of LIBOR including a number of class action lawsuits which have been consolidated before the U.S. District Court for the Southern District of New York (the Court). The complaints in those actions assert claims against us and other panel banks under various U.S. laws, including U.S. antitrust laws, the U.S. Commodity Exchange Act, and state law. The Court has issued five detailed rulings on various motions in the consolidated cases and based on the Court's decisions to date, many of the claims against Royal Bank of Canada have been dismissed; however, these decisions are subject to appeal and the claims that have been dismissed may be refiled based upon the appeal decisions. The parties are currently working with the Court to confirm the cases which remain active.

Based on the facts currently known, it is not possible at this time for us to predict the ultimate outcome of these investigations or proceedings or the timing of their resolution.

Royal Bank of Canada Trust Company (Bahamas) Limited Proceedings
On April 13, 2015, a French investigating judge notified Royal Bank of Canada Trust Limited (RBC Bahamas) of the issuance of an *ordonnance de renvoi* referring RBC Bahamas and other unrelated persons to the French *tribunal correctionnel* to face the charge of complicity in estate tax fraud relating to actions taken relating to a trust for which RBC Bahamas serves as trustee. The trial for this matter is expected to commence in January 2016. RBC Bahamas believes that its actions did not violate French law and intends to contest the charge in the French court. Based on the facts currently known, it is not possible to predict the ultimate outcome of this proceeding; however, management believes that its ultimate resolution will not have a material effect on our consolidated financial position, although it may be material to our results of operations in the period it occurs.

Interchange fees litigation
Since 2011, seven proposed class actions have been commenced in Canada: *Bancroft-Snell v. Visa Canada Corporation, et al.*, *9085-4886 Quebec Inc. v. Visa Canada Corporation, et al.*, *Coburn and Watson's Metropolitan Home v. Bank of America Corporation, et al.* (*Watson*), *Macaronies Hair Club and Laser Centre Inc. v. BofA Canada Bank, et al.*, *1023926 Alberta Ltd. v. Bank of America Corporation, et al.*, *The Crown & Hand Pub Ltd. v. Bank of America Corporation, et al.*, and *Hello Baby Equipment Inc. v. BofA Canada Bank, et al.* The defendants in each action are VISA Canada Corporation (Visa), MasterCard International Incorporated (MasterCard), Royal Bank of Canada and other financial institutions. The plaintiff class members are Canadian merchants who accept Visa and/or MasterCard branded credit cards for payment. The actions allege,

among other things, that from March 2001 to the present, Visa and MasterCard conspired with their issuing banks and acquirers to set default interchange rates and merchant discount fees and that certain rules (Honour All Cards and No Surcharge) have the effect of increasing the merchant discount fees. The actions include claims of civil conspiracy, breach of the *Competition Act*, interference with economic relations and unjust enrichment. The claims seek unspecified general and punitive damages. In *Watson*, a decision to partially certify the action as a class proceeding was released on March 27, 2014, and was appealed. On August 19, 2015, the British Columbia Court of Appeal struck the plaintiff class representative's cause of action under section 45 of the *Competition Act* and reinstated the plaintiff class representative's cause of action in civil conspiracy by unlawful means, among other rulings. Based on the facts currently known, it is not possible at this time for us to predict the ultimate outcome of this proceeding or the timing of its resolution.

Foreign Exchange Matters

On July 2, 2015, the Brazilian civil antitrust authority Administrative Council for Economic Defense (CADE) initiated an administrative proceeding to investigate possible violations of Brazilian antitrust law by a number of banks, including Royal Bank of Canada, regarding foreign exchange trading. The matter is in its initial stages.

On July 31, 2015, RBC Capital Markets, LLC was added as a new defendant in a pending putative class action initially filed in November 2013 in the United States District Court for the Southern District of New York. The action is brought against multiple foreign exchange dealers and alleges collusive behaviour, among other allegations, in foreign exchange trading. The action is in its initial stages as it relates to the new defendants, including RBC Capital Markets, LLC. On September 11, 2015, a class action lawsuit was filed in the Ontario Superior Court of Justice and a motion for authorization of a class action was filed in the Quebec Superior Court, both on behalf of an alleged class of Canadian investors, against Royal Bank of Canada, RBC Capital Markets, LLC and a number of other foreign exchange dealers. The Canadian class actions allege that the defendants conspired to manipulate the prices of currency trades and are in their initial stages. Based on the facts currently known, it is not possible to predict the ultimate outcome of the Foreign Exchange Matters or the timing of their ultimate resolution.

Wisconsin school districts litigation

RBC Capital Markets, LLC, RBC Europe, Ltd. and RBC USA Holdco Corporation are defendants in a lawsuit relating to their role in transactions involving investments made by a number of Wisconsin school districts in certain collateralized debt obligations. These transactions were also the subject of a regulatory investigation. In September 2011, we reached a settlement with the Securities and Exchange Commission which was paid to the school districts through a Fair Fund. Based on the facts currently known, it is not possible at this time to predict the ultimate outcome of this proceeding or the timing of its resolution; however, management believes the ultimate resolution of this proceeding will not have a material adverse effect on our consolidated financial position or results of operations.

Other matters

We are a defendant in a number of other actions alleging that certain of our practices and actions were improper. The lawsuits involve a variety of complex issues and the timing of their resolution is varied and uncertain. Management believes that we will ultimately be successful in resolving these lawsuits, to the extent that we are able to assess them, without material financial impact to the Bank. This is, however, an area of significant judgment and the potential liability resulting from these lawsuits could be material to our results of operations in any particular period.

Various other legal proceedings are pending that challenge certain of our other practices or actions. While this is an area of significant judgment and some matters are currently inestimable, we consider that the aggregate liability, to the extent that we are able to assess it, resulting from these other proceedings will not be material to our consolidated financial position or results of operations.

Note 28 Contractual repricing and maturity schedule

The following table details our exposure to interest rate risk. The carrying amounts of financial assets and financial liabilities are reported below based on the earlier of their contractual repricing date or maturity date.

The following table does not incorporate management's expectation of future events where expected repricing or maturity dates differ significantly from the contractual dates. We incorporate these assumptions in the management of interest rate risk exposure. These assumptions include expected repricing of trading instruments and certain loans and deposits. Taking into account these assumptions on the consolidated contractual repricing and maturity schedule at October 31, 2015, would result in a change in the under-one-year gap from $11.5 billion to $82.3 billion.

	As at October 31, 2015							
(Millions of Canadian dollars)	Immediately interest rate-sensitive	Under 3 months	3 to 6 months	6 to 12 months	1 to 5 years	Over 5 years	Non-rate-sensitive	Total
Assets								
Cash and deposits with banks	$ 11,712	$ 17,162	$ 17	$ –	$ –	$ –	$ 6,251	$ 35,142
Trading securities	59	29,399	11,229	14,777	22,678	32,143	48,418	158,703
Available-for-sale securities	–	23,406	2,865	1,194	17,387	10,103	1,850	56,805
Assets purchased under reverse repurchase agreements and securities borrowed	1,467	147,194	21,242	4,157	–	–	663	174,723
Loans (net of allowance for loan losses)	179,940	70,297	21,094	25,187	162,856	8,234	4,615	472,223
Derivatives	105,626	–	–	–	–	–	–	105,626
Segregated fund net assets	–	–	–	–	–	–	830	830
Other assets	177	22,828	–	–	–	106	47,045	70,156
	$ 298,981	$ 310,286	$ 56,447	$ 45,315	$ 202,921	$ 50,586	$ 109,672	$ 1,074,208
Liabilities								
Deposits	$ 257,456	$ 166,310	$ 22,988	$ 37,906	$ 104,122	$ 25,322	$ 83,123	$ 697,227
Obligations related to assets sold under repurchase agreements and securities loaned	1,709	78,533	1,400	1,199	–	–	447	83,288
Obligations related to securities sold short	5	2,335	547	664	9,580	13,447	21,080	47,658
Derivatives	107,860	–	–	–	–	–	–	107,860
Segregated fund net liabilities	–	–	–	–	–	–	830	830
Other liabilities	89	15,221	24	57	1,790	7,193	41,665	66,039
Subordinated debentures	–	1,951	–	–	4,191	1,220	–	7,362
Non-controlling interests	–	1,207	–	–	518	–	73	1,798
Shareholders' equity	–	700	300	1,050	2,301	751	57,044	62,146
	$ 367,119	$ 266,257	$ 25,259	$ 40,876	$ 122,502	$ 47,933	$ 204,262	$ 1,074,208
Total gap	$ (68,138)	$ 44,029	$ 31,188	$ 4,439	$ 80,419	$ 2,653	$ (94,590)	$ –
Canadian dollar	$ (51,779)	$ 14,274	$ 12,805	$ (678)	$ 109,580	$ (2,800)	$ (81,403)	$ (1)
Foreign currency	(16,359)	29,755	18,383	5,117	(29,161)	5,453	(13,187)	1
Total gap	$ (68,138)	$ 44,029	$ 31,188	$ 4,439	$ 80,419	$ 2,653	$ (94,590)	$ –

Note 29 Related party transactions

Related parties

Related parties include associated companies, post-employment benefit plans for the benefit of our employees, key management personnel, the Board of Directors (Directors), close family members of key management personnel and Directors, and entities which are, directly or indirectly, controlled by, jointly controlled by or significantly influenced by key management personnel, Directors or their close family members.

Key management personnel and Directors

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling our activities, directly or indirectly. They include the senior members of our organization called the Group Executive. The Group Executive is comprised of the President and Chief Executive Officer and individuals that report directly to him, including the Chief Administrative Officer and Chief Financial Officer, Chief Human Resources Officer, Chief Risk Officer, and Group Heads for Wealth Management and Insurance, Capital Markets and Investor & Treasury Services, Technology & Operations, and Personal & Commercial Banking. The Directors do not plan, direct, or control the activities of the entity; they oversee the management of the business and provide stewardship.

Compensation of key management personnel and Directors

	For the year ended		
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014 (1)	October 31 2013
Salaries and other short-term employee benefits (2)	**$ 21**	$ 22	$ 23
Post-employment benefits	**2**	7	3
Share-based payments	**37**	26	30
	$ 60	$ 55	$ 56

(1) During the year ended October 31, 2014, certain executives who were members of the Bank's Group Executive as at October 31, 2013 left the Bank and therefore, were no longer part of key management personnel. Compensation for the year ended October 31, 2014, attributable to the former executives, including benefits and share based payments relating to awards granted in prior years was $60 million.

(2) Includes the portion of the annual variable short-term incentive bonus that certain executives elected to receive in the form of DSUs. Refer to Note 22 for further details.

Stock options, stock awards and shares held by key management personnel, Directors and their close family members

	As at			
	October 31, 2015		October 31, 2014	
(Millions of Canadian dollars, except number of shares)	**No. of units held**	**Value**	No. of units held	Value
Stock options	**2,494,007**	**$ 44**	2,472,134	$ 66
Other non-option stock based awards	**1,485,976**	**111**	1,447,763	116
RBC common and preferred shares	**738,777**	**55**	686,674	55
	4,718,760	**$ 210**	4,606,571	$ 237

Transactions, arrangements and agreements involving key management personnel, Directors and their close family members

In the normal course of business, we provide certain banking services to key management personnel, Directors, and their close family members. These transactions were made on substantially the same terms, including interest rates and security, as for comparable transactions with persons of a similar standing and did not involve more than the normal risk of repayment or present other unfavourable features.

As at October 31, 2015, total loans to key management personnel, Directors and their close family members were $7 million (October 31, 2014 – $7 million). No guarantees, pledges or commitments have been given to key management personnel, Directors or their close family members.

Joint ventures and associates

In the normal course of business, we provide certain banking and financial services to our joint ventures and associates, including loans, interest and non-interest bearing deposits. These transactions meet the definition of related party transactions and were made on substantially the same terms as for comparable transactions with third-party counterparties.

As at October 31, 2015, loans to joint ventures and associates were $65 million (October 31, 2014 – $57 million) and deposits from joint ventures and associates were $27 million (October 31, 2014 – $14 million). No guarantees have been given to joint ventures or associates.

Other transactions, arrangements or agreements involving joint ventures or associates

	As at or for the year ended		
(Millions of Canadian dollars)	**October 31 2015**	October 31 2014	October 31 2013
Commitments and other contingencies	**$ 365**	$ 315	$ 240
Other fees received for services rendered	**41**	45	47
Other fees paid for services received	**182**	185	191

Restricted net assets

Certain of our subsidiaries and joint ventures are subject to regulatory requirements of the jurisdictions in which they operate. When these subsidiaries and joint ventures are subject to such requirements, they may be restricted from transferring to us, our share of their assets in the form of cash dividends, loans or advances. At October 31, 2015, restricted net assets of these subsidiaries and joint ventures were $30.8 billion (October 31, 2014 – $16 billion).

Note 30 Results by business segment

Composition of business segments

For management purposes, based on the products and services offered, we are organized into five business segments: Personal & Commercial Banking, Wealth Management, Insurance, Investor & Treasury Services and Capital Markets.

Personal & Commercial Banking is comprised of our personal and business banking operations, and our auto financing and retail investment businesses and operates through four business lines: Personal Financial Services, Business Financial Services, Cards and Payment Solutions (Canadian Banking), and Caribbean & U.S. Banking. In Canada, we provide a broad suite of financial products and services to our individual and business clients through our extensive branch, automated teller machines, online and telephone banking networks, as well as through a large number of proprietary sales professionals. In the Caribbean, we offer a broad range of financial products and services to individuals, business clients and public institutions in targeted markets. In the United States, we serve the cross-border banking needs of Canadian clients within the United States, as well as the banking product needs of our U.S. wealth management clients.

Wealth Management is comprised of Canadian Wealth Management, U.S. & International Wealth Management and Global Asset Management. We serve affluent, high net worth and ultra high net worth clients in Canada, the United States, the United Kingdom, Europe, and Asia with a comprehensive suite of investment, trust, banking, credit and other wealth management solutions. We also provide asset management products and services directly to institutional and individual clients as well as through RBC distribution channels and third-party distributors.

Insurance is comprised of our insurance operations in Canada and globally and operates under two business lines: Canadian Insurance and International Insurance, providing a wide range of life, health, property and casualty, and reinsurance products and solutions. In Canada, we offer our products and services through our proprietary distribution channels, comprised of the field sales force which includes retail insurance branches, our field sales representatives, advice centers and online, as well as through independent insurance advisors and affinity relationships. Outside North America, we operate in reinsurance markets globally offering life, accident and annuity reinsurance products.

Investor & Treasury Services offers global custody, fund and pension administration, as well as an integrated suite of products to institutional investors worldwide. We also provide cash management, correspondent banking and trade finance services to financial institutions globally and funding and liquidity management for RBC as well as other select institutions.

Capital Markets is comprised of a majority of our global wholesale banking businesses providing public and private companies, institutional investors, governments and central banks with a wide range of products and services across our two main business lines: Global Markets and Corporate and Investment Banking. In North America, we offer a full suite of products and services which include corporate and investment banking, equity and debt origination and distribution, and structuring and trading. Outside North America, we have a select presence in the U.K., Europe, and Other international, where we offer a diversified set of capabilities in our key sectors of expertise such as energy, mining and infrastructure.

All other enterprise level activities that are not allocated to these five business segments, such as enterprise funding, securitizations, net charges associated with unattributed capital, and consolidation adjustments, including the elimination of the Taxable equivalent basis (Teb) gross-up amounts, are included in Corporate Support. Teb adjustments gross up Net interest income from certain tax-advantaged sources (Canadian taxable corporate dividends) to their effective tax equivalent value with the corresponding offset recorded in the provision for income taxes. Management believes that these adjustments are necessary for Capital Markets to reflect how it is managed. The use of the Teb adjustments enhances the comparability of revenue across our taxable and tax-advantaged sources. Our use of Teb adjustments may not be comparable to similarly adjusted amounts at other financial institutions. The Teb adjustment for the year ended October 31, 2015 was $570 million (October 31, 2014 – $492 million, October 31, 2013 – $380 million).

Geographic segments

For geographic reporting, our segments are grouped into Canada, United States and Other International. Transactions are primarily recorded in the location that best reflects the risk due to negative changes in economic conditions and prospects for growth due to positive economic changes. This location frequently corresponds with the location of the legal entity through which the business is conducted and the location of our clients. Transactions are recorded in the local currency and are subject to foreign exchange rate fluctuations with respect to the movement in the Canadian dollar.

Management reporting framework

Our management reporting framework is intended to measure the performance of each business segment as if it were a stand-alone business and reflects the way our business segments are managed. This approach is intended to ensure that our business segments' results reflect all relevant revenue and expenses associated with the conduct of their businesses. Management regularly monitors these segments' results for the purpose of making decisions about resource allocation and performance assessment. These items do not impact our consolidated results.

The expenses in each business segment may include costs or services directly incurred or provided on their behalf at the enterprise level. For other costs not directly attributable to one of our business segments, we use a management reporting framework that uses assumptions, estimates and methodologies for allocating overhead costs and indirect expenses to our business segments and that assists in the attribution of capital and the transfer pricing of funds to our business segments in a manner that fairly and consistently measures and aligns the economic costs with the underlying benefits and risks of that specific business segment. Activities and business conducted between our business segments are generally at market rates. All other enterprise level activities that are not allocated to our five business segments are reported under Corporate Support.

Our assumptions and methodologies used in our management reporting framework are periodically reviewed by management to ensure that they remain valid. The capital attribution methodologies involve a number of assumptions and estimates that are revised periodically.

	For the year ended October 31, 2015									
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total	Canada	United States	Other International
Net interest income (2), (3)	$ 10,004	$ 493	$ –	$ 818	$ 3,970	$ (514)	$ 14,771	$ 11,538	$ 1,977	$ 1,256
Non-interest income	4,309	6,282	4,436	1,220	4,093	210	20,550	10,889	4,619	5,042
Total revenue	14,313	6,775	4,436	2,038	8,063	(304)	35,321	22,427	6,596	6,298
Provision for credit losses	984	46	–	(1)	71	(3)	1,097	933	98	66
Insurance policyholder benefits, claims and acquisition expense	–	–	2,963	–	–	–	2,963	1,976	–	987
Non-interest expense	6,611	5,292	613	1,301	4,696	125	18,638	10,139	4,762	3,737
Net income (loss) before income taxes	6,718	1,437	860	738	3,296	(426)	12,623	9,379	1,736	1,508
Income taxes (recoveries)	1,712	396	154	182	977	(824)	2,597	1,727	649	221
Net income	$ 5,006	$ 1,041	$ 706	$ 556	$ 2,319	$ 398	$ 10,026	$ 7,652	$ 1,087	$ 1,287
Non-interest expense includes:										
Depreciation and amortization	$ 345	$ 157	$ 16	$ 54	$ 28	$ 639	$ 1,239	$ 1,046	$ 40	$ 153
Impairment of other intangibles	1	4	–	–	–	2	7	3	1	3
Restructuring provisions	–	83	–	–	–	–	83	25	45	13
Total assets	$ 397,132	$ 26,891	$ 14,139	$ 132,294	$ 478,289	$ 25,463	$ 1,074,208	$ 584,419	$ 252,845	$ 236,944
Total assets include:										
Additions to premises and equipment and intangibles	$ 327	$ 122	$ 23	$ 46	$ 256	$ 644	$ 1,418	$ 1,071	$ 206	$ 141
Total liabilities	$ 397,157	$ 26,906	$ 14,160	$ 132,275	$ 478,291	$ (38,525)	$ 1,010,264	$ 520,420	$ 252,970	$ 236,874

	For the year ended October 31, 2014 (4)									
(Millions of Canadian dollars)	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total	Canada	United States	Other International
Net interest income (2), (3)	$ 9,743	$ 469	$ –	$ 732	$ 3,485	$ (313)	$ 14,116	$ 11,128	$ 1,697	$ 1,291
Non-interest income	3,987	5,844	4,964	1,152	3,881	164	19,992	10,488	4,257	5,247
Total revenue	13,730	6,313	4,964	1,884	7,366	(149)	34,108	21,616	5,954	6,538
Provision for credit losses	1,103	19	–	–	44	(2)	1,164	922	52	190
Insurance policyholder benefits, claims and acquisition expense	–	–	3,573	–	–	–	3,573	2,188	1	1,384
Non-interest expense	6,563	4,800	579	1,286	4,344	89	17,661	9,650	4,199	3,812
Net income (loss) before income taxes	6,064	1,494	812	598	2,978	(236)	11,710	8,856	1,702	1,152
Income taxes (recoveries)	1,589	411	31	157	923	(405)	2,706	1,983	660	63
Net income	$ 4,475	$ 1,083	$ 781	$ 441	$ 2,055	$ 169	$ 9,004	$ 6,873	$ 1,042	$ 1,089
Non-interest expense includes:										
Depreciation and amortization	$ 338	$ 147	$ 16	$ 58	$ 28	$ 578	$ 1,165	$ 971	$ 39	$ 155
Impairment of other intangibles	–	6	–	–	2	–	8	2	6	–
Restructuring provisions	20	16	–	–	–	–	36	–	16	20
Total assets	$ 376,188	$ 27,084	$ 12,930	$ 103,822	$ 400,314	$ 20,212	$ 940,550	$ 496,120	$ 194,879	$ 249,551
Total assets include:										
Additions to premises and equipment and intangibles	$ 318	$ 105	$ 16	$ 30	$ 147	$ 563	$ 1,179	$ 924	$ 154	$ 101
Total liabilities	$ 376,154	$ 27,022	$ 12,988	$ 103,798	$ 400,114	$ (34,029)	$ 886,047	$ 441,607	$ 194,946	$ 249,494

Note 30 Results by business segment (continued)

(Millions of Canadian dollars)	For the year ended October 31, 2013 (4)									
	Personal & Commercial Banking	Wealth Management	Insurance	Investor & Treasury Services	Capital Markets (1)	Corporate Support (1)	Total	Canada	United States	Other International
Net interest income (2), (3)	$ 9,434	$ 396	$ –	$ 671	$ 2,872	$ (124)	$ 13,249	$ 10,961	$ 1,448	$ 840
Non-interest income	3,585	5,091	3,928	1,133	3,708	(12)	17,433	8,601	3,810	5,022
Total revenue	13,019	5,487	3,928	1,804	6,580	(136)	30,682	19,562	5,258	5,862
Provision for credit losses	995	51	–	–	188	3	1,237	892	78	267
Insurance policyholder benefits, claims and acquisition expense	–	–	2,784	–	–	–	2,784	1,425	10	1,349
Non-interest expense	6,168	4,219	551	1,348	3,856	72	16,214	9,210	3,663	3,341
Net income (loss) before income taxes	5,856	1,217	593	456	2,536	(211)	10,447	8,035	1,507	905
Income taxes (recoveries)	1,476	331	(2)	117	836	(653)	2,105	1,710	370	25
Net income	$ 4,380	$ 886	$ 595	$ 339	$ 1,700	$ 442	$ 8,342	$ 6,325	$ 1,137	$ 880
Non-interest expense includes:										
Depreciation and amortization	$ 279	$ 135	$ 13	$ 56	$ 25	$ 503	$ 1,011	$ 838	$ 36	$ 137
Impairment of other intangibles	1	–	–	5	–	4	10	10	–	–
Restructuring provisions	21	–	–	44	–	–	65	9	–	56
Total assets	$ 362,932	$ 23,361	$ 12,275	$ 90,621	$ 358,036	$ 12,520	$ 859,745	$ 494,306	$ 181,703	$ 183,736
Total assets include:										
Additions to premises and equipment and intangibles	$ 468	$ 90	$ 13	$ 35	$ 107	$ 517	$ 1,230	$ 966	$ 132	$ 132
Total liabilities	$ 362,892	$ 23,306	$ 12,325	$ 90,793	$ 357,872	$ (36,903)	$ 810,285	$ 444,781	$ 181,815	$ 183,689

(1) Taxable equivalent basis (Teb).
(2) Inter-segment revenue and share of profits in joint ventures and associates are not material.
(3) Interest revenue is reported net of interest expense as management relies primarily on net interest income as a performance measure.
(4) Certain amounts have been revised from those previously reported.

Revenue by business line

(Millions of Canadian dollars)	For the year ended		
	October 31 2015	October 31 2014	October 31 2013
Personal Financial Services	**$ 7,634**	$ 7,285	$ 6,948
Business Financial Services	**3,091**	3,135	2,990
Cards and Payment Solutions	**2,654**	2,449	2,282
Caribbean & U.S. Banking	**934**	861	799
Canadian Wealth Management	**2,226**	2,186	1,889
U.S. & International Wealth Management	**2,729**	2,430	2,225
Global Asset Management	**1,820**	1,697	1,373
Insurance	**4,436**	4,964	3,928
Investor & Treasury services	**2,038**	1,884	1,804
Corporate and Investment Banking	**3,697**	3,437	3,014
Global Markets (1)	**4,477**	3,896	3,314
Other Capital Markets (1)	**(111)**	33	252
Corporate Support	**(304)**	(149)	(136)
	$ 35,321	$ 34,108	$ 30,682

(1) Certain amounts have been revised from those previously reported.

Note 31 Nature and extent of risks arising from financial instruments

We are exposed to credit, market and liquidity and funding risks as a result of holding financial instruments. Our risk measurement and objectives, policies and methodologies for managing these risks are disclosed in the shaded text along with those tables specifically marked with an asterisk (*) on pages 56 to 82 of the Management's Discussion and Analysis. These shaded text and tables are an integral part of these Consolidated Financial Statements.

Concentrations of credit risk exist if a number of our clients are engaged in similar activities, are located in the same geographic region or have comparable economic characteristics such that their ability to meet contractual obligations would be similarly affected by changes in economic, political or other conditions.

Concentrations of credit risk indicate the relative sensitivity of our performance to developments affecting a particular industry or geographic location. The amounts of credit exposure associated with certain of our on- and off-balance sheet financial instruments are summarized in the following table.

	As at October 31, 2015								
(Millions of Canadian dollars, except percentage amounts)	Canada	%	United States	%	Europe	%	Other International	%	Total
On-balance sheet assets other than derivatives (1)	$ 453,650	68%	$ 110,341	17%	$ 56,984	9%	$ 41,453	6%	$ 662,428
Derivatives before master netting agreement (2), (3)	20,911	11	22,877	12	143,414	74	7,254	3	194,456
	$ 474,561	55%	$ 133,218	16%	$ 200,398	23%	$ 48,707	6%	$ 856,884
Off-balance sheet credit instruments (4)									
Committed and uncommitted (5)	$ 239,351	57%	$ 137,204	33%	$ 32,638	8%	$ 10,312	2%	$ 419,505
Other	49,740	51	17,520	18	29,213	30	1,523	1	97,996
	$ 289,091	56%	$ 154,724	30%	$ 61,851	12%	$ 11,835	2%	$ 517,501

	As at October 31, 2014								
(Millions of Canadian dollars, except percentage amounts)	Canada	%	United States	%	Europe	%	Other International	%	Total
On-balance sheet assets other than derivatives (1)	$ 422,498	72%	$ 79,140	14%	$ 46,596	8%	$36,031	6%	$ 584,265
Derivatives before master netting agreement (2), (3)	12,825	9	23,039	16	102,368	70	7,009	5	145,241
	$ 435,323	60%	$ 102,179	14%	$ 148,964	20%	$43,040	6%	$ 729,506
Off-balance sheet credit instruments (4)									
Committed and uncommitted (5)	$ 224,849	62%	$ 102,253	28%	$ 28,312	8%	$ 7,876	2%	$ 363,290
Other	45,600	53	14,579	17	25,023	29	550	1	85,752
	$ 270,449	60%	$ 116,832	26%	$ 53,335	12%	$ 8,426	2%	$ 449,042

(1) Includes assets purchased under reverse repurchase agreements and securities borrowed, loans and customers' liability under acceptances. The largest concentrations in Canada are Ontario at 47% (October 31, 2014 – 46%), the Prairies at 21% (October 31, 2014 – 21%), British Columbia and the territories at 16% (October 31, 2014 – 16%) and Quebec at 11% (October 31, 2014 – 12%). No industry accounts for more than 35% (October 31, 2014 – 33%) of total on-balance sheet credit instruments.
(2) The largest concentration of credit exposure by counterparty type is banks at 29% (October 31, 2014 – 36%).
(3) Excludes credit derivatives classified as other than trading.
(4) Represents financial instruments with contractual amounts representing credit risk.
(5) Retail and wholesale commitments respectively comprise 36% and 64% of our total commitments (October 31, 2014 – 38% and 62%). The largest concentrations in the wholesale portfolio related to Financing products at 15% (October 31, 2014 – 14%), Non-bank financial services at 10% (October 31, 2014 – 9%), Oil and gas at 10% (October 31, 2014 – 9%), Utilities at 9% (October 31, 2014 – 9%), and Real estate and related at 8% (October 31, 2014 – 9%).

Note 32 Capital management

Regulatory capital and capital ratios

OSFI formally establishes risk-based capital and leverage targets for deposit-taking institutions in Canada. We are required to calculate our capital ratios using the Basel III framework. Under Basel III, regulatory capital includes Common Equity Tier 1 (CET1), Tier 1 and Tier 2 capital. CET1 capital mainly consists of common shares, retained earnings and other components of equity. Regulatory adjustments under Basel III include deductions of goodwill and other intangibles, certain deferred tax assets, defined benefit pension fund assets, investments in banking, financial and insurance entities, and the shortfall of provisions to expected losses. Tier 1 capital comprises predominantly CET1, with additional items that consist of capital instruments such as certain preferred shares, and certain non-controlling interests in subsidiaries. Tier 2 capital includes subordinated debentures that meet certain criteria and certain loan loss allowances. Total capital is the sum of CET1, additional Tier 1 capital and Tier 2 capital. Regulatory capital ratios are calculated by dividing CET1, Tier 1 and Total capital by risk-weighted assets.

Note 32 Capital management (continued)

Beginning this year, the asset-to-capital multiple has been replaced by a leverage ratio. The leverage ratio is calculated by dividing Tier 1 capital by an exposure measure. The exposure measure consists of total assets (excluding items deducted from Tier 1 capital) and certain off-balance sheet items converted into credit exposure equivalents. Adjustments are also made to derivatives and secured financing transactions to reflect credit and other risks. During 2015 and 2014, we complied with all capital and leverage requirements imposed by OSFI.

	As at	
(Millions of Canadian dollars, except percentage and multiple amounts)	**October 31 2015**	October 31 2014
Capital (1)		
Common Equity Tier 1 capital	**$ 43,715**	$ 36,406
Tier 1 capital	**50,541**	42,202
Total capital	**58,004**	50,020
Risk-weighted assets used in calculation of capital ratios (1), (2)		
Common Equity Tier 1 capital ratio	**411,756**	368,594
Tier 1 capital ratio	**412,941**	369,976
Total capital ratio	**413,957**	372,050
Total capital risk-weighted assets (1)		
Credit risk	**323,870**	286,327
Market risk	**39,786**	38,460
Operational risk	**50,301**	47,263
	$ 413,957	$ 372,050
Capital ratios, leverage ratios and multiples (1)		
Common Equity Tier 1 capital ratio	**10.6%**	9.9%
Tier 1 capital ratio	**12.2%**	11.4%
Total capital ratio	**14.0%**	13.4%
Leverage ratio (3)	**4.3%**	n.a.
Assets-to-capital multiple (4)	**n.a.**	17.0X

(1) Capital, risk-weighted assets and capital ratios and multiples are calculated using OSFI Capital Adequacy Requirements. Leverage ratio is calculated using OSFI Leverage Requirements.
(2) Effective the third quarter of 2014, the credit valuation adjustment to our risk-weighted asset calculation implemented in the first quarter of 2014, must reflect different percentages for each tier of capital. This change reflects a phase-in of credit valuation adjustments ending in the fourth quarter of 2018. During this phase-in period, risk-weighted assets for Common Equity Tier 1, Tier 1 and Total capital ratios will be subject to different annual credit valuation adjustment percentages.
(3) Exposure measure as at October 31, 2015 was $1,170 billion.
(4) Beginning this year, the asset-to-capital multiple has been replaced by a leverage ratio. Gross adjusted assets as at October 31, 2014 were $885 billion.
n.a. not applicable

Note 33 Offsetting financial assets and financial liabilities

Offsetting within our balance sheet may be achieved where financial assets and liabilities are subject to master netting arrangements that provide the currently enforceable right of offset and where there is an intention to settle on a net basis, or realize the assets and liabilities simultaneously. For derivative contracts and repurchase and reverse repurchase arrangements, this is generally achieved when there is a market mechanism for settlement (e.g. central counterparty exchange, or clearing house) which provides daily net settlement of cash flows arising from these contracts. Margin receivables and margin payables are generally offset as they settle simultaneously through a market settlement mechanism. These are generally classified as Other assets or Other liabilities.

Amounts that do not qualify for offsetting include master netting arrangements that only permit outstanding transactions with the same counterparty to be offset in an event of default or occurrence of other predetermined events. Such master netting arrangements include the ISDA Master Agreement or derivative exchange or clearing counterparty agreements for derivative contracts, global master repurchase agreement and global master securities lending agreements for repurchase, reverse repurchase and other similar secured lending and borrowing arrangements.

The amount of the financial collateral received or pledged subject to master netting arrangement or similar agreements but not qualified for offsetting refers to the collateral received or pledged to cover the net exposure between counterparties, by enabling the collateral to be realized in an event of default or the occurrence of other predetermined events. Certain amounts of collateral are restricted from being sold or re-pledged unless there is an event of default or the occurrence of other predetermined events.

The tables below provide the amount of financial instruments that have been offset on the Consolidated Balance Sheets and the amounts that do not qualify for offsetting but are subject to enforceable master netting arrangements or similar agreements. The amounts presented are not intended to represent our actual exposure to credit risk.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

	As at October 31, 2015							
	Amounts subject to offsetting and enforceable netting arrangements							
				Amounts subject to master netting arrangements or similar agreements but do not qualify for offsetting on the balance sheet (1)				
(Millions of Canadian dollars)	Gross amounts of financial assets before balance sheet offsetting	Amounts of financial liabilities offset on the balance sheet	Net amount of financial assets presented on the balance sheet	Impact of master netting agreements	Financial collateral received (2)	Net amount	Amounts not subject to enforceable netting arrangements	Total amount recognized on the balance sheet
Assets purchased under reverse repurchase agreements and securities borrowed	$ 183,493	$ 9,846	$ 173,647	$ 30	$ 172,910	$ 707	$ 1,076	$ 174,723
Derivative assets (3)	185,654	87,527	98,127	71,833	14,956	11,338	7,499	105,626
Other financial assets	1,560	1,283	277	–	52	225	78	355
	$ 370,707	$ 98,656	$ 272,051	$ 71,863	$ 187,918	$12,270	$ 8,653	$ 280,704

	As at October 31, 2014							
	Amounts subject to offsetting and enforceable netting arrangements							
				Amounts subject to master netting arrangements or similar agreements but do not qualify for offsetting on the balance sheet (1)				
(Millions of Canadian dollars)	Gross amounts of financial assets before balance sheet offsetting	Amounts of financial liabilities offset on the balance sheet	Net amount of financial assets presented on the balance sheet	Impact of master netting agreements	Financial collateral received (2)	Net amount	Amounts not subject to enforceable netting arrangements	Total amount recognized on the balance sheet
Assets purchased under reverse repurchase agreements and securities borrowed	$ 149,348	$ 14,038	$ 135,310	$ 56	$ 134,985	$ 269	$ 270	$ 135,580
Derivative assets (3)	136,230	57,068	79,162	60,546	8,993	9,623	8,240	87,402
Other financial assets	1,345	1,247	98	–	70	28	60	158
	$ 286,923	$ 72,353	$ 214,570	$ 60,602	$ 144,048	$ 9,920	$ 8,570	$ 223,140

(1) Financial collateral is reflected at fair value. The amount of financial instruments and financial collateral disclosed is limited to the net balance sheet exposure, and any over-collateralization is excluded from the table.
(2) Includes cash collateral of $11,345 million (October 31, 2014 – $8,719 million) and non-cash collateral of $177 billion (October 31, 2014 – $135 billion).
(3) Includes cash margin of $1,512 million (October 31, 2014 – $1,326 million) which offset against the derivative balance on the balance sheet.

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

	As at October 31, 2015							
	Amounts subject to offsetting and enforceable netting arrangements							
				Amounts subject to master netting arrangements or similar agreements but do not qualify for offsetting on the balance sheet (1)				
(Millions of Canadian dollars)	Gross amounts of financial liabilities before balance sheet offsetting	Amounts of financial assets offset on the balance sheet	Net amount of financial liabilities presented on the balance sheet	Impact of master netting agreements	Financial collateral pledged (2)	Net amount	Amounts not subject to enforceable netting arrangements	Total amount recognized on the balance sheet
Obligations related to assets sold under repurchase agreements and securities loaned	$ 92,564	$ 9,846	$ 82,718	$ 30	$ 82,476	$ 212	$ 570	$ 83,288
Derivative liabilities (3)	186,400	87,960	98,440	71,833	15,060	11,547	9,420	107,860
Other financial liabilities	2,348	1,517	831	–	551	280	3	834
	$ 281,312	$ 99,323	$ 181,989	$ 71,863	$ 98,087	$ 12,039	$ 9,993	$ 191,982

	As at October 31, 2014							
	Amounts subject to offsetting and enforceable netting arrangements							
				Amounts subject to master netting arrangements or similar agreements but do not qualify for offsetting on the balance sheet (1)				
(Millions of Canadian dollars)	Gross amounts of financial liabilities before balance sheet offsetting	Amounts of financial assets offset on the balance sheet	Net amount of financial liabilities presented on the balance sheet	Impact of master netting agreements	Financial collateral pledged (2)	Net amount	Amounts not subject to enforceable netting arrangements	Total amount recognized on the balance sheet
Obligations related to assets sold under repurchase agreements and securities loaned	$ 78,029	$ 14,038	$ 63,991	$ 56	$ 63,790	$ 145	$ 340	$ 64,331
Derivative liabilities (3)	135,662	56,982	78,680	60,546	9,184	8,950	10,302	88,982
Other financial liabilities	1,921	1,333	588	–	478	110	8	596
	$ 215,612	$ 72,353	$ 143,259	$ 60,602	$ 73,452	$ 9,205	$ 10,650	$ 153,909

(1) Financial collateral is reflected at fair value. The amount of financial instruments and financial collateral disclosed is limited to the net balance sheet exposure, and any over-collateralization is excluded from the table.
(2) Includes cash collateral of $13,233 million (October 31, 2014 – $7,187 million) and non-cash collateral of $85 billion (October 31, 2014 – $66 billion).
(3) Includes cash margin of $1,277 million (October 31, 2014 – $1,240 million) which offset against the derivative balance on the balance sheet.

Note 34 Recovery and settlement of on-balance sheet assets and liabilities

The table below presents an analysis of assets and liabilities recorded on our Consolidated Balance Sheets by amounts to be recovered or settled within one year and after one year, as at the balance sheet date, based on contractual maturities and certain other assumptions outlined in the footnotes below. As warranted, we manage the liquidity risk of various products based on historical behavioural patterns that are often not aligned with contractual maturities. Amounts to be recovered or settled within one year, as presented below, may not be reflective of management's long-term view of the liquidity profile of certain balance sheet categories.

	As at					
	October 31, 2015			October 31, 2014 (1)		
(Millions of Canadian dollars)	Within one year	After one year	Total	Within one year	After one year	Total
Assets						
Cash and due from banks (2)	$ 10,466	$ 1,986	$ 12,452	$ 16,649	$ 772	$ 17,421
Interest-bearing deposits with banks	22,690	–	22,690	7,494	905	8,399
Securities						
Trading securities (3)	149,150	9,553	158,703	141,399	9,981	151,380
Available-for-sale securities	12,338	44,467	56,805	12,318	35,450	47,768
Assets purchased under reverse repurchase agreements and securities borrowed	172,122	2,601	174,723	133,438	2,142	135,580
Loans						
Retail	92,012	256,171	348,183	78,435	255,834	334,269
Wholesale	25,842	100,227	126,069	22,491	80,463	102,954
Allowance for loan losses			(2,029)			(1,994)
Segregated fund net assets	–	830	830	–	675	675
Other						
Customers' liability under acceptances	13,446	7	13,453	11,456	6	11,462
Derivatives (3)	103,618	2,008	105,626	85,688	1,714	87,402
Premises and equipment, net	–	2,728	2,728	–	2,684	2,684
Goodwill	–	9,289	9,289	–	8,647	8,647
Other intangibles	–	2,814	2,814	–	2,775	2,775
Investments in joint ventures and associates	–	360	360	–	295	295
Employee benefit assets	–	245	245	–	138	138
Other assets	35,350	5,917	41,267	24,414	6,281	30,695
	$ 637,034	$ 439,203	$ 1,074,208	$ 533,782	$ 408,762	$ 940,550
Liabilities						
Deposits (4)	$ 528,109	$ 169,118	$ 697,227	$ 451,065	$ 163,035	$ 614,100
Segregated fund net liabilities	–	830	830	–	675	675
Other						
Acceptances	13,446	7	13,453	11,456	6	11,462
Obligations related to securities sold short	41,156	6,502	47,658	46,125	4,220	50,345
Obligations related to assets sold under repurchase agreements and securities loaned	82,498	790	83,288	64,331	–	64,331
Derivatives (3)	105,271	2,589	107,860	87,830	1,152	88,982
Insurance claims and policy benefit liabilities	97	9,013	9,110	135	8,429	8,564
Employee benefit liabilities	–	1,969	1,969	–	2,420	2,420
Other liabilities	28,563	12,944	41,507	25,228	12,081	37,309
Subordinated debentures	1,500	5,862	7,362	200	7,659	7,859
	$ 800,640	$ 209,624	$ 1,010,264	$ 686,370	$ 199,677	$ 886,047

(1) Certain amounts have been revised from those previously reported.
(2) Cash and due from banks are assumed to be recovered within one year, except for cash balances not available for use by the bank.
(3) Trading securities classified as at FVTPL and trading derivatives not designated in hedging relationships are presented as within one year as this best represents in most instances the short-term nature of our trading activities. Non-trading derivatives designated in hedging relationships are presented according to the recovery or settlement of the related hedged item.
(4) Demand deposits of $312 billion (October 31, 2014 – $289 billion) are presented as within one year due to their being repayable on demand or at short notice on a contractual basis. In practice, these deposits relate to a broad range of individuals and customer-types which form a stable base for our operations and liquidity needs.

Note 35 Parent company information

The following table presents information regarding the legal entity of Royal Bank of Canada with its subsidiaries presented on an equity accounted basis.

Condensed Balance Sheets

(Millions of Canadian dollars)	As at October 31 2015	As at October 31 2014
Assets		
Cash and due from banks	$ 3,123	$ 7,333
Interest-bearing deposits with banks	15,838	5,788
Securities	130,326	111,159
Investments in bank subsidiaries and associated corporations	22,907	20,240
Investments in other subsidiaries and associated corporations	60,378	53,131
Assets purchased under reverse repurchase agreements and securities borrowed	23,418	17,075
Loans, net of allowance for loan losses	444,169	407,440
Net balances due from bank subsidiaries	19,118	10,466
Other assets	147,330	120,052
	$ 866,607	$ 752,684
Liabilities and shareholders' equity		
Deposits	$ 566,903	$ 497,053
Net balances due to other subsidiaries	66,879	56,146
Other liabilities	163,379	138,989
	797,161	692,188
Subordinated debentures	7,300	7,806
Shareholders' equity	62,146	52,690
	$ 866,607	$ 752,684

Condensed Statements of Income and Comprehensive Income

(Millions of Canadian dollars)	For the year ended October 31 2015	For the year ended October 31 2014	For the year ended October 31 2013
Interest income (1)	$ 18,287	$ 18,415	$ 18,573
Interest expense	5,785	5,882	5,795
Net interest income	12,502	12,533	12,778
Non-interest income (2)	5,474	6,007	4,626
Total revenue	17,976	18,540	17,404
Provision for credit losses	1,027	1,010	1,147
Non-interest expense	8,051	7,801	7,304
Income before income taxes	8,898	9,729	8,953
Income taxes	1,939	2,283	1,537
Net income before equity in undistributed income of subsidiaries	6,959	7,446	7,416
Equity in undistributed income of subsidiaries	3,067	1,558	926
Net income	10,026	9,004	8,342
Other comprehensive income, net of taxes	3,153	915	696
Total comprehensive income	$ 13,179	$ 9,919	$ 9,038

(1) Includes dividend income from investments in subsidiaries and associated corporations of $120 million (2014 – $10 million; 2013 – $1,313 million).
(2) Includes share of profit from associated corporations of $15 million (2014 – profit of $7 million; 2013 – loss of $9 million).

Note 35 Parent company information (continued)

Condensed Statements of Cash Flows

(Millions of Canadian dollars)	For the year ended October 31 2015	October 31 2014	October 31 2013
Cash flows from operating activities			
Net income	$ 10,026	$ 9,004	$ 8,342
Adjustments to determine net cash from operating activities:			
Change in undistributed earnings of subsidiaries	(3,067)	(1,558)	(926)
Change in deposits, net of securitizations	70,802	41,428	31,183
Change in loans, net of securitizations	(33,904)	(22,865)	(18,927)
Change in trading securities	(10,663)	(4,193)	(19,048)
Change in obligations related to assets sold under repurchase agreements and securities loaned	2,687	(2,712)	1,730
Change in assets purchased under reverse repurchase agreements and securities borrowed	(6,343)	(2,497)	(3,668)
Change in obligations related to securities sold short	(1,244)	(1,305)	388
Other operating activities, net	(7,845)	182	(8,210)
Net cash from (used in) operating activities	20,449	15,484	(9,136)
Cash flows from investing activities			
Change in interest-bearing deposits with banks	(10,050)	(3,081)	(1,548)
Proceeds from sale of available-for-sale securities	620	1,225	1,641
Proceeds from maturity of available-for-sale securities	25,207	28,875	28,056
Purchases of available-for-sale securities	(36,408)	(36,165)	(26,392)
Net acquisitions of premises and equipment and other intangibles	(937)	(803)	(754)
Change in cash invested in subsidiaries	(978)	(2,409)	(7,323)
Change in net funding provided to subsidiaries	2,081	4,889	20,164
Proceeds from sale of associated corporations	4	70	–
Net cash (used in) from investing activities	(20,461)	(7,399)	13,844
Cash flows from financing activities			
Issue of subordinated debentures	1,000	2,000	2,046
Repayment of subordinated debentures	(1,700)	(1,600)	(2,000)
Issue of preferred shares	1,350	1,000	–
Issuance costs	(21)	(14)	–
Redemption of preferred shares	(325)	(1,525)	(222)
Issue of common shares	62	150	121
Common shares purchased for cancellation	–	(113)	(408)
Dividends paid	(4,564)	(4,211)	(3,810)
Net cash used in financing activities	(4,198)	(4,313)	(4,273)
Net change in cash and due from banks	(4,210)	3,772	435
Cash and due from banks at beginning of year	7,333	3,561	3,126
Cash and due from banks at end of year	$ 3,123	$ 7,333	$ 3,561
Supplemental disclosure of cash flow information			
Amount of interest paid in year	$ 5,786	$ 5,814	$ 5,943
Amount of interest received in year	18,001	18,582	17,281
Amount of dividends received in year	106	10	1,313
Amount of income taxes paid in year	1,323	1,286	265

Note 36 Subsequent events

Acquisition and disposition

On November 2, 2015, we completed the acquisition of City National. City National's business will give us an expansion platform for long-term growth in the U.S. By acquiring 100% of the voting equity interests, the acquisition provides us with the opportunity to enhance and complement our existing U.S. businesses in line with our strategic goals. Total consideration of $7.1 billion (US$5.5 billion) at the date of close includes US$2.6 billion in cash, 41.6 million RBC common shares issued at a price of US$57.16 per share, first preferred shares, Series C-1 and Series C-2 with a fair value of US$290 million (par value of US$275 million), issued upon the cancellation of the outstanding City National preferred shares, as well as amounts related to share based compensation. Due to the proximity of the close date to the release date of our Consolidated Financial Statements, we have not finalized the initial accounting for the acquisition as the valuation of assets acquired and liabilities assumed including loans, intangible assets, goodwill, share based compensation and contingent liabilities has not been completed.

On November 4, 2015, we entered into a purchase and sale agreement to sell our trust, custody and fund administration business in the Caribbean to SMP Group Limited. The transaction is subject to customary closing conditions including regulatory approvals.

Capital and funding transactions

On November 2, 2015, we redeemed all $1.5 billion outstanding 3.18% subordinated debentures due on November 2, 2015 for 100% of their principal amount plus accrued interest to the redemption date.

On November 16, 2015, we announced our intention to redeem all issued and outstanding $1.2 billion principal amount of RBC TruCS 2015 for cash at a redemption price of $1,000 per unit. The redemption is expected to be completed on December 31, 2015.

Condensed Balance Sheet

(Millions of Canadian dollars)	IFRS 2015	IFRS 2014	IFRS 2013	IFRS 2012	IFRS 2011	CGAAP 2011	CGAAP 2010	CGAAP 2009	CGAAP 2008	CGAAP 2007	CGAAP 2006
Assets											
Cash and due from banks	$ 12,452	$ 17,421	$ 15,550	$ 12,428	$ 12,428	$ 13,247	$ 8,440	$ 7,584	$ 11,086	$ 4,226	$ 4,401
Interest-bearing deposits with banks	22,690	8,399	9,039	10,246	6,460	12,181	13,254	8,919	20,041	11,881	10,502
Securities	215,508	199,148	182,710	161,602	167,022	179,558	183,519	177,298	171,134	178,255	184,869
Assets purchased under reverse repurchase agreements and securities borrowed	174,723	135,580	117,517	112,257	84,947	84,947	72,698	41,580	44,818	64,313	59,378
Loans net of allowance	472,223	435,229	408,850	378,241	347,530	296,284	273,006	258,395	289,540	237,936	208,530
Other	176,612	144,773	126,079	149,180	175,446	165,485	175,289	161,213	187,240	103,735	69,100
Total Assets	$ 1,074,208	$ 940,550	$ 859,745	$ 823,954	$ 793,833	$ 751,702	$ 726,206	$ 654,989	$ 723,859	$ 600,346	$ 536,780
Liabilities											
Deposits	$ 697,227	$ 614,100	$ 563,079	$ 512,244	$ 479,102	$ 444,181	$ 414,561	$ 378,457	$ 438,575	$ 365,205	$ 343,523
Other	305,675	264,088	239,763	259,174	263,625	256,124	263,030	229,699	242,744	201,404	160,575
Subordinated debentures	7,362	7,859	7,443	7,615	8,749	7,749	6,681	6,461	8,131	6,235	7,103
Trust capital securities	–	–	–	–	894	–	727	1,395	1,400	1,400	1,383
Preferred shares liabilities	–	–	–	–	–	–	–	–	–	300	298
Non-controlling interest in subsidiaries	–	n.a.	n.a.	n.a.	n.a.	1,941	2,256	2,071	2,371	1,483	1,775
Total Liabilities	1,010,264	886,047	810,285	779,033	752,370	709,995	687,255	618,083	693,221	576,027	514,657
Equity attributable to shareholders	62,146	52,690	47,665	43,160	39,702	41,707	38,951	36,906	30,638	24,319	22,123
Non-controlling interest	1,798	1,813	1,795	1,761	1,761	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total equity	63,944	54,503	49,460	44,921	41,463	41,707	38,951	36,906	30,638	24,319	22,123
Total liabilities and equity	$ 1,074,208	$ 940,550	$ 859,745	$ 823,954	$ 793,833	$ 751,702	$ 726,206	$ 654,989	$ 723,859	$ 600,346	$ 536,780

Condensed Income Statement

(Millions of Canadian dollars)	IFRS 2015	IFRS 2014	IFRS 2013	IFRS 2012	IFRS 2011	CGAAP 2011	CGAAP 2010	CGAAP 2009	CGAAP 2008	CGAAP 2007	CGAAP 2006
Net interest income	$ 14,771	$ 14,116	$ 13,249	$ 12,439	$ 11,357	$ 10,600	$ 10,338	$ 10,705	$ 9,054	$ 7,700	$ 6,796
Non-interest income	20,550	19,992	17,433	16,708	16,281	16,830	15,744	15,736	12,528	14,762	13,481
Total revenue	35,321	34,108	30,682	29,147	27,638	27,430	26,082	26,441	21,582	22,462	20,637
Provision for credit losses (PCL)	1,097	1,164	1,237	1,299	1,133	975	1,240	2,167	1,595	791	429
Insurance policyholder benefits, claims and acquisition expense	2,963	3,573	2,784	3,621	3,358	3,360	3,546	3,042	1,631	2,173	2,509
Non-interest expense (NIE)	18,638	17,661	16,214	14,641	14,167	14,453	13,469	13,436	12,351	12,473	11,495
Non-controlling interest	n.a.	n.a.	n.a.	n.a.	n.a.	104	99	100	81	141	44
Net income from continuing operations	10,026	9,004	8,342	7,558	6,970	6,650	5,732	5,681	4,555	5,492	4,757
Net loss from discontinued operations	–	–	–	(51)	(526)	(1,798)	(509)	(1,823)	–	–	(29)
Net income	10,026	9,004	8,342	7,507	6,444	4,852	5,223	3,858	4,555	5,492	4,728

Other Statistics – reported

(Millions of Canadian dollars, except percentages and per share amounts)	IFRS					CGAAP					
	2015	2014	2013	2012	2011	2011	2010	2009	2008	2007	2006
PROFITABILITY MEASURES (1)											
Earnings per shares (EPS)											
– basic	**$ 6.75**	$ 6.03	$ 5.53	$ 4.96	$ 4.25	$ 3.21	$ 3.49	$ 2.59	$ 3.41	$ 4.24	$ 3.65
– diluted	**$ 6.73**	$ 6.00	$ 5.49	$ 4.91	$ 4.19	$ 3.19	$ 3.46	$ 2.57	$ 3.38	$ 4.19	$ 3.59
Return on common equity (ROE)	**18.6%**	19.0%	19.7%	19.6%	18.7%	12.9%	14.9%	11.9%	18.1%	24.7%	23.5%
Return on risk-weighted assets (RWA) (2)	**2.45%**	2.52%	2.67%	2.70%	2.44%	1.87%	2.03%	1.50%	1.78%	2.23%	2.21%
Efficiency ratio (3)	**52.8%**	51.8%	52.8%	50.2%	51.3%	52.7%	51.6%	50.8%	57.2%	55.5%	55.7%
KEY RATIOS											
PCL on impaired loans as a % of Average net loans and acceptances	**0.24%**	0.27%	0.31%	0.35%	0.33%	0.34%	0.45%	0.72%	0.53%	0.33%	0.23%
Net interest margin (total average assets)	**1.40%**	1.56%	1.56%	1.55%	1.52%	1.49%	1.59%	1.64%	1.39%	1.33%	1.35%
Non-interest income as a % of total revenue	**58.2%**	58.6%	56.8%	57.3%	58.9%	61.4%	60.4%	59.5%	58.0%	65.7%	67.1%
SHARE INFORMATION (1)											
Common shares outstanding (000s) – end of period	**1,443,423**	1,442,233	1,441,056	1,445,303	1,438,376	1,438,376	1,424,922	1,417,610	1,341,260	1,276,260	1,280,890
Dividends declared per common share	**$ 3.08**	$ 2.84	$ 2.53	$ 2.28	$ 2.08	$ 2.08	$ 2.00	$ 2.00	$ 2.00	$ 1.82	$ 1.44
Dividend yield	**4.1%**	3.8%	4.0%	4.5%	3.9%	3.9%	3.6%	4.8%	4.2%	3.3%	3.1%
Dividend payout ratio (2)	**46%**	47%	46%	46%	45%	47%	52%	52%	59%	43%	40%
Book value per share	**$ 39.51**	$ 33.69	$ 29.87	$ 26.52	$ 24.25	$ 25.65	$ 23.99	$ 22.67	$ 20.90	$ 17.49	$ 16.52
Common share price (RY on TSX) – close, end of period	**$ 74.77**	$ 80.01	$ 70.02	$ 56.94	$ 48.62	$ 48.62	$ 54.39	$ 54.80	$ 46.84	$ 56.04	$ 49.80
Market capitalization (TSX)	**107,925**	115,393	100,903	82,296	69,934	69,934	77,502	77,685	62,825	71,522	63,788
Market price to book value	**1.89**	2.38	2.34	2.15	2.00	1.90	2.27	2.42	2.24	3.20	3.01
CAPITAL MEASURES – CONSOLIDATED (4)											
Common Equity Tier 1 capital ratio	**10.6%**	9.9%	9.6%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Tier 1 capital ratio	**12.2%**	11.4%	11.7%	13.1%	n.a.	13.3%	13.0%	13.0%	9.0%	9.4%	9.6%
Total capital ratio	**14.0%**	13.4%	14.0%	15.1%	n.a.	15.3%	14.4%	14.2%	11.0%	11.5%	11.9%
Assets-to-capital multiple	**n.a.**	17.0X	16.6X	16.7X	n.a.	16.1X	16.5X	16.3X	20.1X	20.0X	19.7X
Leverage Ratio	**4.3%**	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

(1) On April 6, 2006, we paid a stock dividend of one common share on each of our issued and outstanding common shares. The effect was the same as two-for-one split of our common shares. All common share and per share information have been adjusted retroactively for the stock dividend.

(2) Return on risk-weighted assets (RWA) for fiscal 2011 is based on RWA reported under CGAAP and Income reported under IFRS.

(3) Ratios for 2009-2012 represent continuing operations.

(4) Effective 2013 we calculate the capital ratios and multiples using the Basel III (all-in basis) framework unless otherwise stated. 2008-2012 capital ratios and multiples were calculated using the Basel II framework. 2004-2007 capital ratios and 2005-2007 asset-to-capital multiples were calculated using the Basel I framework. Capital ratios and multiples for 2011 were determined under Canadian GAAP.

Glossary

Acceptances
A bill of exchange or negotiable instrument drawn by the borrower for payment at maturity and accepted by a bank. The acceptance constitutes a guarantee of payment by the bank and can be traded in the money market. The bank earns a "stamping fee" for providing this guarantee.

Allowance for credit losses
The amount deemed adequate by management to absorb identified credit losses as well as losses that have been incurred but are not yet identifiable as at the balance sheet date. This allowance is established to cover the lending portfolio including loans, acceptances, guarantees, letters of credit, and unfunded commitments. The allowance is increased by the provision for credit losses, which is charged to income and decreased by the amount of write-offs, net of recoveries in the period.

Alt-A assets
A term used in the U.S. to describe assets (mainly mortgages) with a borrower risk profile between the prime and subprime categorizations. Categorization of assets as Alt-A (as opposed to prime) varies, such as limited verification or documentation of borrowers' income or a limited credit history.

Asset-backed securities (ABS)
Securities created through the securitization of a pool of assets, for example auto loans or credit card loans.

Assets-to-capital multiple (ACM)
Total assets plus specified off-balance sheet items, as defined by OSFI, divided by total regulatory capital on a transitional basis. ACM has been replaced in 2015 by the Basel III Leverage Ratio.

Assets under administration (AUA)
Assets administered by us, which are beneficially owned by clients, as at October 31, unless otherwise noted. Services provided in respect of assets under administration are of an administrative nature, including safekeeping, collecting investment income, settling purchase and sale transactions, and record keeping.

Assets under management (AUM)
Assets managed by us, which are beneficially owned by clients, as at October 31, unless otherwise noted. Services provided in respect of assets under management include the selection of investments and the provision of investment advice. We have assets under management that are also administered by us and included in assets under administration.

Auction rate securities (ARS)
Securities issued through structured entities that hold long-term assets funded with long-term debt. In the U.S., these securities are issued by sponsors such as municipalities, student loan authorities or other sponsors through bank-managed auctions.

Average earning assets
Average earning assets include interest-bearing deposits with other banks including certain components of cash and due from banks, securities, assets purchased under reverse repurchase agreements and securities borrowed, loans, and excludes segregated fund net assets and other assets. The averages are based on the daily balances for the period.

Bank-owned life insurance contracts (BOLI)
Our legacy portfolio includes BOLI where we provided banks with BOLI stable value agreements ("wraps"), which insure the life insurance policy's cash surrender value from market fluctuations on the underlying investments, thereby allowing us to guarantee a minimum tax-exempt return to the counterparty. These wraps allow us to account for the underlying assets on an accrual basis instead of a mark-to-market basis.

Basis point (bp)
One one-hundredth of a percentage point (.01%).

Collateral
Assets pledged as security for a loan or other obligation. Collateral can take many forms, such as cash, highly rated securities, property, inventory, equipment and receivables.

Collateralized debt obligation (CDO)
Securities with multiple tranches that are issued by structured entities and collateralized by debt obligations including bonds and loans. Each tranche offers a varying degree of risk and return so as to meet investor demand.

Commercial mortgage-backed securities (CMBS)
Securities created through the securitization of commercial mortgages.

Commitments to extend credit
Unutilized amount of credit facilities available to clients either in the form of loans, bankers' acceptances and other on-balance sheet financing, or through off-balance sheet products such as guarantees and letters of credit.

Common Equity Tier 1 (CET1) capital
A regulatory Basel III capital measure comprised mainly of common shareholders' equity less regulatory deductions and adjustments for goodwill and intangibles, defined benefit pension fund assets, shortfall in allowances and other specified items.

Common Equity Tier 1 capital ratio
A risk-based capital measure calculated as CET1 capital divided by risk-weighted assets.

Covered bonds
Full recourse on-balance sheet obligations issued by banks and credit institutions that are also fully collateralized by assets over which investors enjoy a priority claim in the event of an issuer's insolvency.

Credit default swaps (CDS)
A derivative contract that provides the purchaser with a one-time payment should the referenced entity/entities default (or a similar triggering event occur).

Derivative
A contract between two parties, which requires little or no initial investment and where payments between the parties are dependent upon the movements in price of an underlying instrument, index or financial rate. Examples of derivatives include swaps, options, forward rate agreements and futures. The notional amount of the derivative is the contract amount used as a reference point to calculate the payments to be exchanged between the two parties, and the notional amount itself is generally not exchanged by the parties.

Dividend payout ratio
Common dividends as a percentage of net income available to common shareholders.

Earnings per share (EPS), basic
Calculated as net income available to common shareholders divided by the average number of shares outstanding.

Earnings per share (EPS), diluted
Calculated as net income available to common shareholders divided by the average number of shares outstanding adjusted for the dilutive effects of stock options and other convertible securities.

Economic capital
An estimate of the amount of equity capital required to underpin risks. It is calculated by estimating the level of capital that is necessary to support our various businesses, given their risks, consistent with our desired solvency standard and credit ratings. The identified risks for which we calculate Economic Capital are credit, market (trading and non-trading), operational, business, fixed asset, and insurance. Additionally, Economic Capital includes goodwill and intangibles, and allows for diversification benefits across risks and business segments.

Fair value
Fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Funding Valuation Adjustment
Funding valuation adjustments are calculated to incorporate cost and benefit of funding in the valuation of uncollateralized and under-collateralized OTC derivatives. Future expected cash flows of these derivatives are discounted to reflect the cost and benefit of funding the derivatives by using a funding curve, implied volatilities and correlations as inputs.

Gross-adjusted assets (GAA)
GAA are used in the calculation of the Assets-to-Capital multiple. They represent our total assets including specified off-balance sheet items and net of prescribed deductions. Off balance sheet items for this calculation are direct credit substitutes, including letters of credit and guarantees, transaction-related contingencies, trade-related contingencies and sale and repurchase agreements. Commencing Q1/15, the Asset-to-capital multiple and GAA have been replaced by with the leverage ratio and leverage ratio exposure respectively.

Guarantees and standby letters of credit
These primarily represent irrevocable assurances that a bank will make payments in the event that its client cannot meet its financial obligations to third parties. Certain other guarantees, such as bid and performance bonds, represent non-financial undertakings.

Hedge
A risk management technique used to mitigate exposure from market, interest rate or foreign currency exchange risk arising from normal banking operations. The elimination or reduction of such exposure is accomplished by establishing offsetting positions. For example, assets denominated in foreign currencies can be offset with liabilities in the same currencies or through the use of foreign exchange hedging instruments such as futures, options or foreign exchange contracts.

Hedge funds
A type of investment fund, marketed to accredited high net worth investors, that is subject to limited regulation and restrictions on its investments compared to retail mutual funds, and that often utilize aggressive strategies such as selling short, leverage, program trading, swaps, arbitrage and derivatives.

High-quality liquid assets (HQLA)
Assets are considered to be HQLA if they can be easily and immediately converted into cash at little or no loss of value during a time of stress.

Home equity products
This is comprised of residential mortgages and secured personal loans whereby the borrower pledges real estate as collateral.

International Financial Reporting Standards (IFRS)
IFRS are principles-based standards, interpretations and the framework adopted by the International Accounting Standards Board.

Impaired loans
Loans are classified as impaired when there has been a deterioration of credit quality to the extent that management no longer has reasonable assurance of timely collection of the full amount of principal and interest in accordance with the contractual terms of the loan agreement. Credit card balances are not classified as impaired as they are directly written off after payments are 180 days past due.

Innovative capital instruments
Innovative capital instruments are capital instruments issued by structured entities, whose primary purpose is to raise capital. We previously issued innovative capital instruments, RBC Trust Capital Securities (RBC TruCS) and RBC Trust Subordinated Notes (RBC TSNs), through three structured entities: RBC Capital Trust, RBC Capital Trust II and RBC Subordinated Notes Trust. As per OSFI Basel III guidelines, non-qualifying innovative capital instruments treated as additional Tier 1 capital are subject to phase out over a ten year period beginning on January 1, 2013.

Leverage Ratio
A Basel III regulatory measure, the ratio divides Tier 1 capital by the sum of total assets plus specified off-balance sheet items.

Liquidity Coverage Ratio (LCR)
The Liquidity Coverage Ratio is a Basel III metric that measures the sufficiency of HQLA available to meet net short-term financial obligations over a thirty day period in an acute stress scenario.

Loan-to-value (LTV) ratio
Calculated based on the total facility amount for the residential mortgage and homeline product divided by the value of the related residential property.

Master netting agreement
An agreement between us and a counterparty designed to reduce the credit risk of multiple derivative transactions through the creation of a legal right of offset of exposure in the event of a default.

Net interest income
The difference between what is earned on assets such as loans and securities and what is paid on liabilities such as deposits and subordinated debentures.

Net interest margin (average assets)
Net interest income as a percentage of total average assets.

Net interest margin (on average earning assets)
Calculated as net interest income divided by average earning assets.

Normal course issuer bid (NCIB)
A program for the repurchase of our own shares for cancellation through a stock exchange that is subject to the various rules of the relevant stock exchange and securities commission.

Notional amount
The contract amount used as a reference point to calculate payments for derivatives.

Off-balance sheet financial instruments
A variety of arrangements offered to clients, which include credit derivatives, written put options, backstop liquidity facilities, stable value products, financial standby letters of credit, performance guarantees, credit enhancements, mortgage loans sold with recourse, commitments to extend credit, securities lending, documentary and commercial letters of credit, note issuances and revolving underwriting facilities, securities lending indemnifications and indemnifications.

Office of the Superintendent of Financial Institutions Canada (OSFI)
The primary regulator of federally chartered financial institutions and federally administered pension plans in Canada. OSFI's mission is to safeguard policyholders, depositors and pension plan members from undue loss.

Operating leverage
The difference between our revenue growth rate and non-interest expense growth rate.

Options
A contract or a provision of a contract that gives one party (the option holder) the right, but not the obligation, to perform a specified transaction with another party (the option issuer or option writer) according to specified terms.

Primary dealer
A formal designation provided to a bank or securities broker-dealer permitted to trade directly with a country's central bank. Primary dealers participate in open market operations, act as market-makers of government debt and provide market information and analysis to assist with monetary policy.

Provision for credit losses (PCL)
The amount charged to income necessary to bring the allowance for credit losses to a level determined appropriate by management. This includes both specific and general provisions.

Repurchase agreements
These involve the sale of securities for cash and the simultaneous repurchase of the securities for value at a later date. These transactions normally do not constitute economic sales and therefore are treated as collateralized financing transactions.

Residential mortgage-backed securities (RMBS)
Securities created through the securitization of residential mortgage loans.

Return on common equity (ROE)
Net income available to common shareholders, expressed as a percentage of average common equity.

Reverse repurchase agreements
These involve the purchase of securities for cash and the simultaneous sale of the securities for value at a later date. These transactions normally do not constitute economic sales and therefore are treated as collateralized financing transactions.

Risk-weighted assets (RWA)
Assets adjusted by a regulatory risk-weight factor to reflect the riskiness of on and off-balance sheet exposures. Certain assets are not risk-weighted, but deducted from capital. The calculation is defined by guidelines issued by OSFI. For more details, refer to the Capital management section.

Securities lending
Transactions in which the owner of a security agrees to lend it under the terms of a prearranged contract to a borrower for a fee. The borrower must collateralize the security loan at all times. An intermediary such as a bank often acts as agent for the owner of the security. There are two types of securities lending arrangements: lending with and without credit or market risk indemnification. In securities lending without indemnification, the bank bears no risk of loss. For transactions in which the bank provides an indemnification, it bears the risk of loss if the borrower defaults and the value of the collateral declines concurrently.

Securities sold short
A transaction in which the seller sells securities and then borrows the securities in order to deliver them to the purchaser upon settlement. At a later date, the seller buys identical securities in the market to replace the borrowed securities.

Securitization
The process by which various financial assets are packaged into newly issued securities backed by these assets.

Structured entities
A structured entity is an entity in which voting or similar rights are not the dominant factor in deciding who controls the entity, such as when the activities that significantly affect the entity's returns are directed by means of contractual arrangements. Structured entities often have restricted activities, narrow and well defined objectives, insufficient equity to finance their activities, and financing in the form of multiple contractually-linked instruments.

Standardized Approach
Risk weights prescribed by OSFI are used to calculate risk-weighted assets for the credit risk exposures. Credit assessments by OSFI-recognized external credit rating agencies of S&P, Moody's, Fitch and DBRS are used to risk-weight our Sovereign and Bank exposures based on the standards and guidelines issued by OSFI. For our Business and Retail exposures, we use the standard risk weights prescribed by OSFI.

Structured investment vehicle
Managed investment vehicle that holds mainly highly rated asset-backed securities and funds itself using the short-term commercial paper market as well as the medium-term note (MTN) market.

Subprime loans
Subprime lending is the practice of making loans to borrowers who do not qualify for the best market interest rates because of their deficient credit history. Subprime lending carries more risk for lenders due to the combination of higher interest rates for the borrowers, poorer credit histories, and adverse financial situations usually associated with subprime applicants.

Taxable equivalent basis (teb)
Income from certain specified tax advantaged sources (eligible Canadian taxable corporate dividends) is increased to a level that would make it comparable to income from taxable sources. There is an offsetting adjustment in the tax provision, thereby generating the same after-tax net income.

Tier 1 capital
Tier 1 capital comprises predominantly of CET1 capital, with additional Tier 1 items such as preferred shares, innovative instruments and non-controlling interests in subsidiaries Tier 1 instruments.

Tier 2 capital
Tier 2 capital consists mainly of subordinated debentures that meet certain criteria, certain loan loss allowances and non-controlling interests in subsidiaries' Tier 2 instruments.

Total capital and total capital ratio
Total capital is defined as the total of Tier 1 and Tier 2 capital. The total capital ratio is calculated by dividing total capital by risk-weighted assets.

Tranche
A security class created whereby the risks and returns associated with a pool of assets are packaged into several classes of securities offering different risk and return profiles from those of the underlying asset pool. Tranches are typically rated by ratings agencies, and reflect both the credit quality of underlying collateral as well as the level of protection based on the tranches' relative subordination.

Trust Capital Securities (RBC TruCS)
Transferable trust units issued by structured entities RBC Capital Trust or RBC Capital Trust II for the purpose of raising innovative Tier 1 capital.

Value-at-Risk (VaR)
A generally accepted risk-measurement concept that uses statistical models based on historical information to estimate within a given level of confidence the maximum loss in market value we would experience in our trading portfolio from an adverse one-day movement in market rates and prices.

Directors and executive officers

Directors

W. Geoffrey Beattie (2001)
Toronto, Ontario
Chief Executive Officer
Generation Capital

Jacynthe Côté (2014)
Montreal, Quebec
Corporate Director

Toos N. Daruvala (2015)
New York, New York
Director and Senior Partner
McKinsey & Company

David F. Denison, O.C., FCPA, FCA (2012)
Toronto, Ontario
Corporate Director

Richard L. George, O.C. (2012)
Calgary, Alberta
Partner, Novo Investment Group

Alice D. Laberge (2005)
Vancouver, British Columbia
Corporate Director

Michael H. McCain (2005)
Toronto, Ontario
President and Chief Executive Officer
Maple Leaf Foods Inc.

David I. McKay (2014)
Toronto, Ontario
President and Chief Executive Officer
Royal Bank of Canada

Heather Munroe-Blum, O.C., O.Q., Ph.D., FRSC (2011)
Montreal, Quebec
Professor Emerita and Principal Emerita
McGill University

J. Pedro Reinhard (2000)
Key Biscayne, Florida
President
Reinhard & Associates

Thomas A. Renyi (2013)
New Harbor, Maine
Corporate Director

Edward Sonshine, O.Ont., Q.C. (2008)
Toronto, Ontario
Chief Executive Officer
RioCan Real Estate Investment Trust

Kathleen P. Taylor (2001)
Toronto, Ontario
Chair of the Board
Royal Bank of Canada

Bridget A. van Kralingen (2011)
New York, New York
Senior Vice President
IBM Global Business Services
IBM Corporation

Thierry Vandal (2015)
New York, New York
President
Axium Infrastructure US Inc.

Victor L. Young, O.C. (1991)
St. John's, Newfoundland and Labrador
Corporate Director

The date appearing after the name of each director indicates the year in which the individual became a director.

Group Executive

Janice R. Fukakusa, FCPA, FCA
Chief Administrative Officer and Chief Financial Officer

Doug Guzman(1)
Group Head, Wealth Management and Insurance

Zabeen Hirji
Chief Human Resources Officer

Mark Hughes
Chief Risk Officer

A. Douglas McGregor
Group Head, Capital Markets and Investor & Treasury Services

David I. McKay
President and Chief Executive Officer

Bruce Ross
Group Head, Technology & Operations

Jennifer Tory
Group Head, Personal & Commercial Banking

(1) Effective November 1, 2015, Doug Guzman was appointed Group Head, Wealth Management and Insurance, replacing M. George Lewis, who is continuing as a Senior Portfolio Manager, RBC Global Asset Management.

Principal subsidiaries

Principal subsidiaries (1)	Principal office address (2)	Carrying value of voting shares owned by the Bank (3)
Royal Bank Holding Inc.	Toronto, Ontario, Canada	$ 48,117
Royal Mutual Funds Inc.	Toronto, Ontario, Canada	
RBC Insurance Holdings Inc.	Mississauga, Ontario, Canada	
RBC General Insurance Company	Mississauga, Ontario, Canada	
RBC Insurance Company of Canada	Mississauga, Ontario, Canada	
RBC Life Insurance Company	Mississauga, Ontario, Canada	
RBC Direct Investing Inc.	Toronto, Ontario, Canada	
RBC Phillips, Hager & North Investment Counsel Inc.	Toronto, Ontario, Canada	
R.B.C. Holdings (Bahamas) Limited	Nassau, New Providence, Bahamas	
RBC Caribbean Investments Limited	George Town, Grand Cayman, Cayman Islands	
Royal Bank of Canada Insurance Company Ltd.	St. Michael, Barbados	
Investment Holdings (Cayman) Limited	George Town, Grand Cayman, Cayman Islands	
RBC (Barbados) Funding Ltd.	St. Michael, Barbados	
RBC Capital Markets Arbitrage S.A.	Luxembourg, Luxembourg	
Capital Funding Alberta Limited	Calgary, Alberta, Canada	
RBC Global Asset Management Inc.	Toronto, Ontario, Canada	
RBC Investor Services Trust	Toronto, Ontario, Canada	
RBC Investor Services Bank S.A.	Esch-sur-Alzette, Luxembourg	
RBC (Barbados) Trading Bank Corporation	St. James, Barbados	
BlueBay Asset Management (Services) Ltd	London, England	
RBC USA Holdco Corporation (2)	New York, New York, U.S.	13,558
RBC Capital Markets, LLC (2)	New York, New York, U.S.	
RBC Global Asset Management (U.S.) Inc.	Minneapolis, Minnesota, U.S.	
RBC Dominion Securities Limited	Toronto, Ontario, Canada	7,326
RBC Dominion Securities Inc.	Toronto, Ontario, Canada	
RBC Holdings (Barbados) Ltd.	St. Michael, Barbados	3,479
RBC Financial (Caribbean) Limited	Port of Spain, Trinidad and Tobago	
RBC Finance S.à r.l./B.V. (2)	Amsterdam, Netherlands	3,282
RBC Holdings (Luxembourg) S.A R.L.	Luxembourg, Luxembourg	
RBC Holdings (Channel Islands) Limited	Jersey, Channel Islands	
Royal Bank of Canada (Channel Islands) Limited	Guernsey, Channel Islands	
RBC Capital Trust	Toronto, Ontario, Canada	2,133
RBC Europe Limited	London, England	1,860
Royal Bank Mortgage Corporation	Toronto, Ontario, Canada	1,060
The Royal Trust Company	Montreal, Quebec, Canada	572
RBC Bank (Georgia), National Association (2)	Atlanta, Georgia, U.S.	326
Royal Trust Corporation of Canada	Toronto, Ontario, Canada	243
RBC Covered Bond Guarantor Limited Partnership	Toronto, Ontario, Canada	237

(1) The Bank directly or indirectly controls each subsidiary.

(2) Each subsidiary is incorporated or organized under the law of the state or country in which the principal office is situated, except for RBC USA Holdco Corporation which is incorporated under the laws of the State of Delaware, U.S., RBC Capital Markets, LLC, which is organized under the laws of the State of Minnesota, U.S. RBC Finance S.à r.l. / B.V. is a company incorporated in the Netherlands with its official seat in Amsterdam, the Netherlands, and place of effective management, central administration, and principal establishment in Luxembourg, Grand Duchy of Luxembourg. RBC Bank (Georgia), National Association is a national banking association organized under the laws of the U.S. with its main office in Atlanta, Georgia and management offices in Raleigh, North Carolina.

(3) The carrying value (in millions of Canadian dollars) of voting shares is stated as the Bank's equity in such investments.

Shareholder Information

Corporate headquarters
Street address:
Royal Bank of Canada
200 Bay Street
Toronto, Ontario M5J 2J5
Canada
Tel: 1-888-212-5533

Mailing address:
P.O. Box 1
Royal Bank Plaza
Toronto, Ontario M5J 2J5
Canada
website: rbc.com

Transfer Agent and Registrar
Main Agent:
Computershare Trust
Company of Canada
1500 Robert Bourassa Blvd.
Suite 700
Montreal, Quebec H3A 3S8
Canada
Tel: 1-866-586-7635 (Canada and the U.S.) or 514-982-7555 (International)
Fax: 514-982-7580
website: computershare.com/rbc

Co-Transfer Agent (U.S.):
Computershare Trust
Company, N.A.
250 Royall Street
Canton, Massachusetts 02021
U.S.A.

Co-Transfer Agent (U.K.):
Computershare Investor
Services PLC
Securities Services – Registrars
P.O. Box 82, The Pavilions,
Bridgwater Road,
Bristol BS99 6ZZ
U.K.

Stock exchange listings
(Symbol: RY)

Common shares are listed on:
Canada – Toronto Stock Exchange (TSX)
U.S. – New York Stock Exchange (NYSE)
Switzerland – Swiss Exchange (SIX)

All preferred shares are listed on the TSX with the exception of the series C-1 and C-2. The related depository shares of the series C-1 and C-2 preferred shares are listed on the NYSE.

Valuation day price
For capital gains purposes, the Valuation Day (December 22, 1971) cost base for our common shares is $7.38 per share. This amount has been adjusted to reflect the two-for-one share split of March 1981 and the two-for-one share split of February 1990. The one-for-one share dividends paid in October 2000 and April 2006 did not affect the Valuation Day value for our common shares.

Shareholder contacts
For dividend information, change in share registration or address, lost stock certificates, tax forms, estate transfers or dividend reinvestment, please contact:
Computershare Trust Company of Canada
100 University Avenue, 8th Floor
Toronto, Ontario M5J 2Y1
Canada

Tel: 1-866-586-7635 (Canada and the U.S.) or 514-982-7555 (International)
Fax: 1-888-453-0330 (Canada and the U.S.) or 416-263-9394 (International)
email: service@computershare.com

For other shareholder inquiries, please contact:
Shareholder Relations
Royal Bank of Canada
200 Bay Street
South Tower
Toronto, Ontario M5J 2J5
Canada
Tel: 416-955-7806

Financial analysts, portfolio managers, institutional investors
For financial information inquiries, please contact:
Investor Relations
Royal Bank of Canada
200 Bay Street
North Tower
Toronto, Ontario M5J 2W7
Canada
Tel: 416-955-7802

or visit our website at rbc.com/investorrelations

Direct deposit service
Shareholders in Canada and the U.S. may have their RBC common share dividends deposited directly to their bank account by electronic funds transfer. To arrange for this service, please contact our Transfer Agent and Registrar, Computershare Trust Company of Canada.

Eligible dividend designation
For purposes of the enhanced dividend tax credit rules contained in the *Income Tax Act* (Canada) and any corresponding provincial and territorial tax legislation, all dividends (and deemed dividends) paid by us to Canadian residents on our common and preferred shares after December 31, 2005, are designated as "eligible dividends".
Unless stated otherwise, all dividends (and deemed dividends) paid by us hereafter are designated as "eligible dividends" for the purposes of such rules.

2016 Quarterly earnings release dates

First quarter	February 24
Second quarter	May 26
Third quarter	August 24
Fourth quarter	November 30

2016 Annual Meeting
The Annual Meeting of Common Shareholders will be held on Wednesday, April 6, 2016, at 9:30am (Eastern Time) at the Mount Royal Centre, Auditorium, 2200 Mansfield Street, Montreal, Quebec, Canada.

Dividend dates for 2016
Subject to approval by the Board of Directors

	Ex-dividend dates	Record dates	Payment dates
Common and preferred shares series W, AA, AB, AC, AD, AE, AF, AG, AJ, AK, AL, AZ, BB, BD, BF, BH, BI, and BJ	January 22 April 21 July 22 October 24	January 26 April 25 July 26 October 26	February 24 May 24 August 24 November 24
Preferred shares series C-1 (US$)	February 3 April 29 August 3 November 2	February 5 May 3 August 5 November 4	February 15 May 13 August 15 November 14
Preferred shares series C-2 (US$)	January 27 April 27 July 27 October 26	January 29 April 29 July 29 October 28	February 8 May 9 August 8 November 7

Governance
A summary of the significant ways in which corporate governance practices followed by RBC differ from corporate governance practices required to be followed by U.S. domestic companies under the NYSE listing standards is available on our website at rbc.com/governance.

Information contained in or otherwise accessible through the websites mentioned in this report to shareholders does not form a part of this report. All references to websites are inactive textual references and are for your information only.

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81104 (12/2015)

Appendix C

January 2016 FOCUS Report

RBC Capital Markets

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

FORM X-17A-5

FOCUS REPORT
(FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT)
PART II [11]

(Please read instructions before preparing Form)

This report is being filed pursuant to (Check Applicable Block(s)):

1) Rule 17a-5(a) [X] 16 2) Rule 17a-5(b) [ ] 17 3) Rule 17a-11 [ ] 18

4) Special request by designated examining authority [ ] 19 5) Other [ ] 26

NAME OF BROKER-DEALER

RBC CAPITAL MARKETS, LLC [13]

ADDRESS OF PRINCIPAL PLACE OF BUSINESS (Do not use P.O. Box No.)

3 WORLD FINANCIAL CENTER, 200 VESEY ST. [20]
(No. and Street)

NEW YORK [21] (City) NY [22] (State) 10281 [23] (Zip Code)

SEC. FILE NO.
8-45411 [14]

FIRM ID NO.
31194 [15]

FOR PERIOD BEGINNING (MM/DD/YY)
01/01/16 [24]

AND ENDING (MM/DD/YY)
01/31/16 [25]

NAME AND TELEPHONE NUMBER OF PERSON TO CONTACT IN REGARD TO THIS REPORT

Peter Justini [30]

(Area code) - Telephone No.
(212) 618-7619 [31]

NAME(S) OF SUBSIDIARIES OR AFFILIATES CONSOLIDATED IN THIS REPORT

[32] [33]
[34] [35]
[36] [37]
[38] [39]

OFFICIAL USE

DOES RESPONDENT CARRY ITS OWN CUSTOMER ACCOUNTS ? YES [X] 40 NO [ ] 41

CHECK HERE IF RESPONDENT IS FILING AN AUDITED REPORT [ ] 42

EXECUTION:

The registrant/broker or dealer submitting this Form and its attachments and the person(s) by whom it is executed represent hereby that all information contained therein is true, correct and complete. It is understood that all required items, statements, and schedules are considered integral parts of this Form and that the submisson of any amendment represents that all unamended items, statements and schedules remain true, correct and complete as previously submitted.

Dated the 24th day of February 20 16

Manual Signatures of:

1) _____
Principal Executive Officer or Managing Partner

2) _____
Principal Financial Officer or Partner

3) _____
Principal Operations Officer or Partner

ATTENTION - Intentional misstatements or omissions of facts constitute Federal Criminal Violations. (See 18 U.S.C. 1001 and 15 U.S.C. 78:f (a))

FINRA

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER				
RBC CAPITAL MARKETS, LLC	N	2		100

STATEMENT OF FINANCIAL CONDITION

as of (MM/DD/YY) 01/31/16 [99]
SEC FILE NO. 8-45411 [98]
Consolidated [ ] [198]
Unconsolidated [X] [199]

ASSETS	Allowable		Nonallowable		Total	
1. Cash	$ 255,167,158	200			$ 255,167,158	750
2. Cash segregated in compliance with federal and other regulations	402,580,834	210			402,580,834	760
3. Receivable from brokers or dealers and clearing organizations:						
A. Failed to deliver:						
1. Includable in "Formula for Reserve Requirements"	47,191,066	220				
2. Other	284,719,046	230			331,910,112	770
B. Securities borrowed:						
1. Includable in "Formula for Reserve Requirements"	66,727,749	240				
2. Other	11,212,569,903	250			11,279,297,652	780
C. Omnibus accounts:						
1. Includable in "Formula for Reserve Requirements"		260				
2. Other	125,836,818	270			125,836,818	790
D. Clearing Organizations:						
1.Includable in "Formula for Reserve Requirements"		280				
2. Other	1,530,181,342	290			1,530,181,342	800
E. Other	1,863,755,662	300	$	550	1,863,755,662	810
4. Receivables from customers:						
A. Securities accounts:						
1. Cash and fully secured accounts	1,661,543,122	310				
2. Partly secured accounts		320	967,500	560		
3. Unsecured Accounts			1,784,133	570		
B. Commodity accounts	141,895,424	330	34,791	580		
C. Allowance for doubtful accounts	( )	335	(195,020)	590	1,806,029,950	820
5. Receivables from non-customers:						
A. Cash and fully secured accounts	380,168,726	340				
B. Partly secured and unsecured accounts		350	1,610,965	600	381,779,691	830
6. Securities purchased under agreements to resell	45,578,596,684	360		605	45,578,596,684	840
7. Securities and spot commodities owned, at market value:						
A. Banker's acceptances, certificates of deposit and commercial paper	524,349,928	370				
B. U.S. and Canadian government obligations	14,547,312,235	380				
C. State and municipal government obligations	530,438,141	390				
D. Corporate obligations	2,105,645,895	400				

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
RBC CAPITAL MARKETS, LLC
as of 01/31/16

STATEMENT OF FINANCIAL CONDITION

	ASSETS (continued) Allowable		Nonallowable		Total	
E. Stocks and warrants	$ 27,196,285	410				
F. Options	215,624	420				
G. Arbitrage	155,943,246	422				
H. Other securities	618,315,699	424				
I. Spot Commodities		430				
J. Total inventory - includes encumbered securities of ... $ 18,509,417,053 120					$ 18,509,417,053	850
8. Securities owned not readily marketable:						
A. At Cost ..... $ 130		440	$ 490,879,220	610	490,879,220	860
9. Other investments not readily marketable:						
..... $ 140						
B. At estimated fair value	616,894,139	450		620	616,894,139	870
10. Securities borrowed under subordination agreements and partners' individual and capital securities accounts, at market value:						
A. Exempted securities .... $ 150						
B. Other ..... $ 160		460		630		880
11. Secured demand notes-market value of collateral:						
A. Exempted securities .... $ 170						
B. Other ..... $ 180		470		640		890
12. Memberships in exchanges:						
A. Owned, at market value ..... $ 16,059,612 190						
B. Owned at cost			15,648,695	650		
C. Contributed for use of company, at market value				660	15,648,695	900
13. Investment in and receivables from affiliates, subsidiaries and associated partnerships		480	158,328,879	670	158,328,879	910
14. Property, furniture, equipment, leasehold improvements and rights under lease agreements: At cost (net of accumulated depreciation and amortization)		490	393,981,545	680	393,981,545	920
15. Other Assets:						
A. Dividends and interest receivable	190,267,973	500	321,342	690		
B. Free shipments		510		700		
C. Loans and advances		520	320,653,500	710		
D. Miscellaneous	1,495,380	530	2,079,549,209	720		
E. Collateral accepted under SFAS 140	933,906,422	536				
F. SPE Assets		537			3,526,193,826	930
16. TOTAL ASSETS	$ 83,802,914,501	540	$ 3,463,564,759	740	$ 87,266,479,260	940

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
RBC CAPITAL MARKETS, LLC

as of 01/31/16

STATEMENT OF FINANCIAL CONDITION
LIABILITIES AND OWNERSHIP EQUITY

Liabilities	A.I. Liabilities *		Non-A.I. Liabilities *		Total	
17. Bank loans payable:						
A. Includable in "Formula for Reserve Requirements"	$	1030	$	1240	$ 166,941,435	1460
B. Other		1040		1250	536,653,279	1470
18. Securities sold under repurchase agreements.				1260	52,223,679,582	1480
19. Payable to brokers or dealers and clearing organizations:						
A. Failed to receive:						
1. Includable in "Formula for Reserve Requirements"		1050		1270	85,221,526	1490
2. Other		1060		1280	113,223,638	1500
B. Securities loaned:						
1. Includable in "Formula for Reserve Requirements"		1070			83,231,316	1510
2. Other		1080		1290	2,722,995,915	1520
C. Omnibus accounts:						
1. Includable in "Formula for Reserve Requirements"		1090				1530
2. Other		1095		1300	2,582,781	1540
D. Clearing organizations:						
1. Includable in "Formula for Reserve Requirements"		1100				1550
2. Other		1105		1310	172,225,970	1560
E. Other		1110		1320	189,853,032	1570
20. Payable to customers:						
A. Securities accounts - including free credits of $ 941,817,423 [950]		1120			1,349,113,566	1580
B. Commodities accounts		1130		1330	1,329,773,630	1590
21. Payable to non customers:						
A. Securities accounts		1140		1340	2,703,657,375	1600
B. Commodities accounts		1150		1350	261,069,027	1610
22. Securities sold not yet purchased at market value - including arbitrage of $ 143,472,538 [960]				1360	9,555,447,968	1620
23. Accounts payable and accrued liabilities and expenses:						
A. Drafts payable		1160				1630
B. Accounts payable		1170			195,886,379	1640
C. Income taxes payable		1180				1650
D. Deferred income taxes				1370		1660
E. Accrued expenses and other liabilities		1190			1,766,600,511	1670
F. Other		1200		1380		1680
G. Obligation to return securities				1386	933,906,422	1686
H. SPE Liabilities				1387		1687

OMIT PENNIES

*Brokers or Dealers electing the alternative net capital requirement method need not complete these columns.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
RBC CAPITAL MARKETS, LLC
as of 01/31/16

STATEMENT OF FINANCIAL CONDITION
LIABILITIES AND OWNERSHIP EQUITY (continued)

	Liabilities	A.I. Liabilities *	Non-A.I. Liabilities *	Total
24. Notes and mortgages payable:				
A. Unsecured	$	1210		$ 1690
B. Secured		1211	$ 1390	6,742,769,866 1700
25. Liabilities subordinated to claims of general creditors:				
A. Cash borrowings:			1400	1,400,000,000 1710
1. from outsiders $ 0970				
2. Includes equity subordination(15c3-1(d)) of $ 0980				
B. Securities borrowings, at market value: from outsiders $ 0990			1410	1720
C. Pursuant to secured demand note collateral agreements:			1420	1730
1. from outsiders $ 1000				
2. Includes equity subordination(15c3-1(d)) of $ 1010				
D. Exchange memberships contributed for use of company, at market value			1430	1740
E. Accounts and other borrowings not qualified for net capital purposes		1220	1440	1750
26. TOTAL LIABILITIES	$	1230	$ 1450	$ 82,534,833,218 1760

Ownership Equity

27. Sole proprietorship	$	1770
28. Partnership - limited partners $ 1020	4,731,646,042	1780
29. Corporation:		
A. Preferred stock		1791
B. Common stock		1792
C. Additional paid- in capital		1793
D. Retained Earnings		1794
E. Total		1795
F. Less capital stock in treasury	( )	1796
30. TOTAL OWNERSHIP EQUITY	$ 4,731,646,042	1800
31. TOTAL LIABILITIES AND OWNERSHIP EQUITY	$ 87,266,479,260	1810

OMIT PENNIES

* Brokers or Dealers electing the alternative net capital requirement method need not complete these columns.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT

PART II

BROKER OR DEALER	
RBC CAPITAL MARKETS, LLC	as of 01/31/16

COMPUTATION OF NET CAPITAL

1. Total ownership equity (from Statement of Financial Condition - Item 1800)			$ 4,731,646,042	3480
2. Deduct: Ownership equity not allowable for Net Capital			( )	3490
3. Total ownership equity qualified for Net Capital			4,731,646,042	3500
4. Add:				
A. Liabilities subordinated to claims of general creditors allowable in computation of net capital			1,400,000,000	3520
B. Other (deductions) or allowable credits (List)				3525
5. Total capital and allowable subordinated liabilities			$ 6,131,646,042	3530
6. Deductions and/or charges:				
A. Total non-allowable assets from Statement of Financial Condition (Notes B and C)	$ 3,463,564,759	3540		
1. Additional charges for customers' and non-customers' security accounts		3550		
2. Additional charges for customers' and non-customers' commodity accounts		3560		
B. Aged fail-to-deliver:	4,903,359	3570		
1. number of items 112 3450				
C. Aged short security differences-less reserve of $ 3460		3580		
number of items 3470				
D. Secured demand note deficiency		3590		
E. Commodity futures contracts and spot commodities - proprietary capital charges	16,791,947	3600		
F. Other deductions and/or charges	225,992,664	3610		
G. Deductions for accounts carried under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x)		3615		
H. Total deductions and/or charges			(3,711,252,729)	3620
7. Other additions and/or allowable credits (List)				3630
8. Net Capital before haircuts on securities positions			$ 2,420,393,313	3640
9. Haircuts on securities: (computed, where applicable, pursuant to 15c3-1(f)):				
A. Contractual securities commitments	$	3660		
B. Subordinated securities borrowings		3670		
C. Trading and investment securities:				
1. Bankers' acceptances, certificates of deposit and commercial paper	73,031,940	3680		
2. U.S. and Canadian government obligations	90,146,427	3690		
3. State and municipal government obligations	48,205,678	3700		
4. Corporate obligations	334,003,780	3710		
5. Stocks and warrants	102,314,731	3720		
6. Options		3730		
7. Arbitrage		3732		
8. Other securities	77,318,712	3734		
D. Undue concentration		3650		
E. Other (List)	29,829,072	3736	(754,850,340)	3740
10. Net Capital			$ 1,665,542,973	3750

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT

PART II

BROKER OR DEALER	as of 01/31/16
RBC CAPITAL MARKETS, LLC	

COMPUTATION OF BASIC NET CAPITAL REQUIREMENT

Part A

11. Minimal net capital required (6-2/3% of line 19)		$	3756
12. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)		$	3758
13. Net capital requirement (greater of line 11 or 12)		$	3760
14. Excess net capital (line 10 less 13)		$	3770
15. Net capital less greater of 10% of line 19 or 120% of line 12		$	3780

COMPUTATION OF AGGREGATE INDEBTEDNESS

16. Total A.I. liabilities from Statement of Financial Condition				$	3790
17. Add:					
A. Drafts for immediate credit	$		3800		
B. Market value of securities borrowed for which no equivalent value is paid or credited	$		3810		
C. Other unrecorded amounts (List)	$		3820	$	3830
18. Deduct: Adjustment based on deposits in Special Reserve Bank Accounts(15c3-1(c)(1)(vii))				$	3838
19. Total aggregate indebtedness				$	3840
20. Percentage of aggregate indebtedness to net capital (line 19 divided by line 10)				%	3850
21. Percentage of aggregate indebtedness to net capital after anticipated capital withdrawals (line 19 divided by line 10 less item 4880 page 12)				%	3853

COMPUTATION OF ALTERNATE NET CAPITAL REQUIREMENT

Part B

22. 2% of combined aggregate debit items as shown in Formula for Reserve Requirements pursuant to Rule 15c3-3 prepared as of the date of net capital computation including both brokers or dealers and consolidated subsidiaries' debits	$	220,928,843	3870
23. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note(A)	$	1,500,000	3880
24. Net capital requirement (greater of line 22 or 23)	$	220,928,843	3760
25. Excess net capital (line 10 less 24)	$	1,444,614,130	3910
26. Percentage of Net Capital to Aggregate Debits (line 10 divided by line 18 page 8)	%	79.54	3851
27. Percentage of Net Capital, after anticipated capital withdrawals, to Aggregate Debits item 10 less Item 4880 page 12 divided by line 17 page 8)	%	71.48	3854
28. Net capital in excess of the greater of: 5% of combined aggregate debit items or 120% of minimum net capital requirement	$	1,422,521,246	3920

OTHER RATIOS

Part C

29. Percentage of debt to debt-equity total computed in accordance with Rule 15c3-1 (d)	%	22.83	3860
30. Options deductions/Net Capital ratio (1000% test) total deductions exclusive of liquidating equity under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x) divided by Net Capital	%		3852

NOTES:

(A) The minimum net capital requirement should be computed by adding the minimum dollar net capital requirement of the reporting broker dealer and, for each subsidiary to be consolidated, the greater of:

1. Minimum dollar net capital requirement, or
2. 6-2/3% of aggregate indebtedness or 2% of aggregate debits if alternate method is used.

(B) Do not deduct the value of securities borrowed under subordination agreements or secured demand notes covered by subordination agreements not in satisfactory form and the market values of memberships in exchanges contributed for use of company (contra to item 1740) and partners' securities which were included in non-allowable assets.

(C) For reports filed pursuant to paragraph (d) of Rule 17a-5, respondent should provide a list of material non-allowable assets.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2017-149674

Date Filed:
01/03/2017

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

RBC Capital Markets, LLC
Dallas, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

20161215-015
Municipal Bond Underwriting; This certificate takes place of 2017-149624

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
RBC USA Holdco Corporation	Wilmington, DE United States	X	
Blair Fleming, Director	New York, NY United States	X	
Clinton Lively, Director	New York, NY United States	X	
V. Troy Maxwell, Director	Toronto Ontario Canada	X	
A. Douglas McGregor, Director	Toronto Ontario Canada	X	
Thomas Sagissor, Director	Minneapolis, MN United States	X	
Cathleen Tobin, Director	Minneapolis, MN United States	X	
Orrick, Herrington & Sutcliffe LLP	Houston, TX United States		X

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

HOLLY AMOS
Notary Public, State of Texas
Comm. Expires 07-01-2020
Notary ID 124975376

AFFIX NOTARY STAMP / SEAL ABOVE

Signature of authorized agent of contracting business entity

Sworn to and subscribed before me, by the said Matthew Bolus, this the 3rd day of January 2017, to certify which, witness my hand and seal of office.

Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath
Holly C Amos	Holly C. Amos	Notary Public

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Wells Fargo Securities, LLC ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Wells Fargo Securities, LLC having offices at 550 S. Tryon St., Charlotte, NC 28288 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Wells Fargo Securities, LLC Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

WELLS FARGO SECURITIES, LLC	**CITY OF AUSTIN**
Craig Brast	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
Managing Director	Senior Buyer Supervisor
Title:	Title:
6/29/2016	6/30/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Wells Fargo Securities, LLC

Company Address: 550 S. Tryon St.

City, State, Zip: Charlotte, NC 28288

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Laura Powell

Title: Managing Director

Signature of Officer or Authorized Representative: Laura Powell

Date: March 8, 2016

Email Address: laura.s.powell@wellsfargo.com

Phone Number: (210) 856-5155

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

WELLS FARGO SECURITIES

City of Austin, Texas

Response to Request for Qualifications for Underwriting Services (No. TVN0103REBID)

March 8, 2016

ORIGINAL

Together we'll go far

WELLS FARGO SECURITIES

HOUSTON
1000 Louisiana, Suite 600
Houston, TX 77002

SAN ANTONIO
40 NE Loop 410 3rd Floor, Suite 335
San Antonio, TX 78216

NEW YORK
150 East 42nd St, 25th Floor
New York, NY 10017

March 8, 2016

Mr. Terry Nicholson
City of Austin Purchasing Office
Municipal Building
124 West 8th Street
Austin, Texas 78701

Dear Mr. Nicholson:

Wells Fargo Securities ("Wells Fargo") is pleased to present its qualifications to serve as municipal bond underwriter for the City of Austin's proposed financings, and we are particularly excited about this opportunity to reaffirm and strengthen our relationship with the City. Our parent firm, Wells Fargo & Company ("WFC"), is one of the largest and most trusted financial institutions in the United States, and with such strength comes the ability to offer an array of financial options unavailable from any other single source. We are confident that our knowledge of and commitment to the City, our firm's past performance on its bond issues, our quantitative and sector expertise, and our innovative financing strategies, make Wells Fargo the most qualified firm to help the City meet its financial objectives.

Wells Fargo is best described as a **national firm** with a strong local presence and a balanced distribution network with the ability to distribute bonds to both retail and institutional investors. Wells Fargo is a diversified financial services company providing banking, insurance, mortgage, consumer finance, asset management, wealth management, and corporate and investment banking products and services to clients both domestically and internationally. Wells Fargo is headquartered in San Francisco, California, and is a publicly held company whose public equity trades on the New York Stock Exchange (WFC).

Our detailed response to the RFQ is contained in the attached proposal. In this cover letter, however, we would like to summarize the strengths that we feel particularly distinguish our firm from the competition.

- **Unmatched Credit Strength**. Wells Fargo & Company is a premier U.S. domiciled bank with some of the highest credit ratings of all U.S. banks (AA-/Aa1/AA from S&P, Moody's, and Fitch, respectively), more than 260,000 employees nationwide, the largest community banking presence in the country, the second largest U.S. deposit base, and the third largest domestic retail distribution network. With over $148 billion of total risk-based capital, the Firm brings significant underwriting strength and the ability to commit capital at a time when many other firms have expressed reservations about participating in the municipal underwriting business.

  Wells Fargo's ability and willingness to underwrite unsold balances proved critical during a senior managed transaction for the City of Houston Combined Utility System that priced last month. In order to maintain aggressive pricing for the issuer, the firm offered to underwrite more than $150 million of the $955 million First Lien Revenue and Refunding Bonds, Series 2016B and ultimately took into inventory $123 million in bonds.

- **Financing Expertise. Wells Fargo is the top-ranked Texas underwriter of negotiated and competitive transactions for 2016 YTD, with $1.56 billion in senior managed transactions.** Wells Fargo's banking team offers the City of Austin extensive experience with Texas issuers and unmatched sector knowledge that is directly relevant to the City's utility, airport and HOT credits. Our investment banking team, operating out of our affiliate Wells Fargo Bank, N.A. ("WFBNA") has senior managed numerous large, notable transactions in Texas since the beginning of 2015, including $955 million for the City of Houston Combined Utility System in February 2016, $235 million for CPS Energy (San Antonio) in November 2015, $162 million for the San Antonio Airport System in July 2015 and $303 million for the San Antonio Water System in January 2015, among many others. Moreover, WFBNA has served as underwriter for over $9.7 billion of par across 37 transactions in the Travis County area since 2010. Of this amount, WFBNA senior managed over $1.4 billion.

The senior members of Wells Fargo's core banking team offer the City more than 90 years of combined experience with credits and transactions similar to those contemplated by the City. Rick Molke, Managing Director and Head of Wells Fargo's Municipal Utilities practice, has 35 years of utility experience and has a long history of leading bond transactions for Public Power issuers including Orlando Utilities Commission, LIPA, PREPA, MEAG, JEA, FMPA, MMWEC, NCPA, OPPD, NPPD, NYPA, MEAN, PPGA, Santee Cooper, Lower Colorado River Authority, CPS Energy and the Salt River Project. Kevin Carney, Managing Director in the firm's Transportation Group, has worked in the airport sector for almost 30 years. In addition to his investment banking experience, he has been an airport consultant and was the lead airport rating analyst for Moody's. Over the last several years, he has served as lead airport banker for Wells Fargo's senior managed financings for San Francisco, Clark County McCarran (Las Vegas), San Antonio, Austin and Miami. In addition, WFS is currently mandated to serve as the Joint Books Senior Managing Underwriter on a $2 billion financing for the Consortium selected to design-build-finance-operate-and-maintain the LaGuardia Airport Central Terminal Building and has recently been selected as a Senior Manager for upcoming transactions at Los Angeles International and Minneapolis-St. Paul International airports. Laura Powell, Managing Director in the Southwest Group, has focused on Texas issuers for almost 17 years and has extensive experience with both general obligation and special tax credits, including those backed by hotel occupancy tax ("HOT") and similar revenue streams, having worked on financings for the Harris County-Houston Sports Authority, Bexar County, the City of Arlington and the City of San Antonio that were backed by a wide variety of special taxes and fees.

- **Powerful Retail and Institutional Distribution Networks**. Unlike many national firms that rely on distribution agreements with third parties, Wells Fargo & Company has its own strong national retail platform, the third largest in the United States, which currently employs over 15,000 full-service financial advisors with accounts holding over $1.4 trillion of client assets. With over 740 retail sales representatives in Texas, the firm has one of the most extensive brokerage networks in the State. Our retail sales strength is augmented by our institutional sales force, which consists of 15 institutional salespeople who cover the full spectrum of institutional buyers in the municipal market. Through this balanced distribution approach, Wells Fargo has wide access to all major sectors of the market to distribute our clients' bond offerings and therefore can generate broader demand and more aggressive pricing for the City's issues than firms with a single investor segment focus.

- **Commitment to Texas and Austin.** Wells Fargo & Company's presence in and commitment to the Lone Star State is longstanding and absolute. Over 20,000 of our 270,000 employees live and work in Texas, making the Firm one of the largest employers in the State. In Austin specifically, WFC has 1,075 full-time team members, along with 25 community banking stores. Furthermore, our Government and Institutional Banking department employs four team members in Austin including portfolio and relationship management professionals. Finally, our team of 14 public finance investment bankers located in three offices across the State is one of the largest among national firms. WFC has donated over $10 million to Texas nonprofits and other organizations through corporate and foundation giving in previous years, including Austin Partners in Education (Austin ISD), Habitat for Humanity, and $298,600 to Foundation Communities to help with rehabilitation and neighborhood improvement projects in Austin. Given this extremely large presence, our Texas and Austin corporate citizenship is of vital importance to Wells Fargo.

- **Previous Experience with the City**. Wells Fargo and the members of its dedicated finance team have a long history of working with the City and its financial advisor. Members of our banking team have consistently met with the City for over 15 years dating back to when they were employed at UBS. Upon our team's arrival to Wells Fargo, we continued to dedicate our resources to covering the City, and in 2013, Wells Fargo successfully priced $143,770,000 Rental Car Special Facility Revenue Bonds, Taxable Series 2013 as senior manager. Our team also has met regularly with the City's professional staff and its financial advisor to provide updates regarding macroeconomic and municipal market conditions, refunding analyses, and new money financing strategies. Most recently, in January we met with the City to discuss current market conditions and refunding and new money analyses for the City's general obligation, water and sewer system, electric utility and airport system credits. In Section V, we provide an updated refunding analysis of the City's general obligation and water and sewer system bonds. Specifically, the City could refund portions of its outstanding general obligation and

water and sewer bonds and generate net present value savings of approximately $7.8 million and $13.6 million, respectively. Please refer to our response in Section V for more details.

- **Innovative Financing Ideas.** Wells Fargo is committed to providing industry-leading analysis and thought leadership in order to help achieve the financial goals of its clients. In our proposal we highlight two ideas that we believe could be applicable to the City and its future financings. The first idea that we present is to refund the City's outstanding hotel occupancy tax bonds and finance new projects using a lease-backed or appropriation structure, in order to provide increased financial flexibility. We discuss the implications of this scenario and highlight our lead banker's experience with a similar financing for the City of San Antonio.

  Additionally, we discuss a Wells Fargo Direct Purchase ("DP") with a synthetic fixed rate swap for Austin Energy. Austin Energy could advance refund its Series 2008A Bonds with proceeds of a Wells Fargo DP to be deposited in an advance refunding escrow fund and simultaneously Wells Fargo and Austin Energy would enter into a synthetic fixed swap. The synthetic fixed rate would be integrated for tax purposes and would be the basis of the arbitrage yield to which the escrow earnings would be restricted. The synthetic fixed advance refunding generates $20.6 million of additional NPV savings compared to a traditional advance refunding bond transaction based on the assumptions utilized in the above analysis. Please see our response in Section V for more information.

  Wells Fargo is an active participant in the interest rate swaps market. WFBNA has a team dedicated to serving the hedging needs of tax-exempt debt issuers. In the last 5 years, the team has executed approximately 400 new swap transactions representing $18.3 billion in notional. In the southwest, including Texas, the team is represented by Felipe Camacho, who has approximately 10 years of experience working on hedging transactions with tax-exempt borrowers. WFBNA is an active market maker in SIFMA, LIBOR, MMD, and Treasury-based products that include swaps, caps, cancellable swaps, swaptions, and rate locks. Felipe Camacho and the rest of the team look forward to assisting the City with any hedging needs.

We hope that we have demonstrated in these materials and through our past service, our high level of interest in this very important assignment. We are extremely grateful for the opportunity to present the City with our investment banking credentials, our innovative financing ideas, and to compete for its business. If you have any questions regarding these materials, please feel free to contact any one of us directly.

Very truly yours,

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Important Information & Disclaimer
This document and any other materials accompanying this document (collectively, the "Materials") are provided for general informational purposes only. By accepting any Materials, the recipient acknowledges and agrees to the matters set forth below.

Wells Fargo Bank, N.A. ("WFBNA"), as proposed derivatives provider, and Wells Fargo Securities ("WFS")*, as proposed underwriter or placement agent, (collectively, for purposes hereof, "we", or "Wells Fargo") are providing the information contained in the Materials for discussion purposes

only in anticipation of engaging in arm's length commercial transactions with you in which Wells Fargo would be acting solely as a principal or agent, as applicable, and not as a municipal advisor, financial advisor or fiduciary to you or any other person or entity regardless of whether we, or an affiliate has or is currently acting as such on a separate transaction (the use of the term "agent" does not imply any fiduciary relationship).

These Materials are being provided to you for the purpose of working with you as an underwriter or placement agent (collectively referred to herein as "underwriter") and/or derivatives provider on the transaction(s) described in the Materials. As part of its services as underwriter, WFS may provide information concerning the structure, timing, terms, and other similar matters concerning the issue of municipal securities that WFS proposes to underwrite as described in the Materials. The Materials may also contain such information. Any such information has been, and would be, provided by WFS in the context of serving as an underwriter and not as your municipal or financial advisor. Additionally, WFBNA, as derivatives provider, and WFS, as underwriter, have financial and other interests that differ from your interests (or those of the issuer). In its capacity as underwriter, WFS' primary role would be to purchase securities from you (or the issuer in the case of a conduit transaction) for resale to investors, or arrange for the placement of securities with investors on your behalf. Wells Fargo will not have any duties or liability to any person or entity in connection with the information being provided in the Materials.

The information provided herein is not intended to be and should not be construed as advice within the meaning of Section 15B of the Securities Exchange Act of 1934, and Wells Fargo will not be acting as your municipal advisor under the municipal advisor rules ("Muni Advisor Rules") of the Securities and Exchange Commission ("SEC").

The Materials are submitted in response to your Request for Qualifications dated February 8, 2016. The Materials and any subsequent discussions between us, including any and all information and analysis with respect to any product is provided to you in reliance upon your compliance with the guidance issued by the Staff of the SEC's Office of Municipal Securities in order for a request for proposals to be consistent with the exemption for responses to requests for proposals or qualifications provided under the Muni Advisor Rules.

The information contained in the Materials and any subsequent discussions between us concerning municipal derivatives and any other municipal financial products, including any and all information and analysis with respect to any such products is provided to you in reliance upon the RFP exemption provided.

Please be advised that any information in the Materials regarding municipal derivatives is being provided by WFBNA as a swap dealer and that any swap offered or recommended in the Materials is being offered or recommended by WFBNA as a swap dealer. No part of the Materials is intended to be and should not be construed as an offer or recommendation of a municipal derivatives service or product by WFS, as underwriter, for purposes of Municipal Securities Rulemaking Board Rule G-17, or otherwise. You should consult with your own financial and/or municipal, legal, accounting, tax, and other advisors, as applicable, to the extent you deem appropriate. If you would like a municipal advisor that has legal fiduciary duties to you, you are certainly free to engage a municipal advisor to serve in that capacity.

Transactions referenced in the Materials which are attributed to Wells Fargo or to WFS may include transactions executed by a Wachovia Corporation or Wells Fargo & Company ("WFC") broker/dealer affiliate or by other municipal securities dealers and/or broker/dealers which were acquired by Wachovia Corporation or WFC.

WFS distributes municipal securities to institutional investors primarily through WFBNA and Wells Fargo Securities, LLC ("WFSLLC"). Distribution to middle market clients is provided primarily through WFSLLC. Retail distribution is primarily provided by Wells Fargo Advisors, which is the trade name used by Wells Fargo Advisors, LLC ("WFA") and Wells Fargo Advisors Financial Network, LLC ("WFAFN"), two non-bank separate registered broker-dealers (members FINRA and SIPC). WFSLLC, WFBNA, WFA, and WFAFN are affiliates and are each wholly owned subsidiaries of WFC.

Municipal underwriting, commercial paper and remarketing rankings referenced herein represent combined totals for WFBNA and WFSLLC. Non-municipal underwriting, commercial paper and remarketing rankings referenced herein represent totals for WFSLLC only. Source information for any ranking information not otherwise provided herein is available on request. Rankings referencing competitive municipal new issues for time periods prior to 2011 include issues underwritten by WFA. Underwriting activities of WFA are not managed or otherwise controlled by WFBNA or WFSLLC. Information for 2009 and prior includes transactions that may have been underwritten by other broker/dealers that were acquired by WFC and/or its predecessors.

In the event that the Materials include information related to a bank-purchased bond transaction ("Direct Purchase"), please be advised that Direct Purchase is a product offering of WFBNA or a subsidiary thereof ("Purchaser") as purchaser / investor. WFS will not participate in any manner in any Direct Purchase transaction between you and Purchaser, and Wells Fargo employees involved with a Direct Purchase transaction are not acting on behalf of or as representatives of WFS. The information contained herein regarding Purchaser's Direct Purchase is being provided to you by WFS only for purposes of providing you, pursuant to your RFQ, financing alternatives that may be available to you from WFC and its affiliates. Information contained in this document regarding Direct Purchase is for discussion purposes only in anticipation of engaging in arm's length commercial transactions with you in which Purchaser would be acting solely as a principal to purchase securities from you or a conduit issuer, and not as a municipal advisor, financial advisor or fiduciary to you or any other person or entity regardless of whether Purchaser, or an affiliate has or is currently acting as such on a separate transaction. Additionally, Purchaser has financial and other interests that differ from your interests. Purchaser's sole role would be to purchase securities from you (or the issuer in the case of a conduit transaction). Any information relating to a Direct Purchase transaction is being provided to you pursuant to and in reliance on the "bank exemption" under the Muni Advisor Rules or the SEC's guidance in its Registration of Municipal Advisors Frequently Asked Questions dated May 19, 2014 and the general information exclusion to advice under the Muni Advisor Rules.

In the event that the information contained herein includes savings threshold levels, please be advised that WFS is not recommending nor providing advice regarding which maturities should be refunded by you.

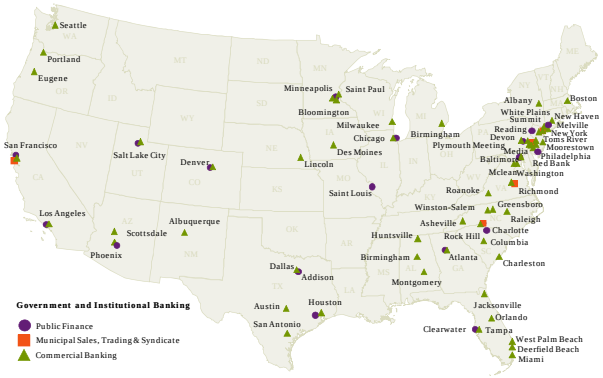
* Wells Fargo Securities is the trade name for certain securities-related capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Securities, LLC, member NYSE, FINRA, NFA, and SIPC. Municipal derivatives services are provided by WFBNA. Commercial banking products and services are provided by WFBNA. Investment banking and capital markets products and services are provided by WFS, and are not a condition to any banking product or service.

See additional important disclosures at the end of the Materials.

I. Business Organization

Wells Fargo Securities, LLC ("Wells Fargo") is a wholly-owned subsidiary of Wells Fargo & Company and is a limited liability company headquartered at 550 South Tryon Street, Charlotte, North Carolina 28288. WFSLLC is registered as a broker/dealer with the Securities Exchange Commission (SEC) (SEC registration #8-65876), and is regulated by the Financial Industry Regulatory Authority (FINRA) (FINRA registration #126292). Wells Fargo is also registered with the MSRB (MSRB registration #A6366) and is licensed to operate in the State of Texas.

Government and Institutional Banking Offices



Our Texas presence includes 14 public finance investment bankers in three offices (Dallas, Houston, and San Antonio), and 15 middle market institutional sales professionals in three offices (Dallas, **Austin**, and Houston). For a complete list of our Texas offices and employees, please refer to Appendix B.

Texas Public Finance Offices

City	Year Est.	Office Description
San Antonio	2006	Laura Powell, Managing Director, and George Pedraza, Director, maintain a full service investment banking office in San Antonio. Wells Fargo is one of the few national firms to have a public finance office in San Antonio.
Houston	2001	Craig Brast, Managing Director and Head of the Southwest Public Finance Group, a 20+ year veteran, manages this office with six additional bankers. Desrye Morgan, John M. P. Young, Brian Goins, Thomas Munn, and Alex Palazzolo work with a variety of issuers to access the capital markets. Steve Sohn markets interest rate management solutions and covers healthcare clients.
Dallas	2003	Wells Fargo has five public finance bankers, primarily covering Dallas area clients. Larry Groppel, John Moore, Richard Matkin, Jeffrey Israel, and Shay Brunson provide investment banking services to a broad range of clients in the surrounding region.

All of three of the firm's Texas public finance offices, as well as our Charlotte and New York headquarters offices, will be involved in providing services to the City of Austin.

National Institutional Sales Distribution Network – Wells Fargo's combined institutional sales force distributes a full line of municipal products in the primary and secondary markets, serving the investment and risk management needs of institutional investors nationwide. Our 15-member Tier-1 municipal sales group targets over 250 key national buyers with assets over $1 billion, such as Vanguard, Nuveen, Fidelity, T.Rowe Price, Eaton Vance, and BlackRock. This group is complemented by the Firm's middle market institutional sales force strategically located across the nation. They target coverage of regional Tier-2 ($500 million to $1 billion in assets) and Tier-3 (less than $500 million in assets) buyers. The combined 183-person sales force, as shown in the table on the next page, provides coverage to over 15,000 investors, which include large bond funds, property and casualty insurance companies, money managers, and bank trust accounts. In addition to purchasing the debt of large recognizable issuers, the added benefit of middle markets customers comes from their knowledge of local credits and regions.

Underwriting & Sales Professionals

Department	TX	U.S.
Underwriters (Charlotte & NY)	--	17
Traders	--	12
Middle Market Sales Professionals	15	183
Institutional Sales Professionals	--	15
Retail Sales Professionals	741	15,167

U.S. Middle Markets Sales Professionals

Location	Reps.	Location	Reps.	Location	Reps.	Location	Reps.
Austin, TX	3	Houston, TX	7	New York, NY	4	San Diego, CA	3
Boston, MA	4	Irvine, CA	4	Omaha, NE	4	San Francisco, CA	11
Charlotte, NC	20	Las Vegas, NV	3	Philadelphia, PA	2	San Jose, CA	3
Chicago, IL	5	Lincoln, NE	4	Phoenix, AZ	6	Seattle, WA	8
Dallas, TX	5	Los Angeles, CA	11	Richmond, VA	2	Vancouver, WA	8
Denver, CO	8	Minneapolis, MN	35	Sacramento, CA	5		
Des Moines, IA	5	Nashville, TN	4	Salt Lake City, UT	9	**26 Total Offices**	**183**

Source: Wells Fargo.

National Retail Distribution Network – Wells Fargo Advisors ("WFA") ranks as the third largest national retail brokerage network in the country, with over 15,000 full-service retail financial advisors in 750 offices Retail investors are the foundation of the municipal bond market, and the competition that they provide for bonds puts pressure on both Tier-1 institutional investors and middle market investors. In addition, WFA has 24 traders and 33 retail marketing liaisons located in St. Louis to assist retail brokers and encourage retail participation in the municipal market (both primary and secondary). The liaison team makes outgoing calls to target markets, manages inquiries from retail advisors in the field, sends daily fixed-income highlight emails advertising new-issue opportunities, works with branch managers to promote syndicate business, provides detailed CUSIP searches, and analyses trade history to find opportunities from new-issue business. **Most importantly, the firm currently maintains a dominant retail operation in Texas with 71 offices and 741 brokers who have direct access to potential retail buyers of the City's bonds. Please see Appendix B for a detailed list of our Texas offices.**

Wells Fargo Retail Sales Offices and Professionals

State	Total Offices	Sales Prof.	State	Total Offices	Sales Prof.	State	Total Offices	Sales Prof.	State	Total Offices	Sales Prof.	State	Total Offices	Sales Prof.	State	Total Offices	Sales Prof.
AK	1	24	FL	45	1,246	LA	12	115	NC	50	812	OK	10	95	VA	29	541
AL	15	180	GA	24	436	MA	13	243	ND	3	26	OR	13	202	VT	5	25
AR	15	116	HI	2	44	MD	15	249	NE	7	106	PA	44	691	WA	10	239
AZ	15	346	IA	11	120	ME	3	36	NH	9	71	RI	2	40	WI	21	247
CA	73	1,877	ID	6	61	MI	24	337	NJ	28	800	SC	19	246	WV	7	63
CO	15	329	IL	41	562	MN	5	364	NM	4	65	SD	6	48	WY	3	16
CT	13	253	IN	17	238	MO	23	360	NV	7	142	TN	10	192			
DC	2	93	KS	14	150	MS	8	59	NY	40	928	TX	71	741			
DE	2	54	KY	8	101	MT	2	19	OH	37	468	UT	6	228	**Total**	**852**	**15,167**

Source: Wells Fargo.

Non-Discrimination Certificate – We confirm our understanding of, and will comply with, the City of Austin's non-discrimination certificate, and we have included all required forms in Appendix A. Wells Fargo Securities, LLC will not attempt to lobby or influence a vote or recommendation related to our proposal.

Changes in Ownership, Management or Staffing – Our firm has not undergone any changes in ownership nor any significant staffing or organizational changes within the past year that would impact our ability to provide the services under this RFQ. Furthermore, we are not aware of any current plan to change the staffing or organizational structure of our firm that would impact our ability to provide the services under this RFQ.

II. Authorized Negotiator

Laura Powell, Managing Director, will serve as lead banker to the City and will coordinate the efforts of the dedicated Wells Fargo finance team. She will be the individual to whom questions or requests for additional information should be directed, and she possesses the authority to negotiate terms, render decisions, and commit all necessary resources of Wells Fargo to ensure successful financings for the City.

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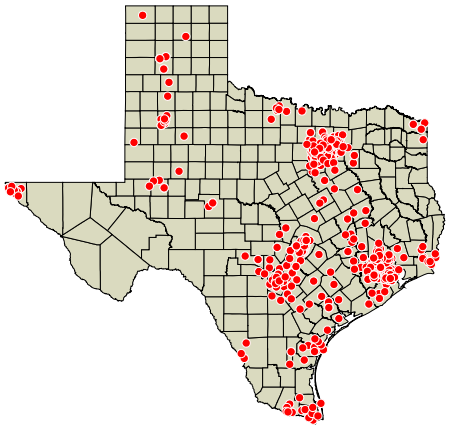
III. Background and Prior Experience

Texas Retail Banking Stores Across Texas



Background – Wells Fargo & Company ("WFC") has a long and storied history in Texas and continues to demonstrate its commitment to the State and its Texas clients by strengthening its statewide presence. The firm first entered the Lone Star State in 1858 as the first coaches of the Overland Mail Company traveled the Southern "Oxbow" route connecting the East and West. As railroads expanded into Texas, WFC agents followed close behind. Wells Fargo & Company opened for business April 1, 1881 in El Paso, and by 1918, had over 1,000 offices in Texas. Today, Wells Fargo & Company remains one of the leading providers of financial services and employers in the State. The Firm's presence in Texas ranks the State as one of the largest in terms of employees in the WFC system and includes over 20,000 team members located in over 700 offices throughout the Lone Star State, including over 740 registered retail brokers, and over 440,000 active customer accounts that hold over $86 billion of client assets.

Wells Fargo Securities, LLC ("Wells Fargo") is a wholly-owned subsidiary of Wells Fargo & Company founded in 2003, and is a limited liability company headquartered at 550 South Tryon Street, Charlotte, North Carolina 28288. Wells Fargo conducts its municipal investment banking business through its Government and Institutional Banking ("GIB") Group. This group aligns teams providing commercial banking services to municipal and nonprofit issuers with the investment banking, underwriting, sales and trading professionals covering the same issuers. Wells Fargo brings together these specialized banking teams to offer an integrated approach that centers our business on the needs of our clients. We take great pride in approaching each relationship as one team, leveraging the resources of Wells Fargo to create the greatest value for our clients.

Public Finance Investment Banking – Wells Fargo's commitment to serving municipal issuers is demonstrated through the strategic building of its public finance practice, headquartered in New York City. With over 190 bankers nationwide, the Firm has taken a long-term stance toward its dedication to public finance and now ranks among the top five largest firms in the industry.

Combined Platform: Institutional Sales & Trading Offices

The transaction expertise and experience of our banking team is substantial, with an investment banking practice of 14 professionals working across Texas. Wells Fargo offers the City an understanding of financing structures and pricing that only a national firm can provide, in addition to our unmatched national distribution network. Our retail brokerage network has grown organically and through acquisitions to bring, through our affiliate Wells Fargo Advisors, the third largest retail brokerage platform by financial advisors and the second largest in terms of client assets in the United States. With the strength of a national practice and full banking platform, our team is poised for continued growth in the public finance sector.

Underwriting/Sales & Trading – Our combined platform has nearly 40 underwriting and trading professionals located at our New York and Charlotte trading desks who underwrite negotiated and competitive tax-exempt and taxable municipal bond and note issues nationwide. Our team's underwriting efforts will be led by **Walker McQuage**. As Managing Director and Head of Wells Fargo's municipal syndicate desk, Walker is responsible for and coordinates the marketing, distribution, and underwriting of all fixed rate municipal transactions managed by

Wells Fargo's institutional trading, sales, and underwriting operations. He has accumulated more than 20 years of underwriting experience with general obligation, revenue, taxable, and other special credits, as well as prior experience in the financial futures markets.

Prior Experience – Our firm has managed over $685 billion of par amount across 5,659 transactions, since 2009. Of those transactions, Wells Fargo has served as senior manager on over $125 billion across over 2, 000 transactions. Our experienced and dedicated team of public finance professionals is committed to providing exceptional underwriting services to the City of Austin. The table below provides a summary of these transactions.

	Senior		Co-Mgr		Total	
Year	Issues	Par ($000)	Issues	Par ($000)	Issues	Par ($000)
2009	365	11,137.0	1,023	102,656.0	1,388	113,793.0
2010	416	14,188.6	838	99,764.0	1,254	113,952.6
2011	168	13,145.5	313	61,184.3	481	74,329.8
2012	260	19,509.4	369	81,075.0	629	100,584.4
2013	215	16,982.4	351	76,733.9	566	93,716.3
2014	230	21,270.3	322	58,112.1	552	79,382.4
2015	307	24,834.8	402	71,585.5	709	96,420.3
2016YTD	40	3,983.5	40	9,515.1	80	13,498.6
Total	**2,001**	**125,051.5**	**3,658**	**560,625.9**	**5,659**	**685,677.4**

Source: Thomson Reuters as of February 29, 2016.

IV. Personnel

Wells Fargo has assembled a banking team of seasoned municipal finance professionals to work with the City. The team brings an unmatched knowledge of, and involvement with, Texas finance and will bring the full resources of Wells Fargo to the City's financings. The key strengths of the team include: (1) national experience as an underwriter of municipal debt; (2) extensive expertise with Texas credits, specifically general obligation, utility revenue, airport and special tax credits; (3) in-depth knowledge of and a significant presence in the Texas municipal market; and (4) unmatched experience marketing and distributing Texas municipal bonds. **Laura Powell**, *Managing Director,* and the City's primary contact as identified in Section II, will be available to the City at all times and will devote 20-50% of her time to serving the City of Austin, depending on whether or not there is an ongoing transaction. Ms. Powell will be joined by **Rick Molke**, *Managing Director* and Head of the Municipal Utilities practice, and **Kevin Carney**, *Managing Director* in Wells Fargo's Transportation Group, who will serve as co-lead bankers for any transactions in the utility or transportation sectors, respectively.

Walker McQuage, *Managing Director* and Head of Wells Fargo's Municipal Syndicate oversees underwriting and syndicate operations. Since 2009, Mr. McQuage has overseen Wells Fargo's participation in nearly 3,300 transactions totaling almost $600 billion of par amount; of these transactions our desk has senior managed nearly 1,000 transactions across almost $100 billion of par. Mr. McQuage has also personally led Wells Fargo's underwriting participation in 544 transactions in Texas aggregating to nearly $50 billion of par amount; of these deals, he has served as lead underwriter on $10.5 billion of par across 157 transactions. **John M. P. Young**, *Director*, **Thomas Munn**, *Associate*, and **Alex Palazzolo,** *Analyst*, will provide day-to-day deal management and investment banking support. Unlike many other firms which have reduced their headcount and resources, Wells Fargo also has a dedicated team that can provide advanced analytics, thereby enabling issuers to optimize the structure of bond issues in order to achieve the lowest possible cost of financing. **Gavin Palatt**, *Managing Director* and Head of the Quantitative Structuring Group, would be available to the Wells Fargo banking team, the City and its financial advisor on an as-needed basis to assist with complex analysis, such as call option valuation. Please see Appendix D for a full listing of our team along with resumes for each member.

V. *Innovative Financing Techniques*

Wells Fargo is committed to providing industry-leading analysis and thought leadership in order to help achieve the financial goals of its clients. In addition to the update below of our previously presented refunding analyses, in this section we highlight two ideas that we believe could be applicable to the City and its future financings.

Refunding Analysis. One of our primary responsibilities to our clients is to actively monitor their outstanding debt and to identify opportunities to refinance bonds for debt service savings when market conditions permit. As discussed with the City previously, in today's low interest rate environment, the City could refund on a tax-exempt basis approximately $60 million of outstanding general obligation bonds and generate approximately $7.8 million of net present value ("NPV") savings, or 13.1% of the refunded par amount, as shown below.

Tax-Exempt General Obligation Refunding Results

Refunding Results	
Delivery Date	5/16/2016
Arbitrage yield (%)	1.959
Escrow yield (%)	0.882
Bond Par Amount ($)	52,515,000
True Interest Cost (%)	2.200
Average Life (years)	9.661
Par amount of refunded bonds ($)	59,765,000
Avg Life of refunded bonds (years)	9.960
Negative Arbitrage ($)	1,571,270
Negative Arbitrage (%)	20.141
NPV Savings ($)	**7,801,410**
NPV Savings (%)	**13.053**

Tax-Exempt Savings By Series

Series	Call Date	Maturity Range	Coupons (%)	Par Ref'd ($)	Svgs ($)	Svgs (%)
2008 PIB	9/1/18	'21 - '28	4.250 - 5.000	48,770,000	6,257,199	12.83
2008 C/O	9/1/18	'21 - '28	4.250 - 4.625	5,675,000	661,692	11.66
2009 C/O	9/1/19	'21 - '39	3.500 - 4.750	7,065,000	882,518	16.59
Total				**59,765,000**	**7,801,410**	**13.05**

* Preliminary, for discussion purposes only. Market rates as of March 2, 2016. Assumes SLGS escrow, reasonable costs of issuance. Minimum 3% savings per maturity; max 50% negative arbitrage per maturity.

Additionally, the City could refund a portion of its outstanding water and wastewater system revenue debt to generate significant debt service savings. Specifically, assuming a refunding that closes in March 2016, the City could advance refund its outstanding Series 2006A, 2007, 2009A, and 2009 bonds and generate net present value savings of approximately $13.6 million (or 9.44% of the refunded par amount), as shown below.

Tax-Exempt Water & Sewer Refunding Results

Refunding Results	
Delivery Date	5/16/2016
Arbitrage yield (%)	2.420
Escrow yield (%)	0.907
Bond Par Amount ($)	128,830,000
True Interest Cost (%)	2.997
Average Life (years)	12.865
Par amount of refunded bonds ($)	143,850,000
Avg Life of refunded bonds (years)	12.993
Negative Arbitrage ($)	4,504,697
Negative Arbitrage (%)	33.185
NPV Savings ($)	**13,574,547**
NPV Savings (%)	**9.437**

Tax-Exempt Savings By Series

Series	Call Date	Maturity Range	Coupons (%)	Par Ref'd ($)	Svgs ($)	Svgs (%)
2006A	11/15/16	'25- '32	3.500 - 4.250	28,475,000	1,963,174	6.89
2007	11/15/17	'29 - '37	5.000	63,355,000	8,158,455	12.88
2009A	11/15/19	'21 - '25	4.750 - 5.000	11,525,000	828,680	7.19
2009	11/15/19	'21 - '25	4.500 - 5.000	40,495,000	2,624,238	6.48
Total				**143,850,000**	**13,574,547**	**9.44**

* Preliminary, for discussion purposes only. Market rates as of March 2, 2016. Assumes SLGS escrow, reasonable costs of issuance. Minimum 3% savings per maturity; max 50% negative arbitrage per maturity.

Innovative Financing Idea #1 – *Hotel Occupancy Tax ("HOT") Credit*. Similar to other cities in Texas, the City has historically utilized its HOT credit to fund improvements to its convention center, as well as certain other authorized projects, and currently has four series of HOT-backed bonds outstanding. A plan for a significant expansion of the convention center has been presented to City Council, with a proposal to ask voters to

"rededicate a 2 percent venue tax within the HOT tax collections." [1] An alternative to expanding the use of the HOT credit might be to refund some or all of the existing HOT debt and issue new bonds under a lease or appropriation-backed structure. In 2012, the City of San Antonio issued $550.373 million Public Facility Corporation Improvement and Refunding Lease Revenue Bonds, which refunded all of its outstanding Convention Center-related debt that was backed by HOT revenues, and also provided $325 million in proceeds for a major expansion of the Convention Center. The security for the Series 2012 Bonds is Lease Payments to be made from Appropriated Funds. The City identified the HOT revenues, ad valorem taxes and sales and use taxes as potential sources of funds to pay debt service but expects to pay the debt service from HOT revenues. The high ratings awarded this credit (Aa2/AA+/AA) are notched off of San Antonio's Aaa/AAA/AAA G.O. bond ratings and are based on a number of factors, including the essentiality of the convention center facilities and structural provisions of the transaction, including the provision that a failure to pay Lease Payments can result in the loss of use of the Convention Center Facilities. The Series 2012 ratings were higher than the existing and pro-forma HOT credit ratings and also eliminated the need to maintain debt service coverage and a debt service reserve fund, thereby resulting in significant savings to the City of San Antonio and an increased debt capacity.

The City of Austin could consider the use of a similar strategy to assist in financing its proposed convention center expansion. Under current market conditions and assuming ratings of March 2, 2016 and a delivery date of November 15, 2016, a refunding of the then $118.93 million in outstanding HOT-backed debt would result in NPV savings of $9.9 million (8.3%), due in part to the release of the existing debt service reserve funds. The elimination of the 1.25x requirement for additional bonds and the reserve fund requirement would provide the City with additional financing flexibility. We note that this analysis makes a number of assumptions, as detailed in Appendix E, including ratings of Aa1/AA+/AA+ and the novation of the existing swap related to the Series 2008A&B Bonds to the new credit structure at no cost.

While at her prior firm, Laura Powell served as lead banker for the City of San Antonio's transaction and would bring this experience to the City of Austin, along with expertise gained through other similar transactions utilizing a wide range of special taxes and fees, as noted previously and detailed in her resume in Appendix D.

Innovative Financing Idea #2 – *Direct Purchase with Synthetic Fixed Swap*. In a Direct Purchase transaction, the obligation is placed directly with WFBNA as sole investor – as opposed to selling bonds in the public market to a group of investors – and does not require any credit enhancement or Official Statement. WFBNA holds the bonds as an 'on-balance sheet' loan and receives the tax-exempt income as the investor. In 2010, Jacksonville Electric Authority ("JEA") converted approximately $200 million of Series 2008 Senior Electric VRDBs to a Wells Fargo index floating rate Direct Purchase. The Wells Fargo Direct Purchase Loan constituted the floating rate funding for outstanding synthetic fixed interest rate swaps that JEA had previously executed with other swap counterparties.

$200,000,000
JEA | Direct Purchase
Mr. Joseph E. Orfano, *Treasurer*
21 West Church Street | Jacksonville, Florida 32202
Tel: (904) 665-4541 | orfaje@jea.com

In 2012, the Wells Fargo Direct Purchase was extended for three years and an additional $45 million of JEA's 2008 VRDBs were refinanced with an additional Direct Purchase. In September 2015, the Wells Fargo DP was extended again for an additional three years (at the then outstanding amount of $227.8 million – some amounts have amortized during the interim period). The synthetic fixed debt structure with a DP as the floating rate funding source could be relevant to Austin Energy ("AE") as an alternative product to advance refund AE's $110 million Series 2008A advance refunding candidates.

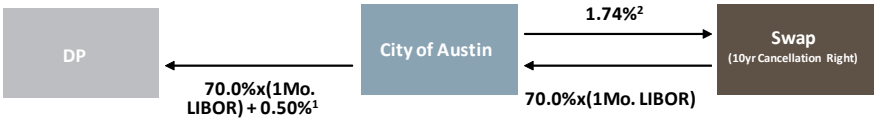
***City of Austin Series 2008A Refunding*.** Austin Energy could advance refund its Series 2008A Bonds with proceeds of a Wells Fargo Direct Purchase to be deposited in an advance refunding escrow fund and simultaneously Wells

[1] *Community Impact Newspaper*, "Effort to Expand Convention Center on Hold for Now" (November 24, 2015).

Fargo and Austin Energy would enter into a synthetic fixed swap. The synthetic fixed rate would be integrated for tax purposes and would be the basis of the arbitrage yield to which the escrow earnings would be restricted.

In the adjacent chart, we show an example of the proposed synthetic fixed rate structure, including indicative current pricing. The Wells Fargo Direct Purchase Note is assumed to be on parity with Austin Energy's A1/AA-/AA- separate electric lien. We estimate indicative pricing for the DP is 70% of 1-month LIBOR plus 50 basis points, subject to full credit review and approval. The Wells Fargo Direct Purchase Notes can be structured with a long dated nominal maturity and mandatory tender in 1-3 years. The swap analysis including the indicative swap rate, which reflects the City's option to terminate the swap at no cost after 10 years, was provided by the Wells Fargo Bank, N.A. Derivatives Marketing desk at 4:00 p.m on March 3, 2016. This is an estimate only and is subject to market conditions. Please direct any derivatives questions to Felipe Camacho on the Derivatives Marketing desk at (415) 644-9391.

Synthetic Fixed Rate Structure



Synthetic Fixed Rate Calculation			
Component	**Description**	**Term**	**As of 3/3/2016**
Base	70.0%x(1Mo. LIBOR)	30 Days	0.31%
Credit	Credit Spread	3.0 Years	0.50%
Swap - Pay	1.74%	11/15/2034	1.74%
Swap - Receive	70.0%x(1Mo. LIBOR)	30 Days	-0.31%
		All-In Rate as of 3/3/2016:	**2.24%**

[1]Hypothetical only. Not a committed rate or credit commitment.
[2]The swap analysis including the indicative swap rate was provided by the Wells Fargo Bank, N.A. Derivatives Marketing desk at 4:00 p.m on March 3, 2016. This is an estimate only and is subject to market conditions. Please direct any swap questions to Felipe Camacho on the Derivatives Marketing desk at (415) 644-9391.

A summary of both the advance refunding and synthetic advance refunding scenarios are shown to the right and below for comparison. In the first scenario, Austin Energy could advance refund its outstanding Series 2008A bonds and generate net present value savings of approximately $9.4 million (or 9.8% of the refunded par amount).

In the second scenario, Austin Energy could advance refund its outstanding Series 2008A bonds while simultaneously entering into a synthetic fixed rate swap

Advance Refunding Summary

Summary of Bonds Refunded		
Series	Par Amount Refunded	Call Date
Series 2008A	96,430,000	11/15/2018

Sources and Uses		
Sources:		
Bond Proceeds:		
Par Amount	$	90,810,000
Premium		16,563,003
Debt Service Fund		13,853
	$	107,386,856
Uses:		
SLGS Purchases	$	106,611,338.00
Cost of Issuance		227,025
Underwriter's Discount		544,860
Contingency		3,633
	$	107,386,856

Summary Statistics		
Dated/Delivery Date		5/16/2016
Arbitrage yield		2.890%
All-In TIC		3.648%
Escrow Yield		0.893%
Negative Arbitrage	$	4,904,163
Par amount of refunded bonds	$	96,430,000
Average coupon of refunded bonds		5.144%
Average life of refunded bonds		18.050
Net PV Savings of Refunded Bonds	$	9,426,926
Percentage savings of refunded bonds		*9.776%*

Annual Debt Service Savings				
Year	Prior D/S	Refunding D/S	Gross Savings	P/V Savings*
2016	$2,479,647	$2,235,660	$243,987	$241,881
2017	4,987,000	4,496,300	490,700	476,341
2018	4,987,000	4,496,300	490,700	462,866
2019	9,842,000	8,916,300	925,700	848,491
2020	4,719,975	4,319,500	400,475	356,689
2021	4,719,975	4,319,500	400,475	346,599
2022	4,719,975	4,319,500	400,475	336,794
2023	4,719,975	4,319,500	400,475	327,267
2024	4,719,975	4,319,500	400,475	318,009
2025	4,719,975	4,319,500	400,475	309,013
2026	4,719,975	4,319,500	400,475	300,271
2027	4,719,975	4,319,500	400,475	291,777
2028	4,719,975	4,319,500	400,475	283,523
2029	4,719,975	4,319,500	400,475	275,503
2030	13,024,975	12,144,500	880,475	588,580
2031	13,003,963	12,143,250	860,713	559,093
2032	12,981,163	12,147,500	833,663	526,203
2033	12,960,525	12,151,000	809,525	496,513
2034	12,935,738	12,152,750	782,988	466,651
2035	12,910,750	12,151,750	759,000	439,559
2036	12,884,250	12,157,000	727,250	409,257
2037	12,882,750	12,167,000	715,750	391,391
2038	12,883,500	12,185,250	698,250	371,021
	$185,963,010	$172,739,560	$13,223,449	$9,423,293

Savings Summary	
PV of savings from cash flow	$9,423,293
Plus: Refunding funds on hand	3,633
Net PV Savings	**$9,426,926**

with Wells Fargo, and generate net present value savings of approximately $30 million (or 31.2% of the refunded par amount). Please see below for a summary of the refunding results.

Synthetic Advance Refunding Summary

Series	Par Amount Refunded	Call Date
Series 2008A	96,430,000	11/15/2018

Sources and Uses		
Sources:		
Bond Proceeds:		
Par Amount	$	107,515,000
Debt Service Fund		13,853
	$	107,528,853
Uses:		
SLGS Purchases	$	106,611,338.00
Cost of Issuance		268,788
Cost of Issuance		645,090
Contingency		3,637
	$	107,528,853

Summary Statistics		
Dated/Delivery Date		5/16/2016
Arbitrage yield		2.240%
All-In TIC		2.301%
Escrow Yield		0.893%
Negative Arbitrage	$	3,338,930
Par amount of refunded bonds	$	96,430,000
Average coupon of refunded bonds		5.144%
Average life of refunded bonds		18.050
Net PV Savings of Refunded Bonds	$	30,055,108
Percentage savings of refunded bonds		*31.168%*

Annual Debt Service Savings				
Year	Prior D/S	Refunding D/S	Gross Savings	P/V Savings*
2016	$2,479,647	$1,197,478	$1,282,169	$1,273,942
2017	4,987,000	3,128,336	1,858,664	1,816,295
2018	4,987,000	3,122,208	1,864,792	1,782,140
2019	9,842,000	7,970,856	1,871,144	1,748,817
2020	4,719,975	2,915,528	1,804,447	1,649,329
2021	4,719,975	2,910,632	1,809,343	1,617,372
2022	4,719,975	2,900,512	1,819,463	1,590,589
2023	4,719,975	2,895,280	1,824,695	1,560,023
2024	4,719,975	2,889,824	1,830,151	1,530,218
2025	4,719,975	2,879,144	1,840,831	1,505,242
2026	4,719,975	2,873,352	1,846,623	1,476,714
2027	4,719,975	2,862,336	1,857,639	1,452,799
2028	4,719,975	2,856,208	1,863,767	1,425,482
2029	4,719,975	2,849,856	1,870,119	1,398,831
2030	13,024,975	11,143,280	1,881,695	1,376,483
2031	13,003,963	11,240,560	1,763,403	1,261,534
2032	12,981,163	11,341,120	1,640,043	1,147,436
2033	12,960,525	11,454,736	1,505,789	1,030,299
2034	12,935,738	11,570,960	1,364,778	913,244
2035	12,910,750	11,694,568	1,216,182	795,884
2036	12,884,250	11,825,224	1,059,026	677,772
2037	12,882,750	11,977,592	905,158	566,536
2038	12,883,500	12,141,000	742,500	454,491
	$185,963,010	$148,640,590	$37,322,420	$30,051,470

Savings Summary	
PV of savings from cash flow	$30,051,470
Plus: Refunding funds on hand	3,637
Net PV Savings	**$30,055,108**

*Assumes swap rate of 1.74% and a Direct Purchase credit spread of 0.50% until 2038. Assumes Direct Purchase spread remains 0.50% until 2038.

Summary Conclusion. The synthetic fixed advance refunding generates $20.6 million of additional NPV savings compared to a traditional advance refunding bond transaction based on the assumptions utilized in the above analysis. Please refer to Appendix E for a discussion of benefits and risks and additional information regarding swap documentation.

Disclaimer. Our willingness to enter into any transaction is subject to final credit approval, agreement on transaction terms and compliance to our satisfaction with all applicable legal and regulatory requirements, including without limit, onboarding and swap trading relationship documentation.

VI. Financial Viability

Wells Fargo Bank, N.A. ("WFBNA") is one of the strongest, best-capitalized, and highest rated banks in the world. The Firm maintains long-term credit ratings of Aa1/AA-/AA and short-term credit ratings of P-1/A-1+/F1+ by Moody's, S&P, and Fitch, respectively, making it one of the safest and most stable financial services companies in the industry.

Wells Fargo Securities is a subsidiary of WFC that engages in providing municipal securities underwriting services. As a FINRA registered broker-dealer, Wells Fargo is regulated by, and is subject to net capital standards of the Securities and Exchange Commission. As of January 31, 2016, Wells Fargo maintained a total capital base of over **$6.8 billion**.

Wells Fargo Securities, LLC ($billions)

	2016
Total Firm Capital ($)	6.8
Total Equity Capital ($)	4.5
Net Capital ($)	3.3
Excess Net Capital ($)	2.6

Source: Wells Fargo SEC Filling as of 1/31/2016

A capital position of this magnitude gives Wells Fargo Securities the strength to underwrite securities of significant size and to prudently commit capital to unsold

balances in an effort to support a client's pricing strategy. The firm does not have, nor does it require, any committed or standby lines of credit or other forms of financing from other financial institutions to support its ability to underwrite municipal securities. Once a transaction has been approved by our internal credit committee, our underwriting desk is able to underwrite up to the entire par amount of the transaction, regardless of our underwriting role. Though the municipal bond market has experienced periods of stress and volatility since the fall of 2008, Wells Fargo has consistently been able to support our client's transactions in an effort to deliver a lower cost of funds to clients during stressful market conditions.

Please refer to Appendix C for our most recent audited financial reports.

VII. Austin Bond Experience

Since 2005, the firm has served as underwriter for $548.63 million in par across 3 negotiated transactions, including a senior managed transaction for the City of Austin's CONRAC facility in 2013, as described below. WFC and its acquired firms also have actively supported the City's transactions at competitive sale—the firm has been involved in four competitive transactions with an aggregate par amount of $67 million, including a senior managed $7.2 million transaction in August 2005. The table below summarizes our recent experience with the City's issues.

Transactions Experience with the City's Bond Issues Since 2005

Sale Date	Issuer	State	Issue Description	Par ($mm)	Security	Bid	Role
08/25/2005	City of Austin	TX	Certificates of Obligation	7.19	GO	C	Senior
08/28/2008	City of Austin	TX	Certificates of Obligation	10.70	GO	C	Co-Mgr
08/28/2008	City of Austin	TX	Pub Prop Fin Contractual Obligation	26.72	GO	C	Co-Mgr
08/26/2010	City of Austin	TX	Certificates of Obligation	22.30	GO	C	Co-Mgr
01/29/2013	City of Austin Airport	TX	CONRAC Revenue Bonds	143.77	Rev	N	Senior
09/20/2013	City of Austin	TX	Public Improvement Ref Bonds	114.71	GO	N	Co-Mgr
07/08/2015	City of Austin Airport	TX	W&S Revenue Ref Bonds	289.15	Rev	N	Co-Mgr

Source: Thomson Reuters SDC, as of February 25, 2016. Includes transactions managed by our acquired firms.
*Preliminary.

The case study below highlights not only our strong performance on the City of Austin's Rental Car Special Facility Bonds, but our ability to effectively market our senior managed transactions to a wide range of investors, resulting in the lowest possible cost of financing for our clients.

$143,770,000
City of Austin, Texas (Austin-Bergstrom International Airport)
Rental Car Special Facility Revenue Bonds, Taxable Series 2013
Role: Senior Manager

In January 2013, Wells Fargo senior managed the $143.7 million Rental Car Special Facility Revenue Bonds, Taxable Series 2013 transaction for Austin-Bergstrom International Airport. Bond proceeds were used for the construction of a 1.6 million square foot public parking and Consolidated Rental Car Facility. The transaction was structured with three tranches, consisting of 10-, 20- and 30-year maturities and was rated Baa1/A-/BBB+ by Moody's, S&P and Fitch, respectively. Weeks ahead of the pricing, Wells Fargo implemented an exhaustive marketing program to help investors understand the credit and financing structure. These marketing efforts included a comprehensive live investor NetRoadshow, direct discussions with investors, and conference calls with Wells Fargo's sales force.

Typically, municipal taxable transactions are issued with a make-whole call redemption feature; however, the Airport opted for a 10-year par call optional redemption. Despite the par call and BBB+ ratings, Wells Fargo found sufficient market acceptance to place the bonds with a wide array of investors, including investment advisors, asset managers, insurance companies, mutual funds and arbitrage/hedge funds. Initial price talk consisted of +200 bps over the 10-year UST for the 2022 maturity, +240 bps over the 30-year UST for the 2032 maturity, and +275 bps over the 30-year UST for the 2042 maturity.

As a result of the well-executed pre-marketing strategy and opportune market dynamics, significant demand gravitated to the 10- and 20-year maturities, allowing Wells Fargo to tighten the credit spreads by 15 and 10 bps, respectively, saving the City $589,000 in NPV interest cost over the life of the financing.

VIII. References

Below, please find three references for the finance team selected to work with the City. Each of these contacts can attest to the Firm's experience and commitment to public finance and the Texas municipal market.

	Mr. Doug Evanson, *Chief Financial Officer* **San Antonio Water System** 2800 U.S. Hwy 281 North, San Antonio, TX 78298 Tel: (210) 704-7297 | devanson@saws.org
	Ms. Charisse Mosely, *Deputy City Controller* **City of Houston** 901 Bagby, 6th Floor, Houston, TX 77002 Tel: (832) 393-3460 | chariss.mosely@houstontx.gov
	Mr. James M. Bass, *Executive Director* **Texas Department of Transportation** 125 East 11th Street | Austin, Texas 78701 Tel: (512) 305-9507 | james.bass@txdot.gov

Appendix A. Required Forms

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No X **If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**

Yes _____ **If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Wells Fargo Securities, LLC

Company Name

Laura Powell, Managing Director

Name and Title of Authorized Representative (Print or Type)

Laura Powell — March 8, 2016

Signature — **Date**

Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Utilization Plan
(Please duplicate as needed)

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

PRIME CONTRACTOR / CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant	Wells Fargo Securities, LLC		
Address	550 S. Tryon St.		
City, State Zip	Charlotte, NC 28288		
Phone Number	(210) 856-5155	Fax Number	(210) 856-5122
Name of Contact Person	Laura Powell		
Is Company City certified?	Yes ☐ No ☒ MBE ☐ WBE ☐ MBE/WBE Joint Venture ☐		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

Laura Powell, Managing Director
Name and Title of Authorized Representative (Print or Type)

Laura Powell
Signature

March 8, 2016
Date

Provide a list of all proposed subcontractors / sub-consultants / suppliers that will be used in the performance of this Contract.
Attach Good Faith Effort documentation if non MBE/WBE firms will be used.

Sub-Contractor / Sub-Consultant	N/A		
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor _____ **Date** _____ **Director/Deputy Director** _____ **Date** _____

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Wells Fargo Securities, LLC

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

N/A

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7 Laura Powell

Signature of vendor doing business with the governmental entity

March 8, 2016

Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

CITY OF AUSTIN, TEXAS
SECTION 0810
NON-COLLUSION,
NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING CERTIFICATION

The term **"Offeror"**, as used in this document, includes the individual or business entity submitting the Offer. For the purpose of this Affidavit, an Offeror includes the directors, officers, partners, managers, members, principals, owners, agents, representatives, employees, other parties in interest of the Offeror, and any person or any entity acting for or on behalf of the Offeror, including a subcontractor in connection with this Offer.

1. **Anti-Collusion Statement.** The Offeror has not in any way directly or indirectly:

   a. colluded, conspired, or agreed with any other person, firm, corporation, Offeror or potential Offeror to the amount of this Offer or the terms or conditions of this Offer.

   b. paid or agreed to pay any other person, firm, corporation Offeror or potential Offeror any money or anything of value in return for assistance in procuring or attempting to procure a contract or in return for establishing the prices in the attached Offer or the Offer of any other Offeror.

2. **Preparation of Solicitation and Contract Documents**. The Offeror has not received any compensation or a promise of compensation for participating in the preparation or development of the underlying Solicitation or Contract documents. In addition, the Offeror has not otherwise participated in the preparation or development of the underlying Solicitation or Contract documents, except to the extent of any comments or questions and responses in the solicitation process, which are available to all Offerors, so as to have an unfair advantage over other Offerors, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

3. **Participation in Decision Making Process.** The Offeror has not participated in the evaluation of Offers or other decision making process for this Solicitation, and, if Offeror is awarded a Contract no individual, agent, representative, consultant, subcontractor, or sub-consultant associated with Offeror, who may have been involved in the evaluation or other decision making process for this Solicitation, will have any direct or indirect financial interest in the Contract, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

4, **Present Knowledge.** Offeror is not presently aware of any potential or actual conflicts of interest regarding this Solicitation, which either enabled Offeror to obtain an advantage over other Offerors or would prevent Offeror from advancing the best interests of the City in the course of the performance of the Contract.

5. **City Code.** As provided in Sections 2-7-61 through 2-7-65 of the City Code, no individual with a substantial interest in Offeror is a City official or employee or is related to any City official or employee within the first or second degree of consanguinity or affinity.

6. **Chapter 176 Conflict of Interest Disclosure.** In accordance with Chapter 176 of the Texas Local Government Code, the Offeror:

   a. does not have an employment or other business relationship with any local government officer of the City or a family member of that officer that results in the officer or family member receiving taxable income;

b. has not given a local government officer of the City one or more gifts, other than gifts of food, lodging, transportation, or entertainment accepted as a guest, that have an aggregate value of more than $100 in the twelve month period preceding the date the officer becomes aware of the execution of the Contract or that City is considering doing business with the Offeror. and

c. does not have a family relationship with a local government officer of the City in the third degree of consanguinity or the second degree of affinity.

7. As required by Chapter 176 of the Texas Local Government Code, Offeror must file a Conflict of Interest Questionnaire with the Office of the City Clerk no later than 5:00 P.M. on the seventh (7th) business day after the commencement of contract discussions or negotiations with the City or the submission of an Offer, or other writing related to a potential Contract with the City. The questionnaire is available on line at the following website for the City Clerk:

   http://www.austintexas.gov/department/conflict-interest-questionnaire

   There are statutory penalties for failure to comply with Chapter 176.

   If the Offeror cannot affirmatively swear and subscribe to the forgoing statements, the Offeror shall provide a detailed written explanation with any solicitation responses on separate pages to be annexed hereto.

8. **Anti-Lobbying Ordinance.** As set forth in the Solicitation Instructions, Section 0200, paragraph 7N, between the date that the Solicitation was issued and the date of full execution of the Contract, Offeror has not made and will not make a representation to a City official or to a City employee, other than the Authorized Contact Person for the Solicitation, except as permitted by the Ordinance.

Signed: Laura Powell

Name and Title: Laura Powell, Managing Director

Date: March 8, 2016

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. **Questions:**

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16

Terry V. Nicholson, Sr. Buyer Specialist
Purchasing Office, 512-974-2995

Date

ACKNOWLEDGED BY:

LAURA POWELL	Laura Powell	MARCH 8, 2016
Name	Authorized Signature	Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

Appendix B. Texas Presence

City	Employees
Abilene	13
Addison	342
Alice	32
Allen	26
Alvarado	12
Alvin	21
Amarillo	83
Angleton	12
Archer City	4
Arlington	140
Atlanta	9
Austin	**1,122**
Bandera	12
Bastrop	19
Bay City	15
Baytown	17
Beaumont	67
Bedford	43
Bee Cave	19
Bellaire	23
Bellville	11
Benbrook	18
Big Spring	13
Boerne	19
Borger	7
Boyd	11
Brenham	19
Brookshire	10
Brownsville	129
Bryan	73
Bulverde	10
Burleson	37
Burnet	10
Canyon Lake	11
Canyon	8
Carrollton	26
Cedar Hill	16
Cedar Park	34
Centerville	6
Channelview	26
Cibolo	11
Cleburne	15
Cleveland	11
Coll. Station	59
Colleyville	14
Comfort	8
Conroe	38
Coppell	31
Corinth	8
Corpus Christi	144
Corsicana	1
Crowley	14
Cuero	11
Cypress	67
Dalhart	5
Dallas	1,192

City	Employees
Danbury	3
Decatur	20
Deer Park	16
Denton	125
Denver City	8
Desoto	11
Donna	26
Dripping Springs	16
Duncanville	14
Edinburg	31
Edna	9
El Paso	459
Fairfield	10
Farmers Branch	21
Floresville	15
Flower Mound	36
Fort Worth	515
Franklin	7
Friendswood	24
Frisco	96
Garland	50
Georgetown	46
Glenn Heights	1
Godley	7
Gonzales	12
Grand Prairie	54
Grapevine	106
Groves	14
Hallettsville	8
Haltom City	58
Harlingen	53
Henrietta	5
Highland Village	21
Hillsboro	15
Houston	2,498
Hubbard	4
Huffman	14
Humble	78
Hurst	41
Hutto	11
Ingleside	11
Ingram	8
Irving	1,340
Joshua	9
Katy	121
Kaufman	13
Keller	17
Kenedy	8
Kennedale	14
Kerrville	43
Killeen	3
Kingsland	9
Kingsville	18
Kingwood	27
Kyle	18
La Porte	15

City	Employees
La Vernia	10
Lake Jackson	24
Lake Worth	29
Lakehills	3
Lakeway	25
Laredo	83
League City	47
Lewisville	13
Liberty	10
Longview	24
Los Fresnos	13
Lubbock	653
Lumberton	8
Madisonville	12
Magnolia	12
Mansfield	23
Marquez	4
McAllen	81
McKinney	62
Mesquite	55
Midland	110
Midlothian	11
Mission	24
Missouri City	84
Mont Belvieu	10
Murphy	15
Nacogdoches	7
Navasota	10
Nederland	7
New Boston	8
New Braunfels	43
New Caney	18
Nocona	7
Nordheim	2
N. Richland Hills	59
Odessa	29
Orange	22
Palestine	8
Paris	5
Pasadena	58
Pearland	79
Pharr	19
Plainview	18
Plano	327
Pleasanton	14
Port Arthur	8
Port Isabel	12
Port Lavaca	9
Port Neches	6
Portland	13
Post	6
Poteet	5
Poth	4
Premont	6
Raymondville	13
Red Oak	14

City	Employees
Rhome	9
Richardson	11
Richmond	32
Rio Hondo	5
Rio Vista	8
Roanoke	13
Robstown	11
Rockport	19
Rockwall	20
Rosenberg	30
Round Rock	107
Rowlett	15
Saginaw	17
San Angelo	54
San Antonio	5,209
San Benito	2
San Marcos	49
Schulenburg	8
Seabrook	19
Sealy	11
Seguin	19
Selma	18
Shavano Park	9
Sherman	21
Silsbee	8
Socorro	17
S. Padre Island	6
Southlake	51
Spring	129
Springtown	13
Stafford	13
Sugar Land	113
Taft	5
Temple	28
Terrell	17
Texarkana	35
The Colony	15
The Woodlands	174
Tomball	46
Tulia	8
Tyler	39
Victoria	97
Waco	157
Waller	14
Watauga	15
Waxahachie	27
Webster	20
West Columbia	7
Westlake	637
Westworth Village	11
Wichita Falls	86
Willis	14
Wimberley	9
Grand Total	**20,232**

Appendix C. Capital Information and Audited Annual Report

WELLS FARGO SECURITIES, LLC
(A Subsidiary of Wells Fargo & Company)

Statement of Financial Condition

June 30, 2015

(Unaudited)

WELLS FARGO SECURITIES, LLC
(A Subsidiary of Wells Fargo & Company)

Statement of Financial Condition

June 30, 2015

(In thousands)

(Unaudited)

Assets

Cash	$	290,408
Cash segregated pursuant to federal regulations		1,652,631
Financial instruments owned, at fair value ($41,245,268 pledged as collateral)		43,327,047
Receivable from broker-dealers and clearing organizations		21,673,623
Securities purchased under agreements to resell		12,671,155
Receivable from customers		1,874,042
Goodwill		79,687
Property, equipment, and leasehold improvements, net		2,489
Other assets		361,649
Total assets	$	81,932,731

Liabilities and Member's Equity

Liabilities:		
Securities sold under agreements to repurchase	$	47,527,776
Financial instruments sold, not yet purchased, at fair value		14,344,264
Payable to broker-dealers and clearing organizations		8,378,729
Payable to customers		4,142,261
Other liabilities		663,215
Total liabilities		75,056,245
Subordinated borrowings		2,323,500
Member's equity:		
Member's contributions		1,565,243
Accumulated earnings		2,987,743
Total member's equity		4,552,986
Total liabilities and member's equity	$	81,932,731

See accompanying notes to statement of financial condition.

(1) Organization

Wells Fargo Securities, LLC (the Company) is organized as a Limited Liability Company. The Company is a wholly owned subsidiary of Everen Capital Corporation (Everen). Everen is a wholly owned subsidiary of Wells Fargo & Company (the Holding Company). The Holding Company is registered with the Federal Reserve Board as a financial holding company in accordance with the Gramm-Leach-Bliley Act of 1999 (GLBA).

The Company is registered as a broker-dealer with the Securities and Exchange Commission (SEC) and is a member organization of the Financial Industry Regulatory Authority (FINRA). The Company is also a registered Futures Commission Merchant (FCM) registered with the Commodities Futures Trading Commission (CFTC). The Company engages in a wide variety of securities activities in accordance with its status as an affiliate of a financial holding company under the provisions of the GLBA. In general, securities sold by the Company are not bank deposits and are not insured by the Federal Deposit Insurance Corporation.

The Company clears some of its customers' transactions through First Clearing, LLC (FCLLC), an affiliated broker dealer, on a fully disclosed basis.

The Company self clears the majority of its institutional customer accommodation and market-making transactions. Some futures are carried and cleared by an unaffiliated broker-dealer. In February 2013, the Company began to self-clear its own futures transactions and also became a clearing member of the Options Clearing Corporation in December 2013.

The Company clears some customer transactions for Wells Fargo Prime Services, LLC (WFPS), an affiliated broker dealer, on a fully disclosed basis.

The Company is a member of the Chicago Mercantile Exchange (CME), Eris Exchange LLC, ICE Clear Credit LLC, ICE Clear Europe, ICE Clear US, ICE Futures Europe, ICE Futures US, LCH LLC and LCH Ltd. where it is approved to clear interest rate swaps and futures. On May 20, 2015, the Company became a member of the Minneapolis Grain Exchange (MGEX) where it is approved to clear futures and options. On July 15, 2015, the company became a member of the Nodal Exchange LLC, where it is approved to clear futures and options through its LCH Ltd. membership.

On November 5, 2014, Standard & Poors Ratings Services (S & P) affirmed its 'AA-/A-1+' long – and short-term counterparty credit ratings on the Company. The ratings on the Company are based on its core status to the Holding Company under S & P's group ratings methodology.

After close of business on February 27, 2015, Wells Fargo Institutional Securities, LLC (WFIS), a wholly-owned subsidiary of Wells Fargo Credit, Inc., merged with and into the Company. The Company had been clearing transactions for WFIS' institutional customers on a fully-disclosed basis, and onboarded those customers as customers of the Company after the merger. On February 24, 2015 WFIS returned $80,000,000 of equity capital to its immediate parent, Wells Fargo Gaming Capital, LLC.

(2) Summary of Significant Accounting Policies

(a) Basis of Presentation

For accounting purposes, the merger with WFIS described in note 1 was treated as a transfer of assets and liabilities between entities under common control. In this regard, the merger was accounted for at historical cost in a manner similar to a pooling of interests. The Company presented the statement of financial condition as of June 30, 2015 as though the assets and liabilities had been transferred at January 1, 2015. Prior to the merger, the accounting practices used by the Company and WFIS were comparable.

(b) Securities Purchased/Sold Under Agreements to Resell/Repurchase

Transactions involving securities purchased under agreements to resell (reverse repurchase agreements) or securities sold under agreements to repurchase (repurchase agreements) are treated as collateralized financing transactions and are recorded at their contracted resale or repurchase amounts. The carrying value of repurchase and reverse repurchase agreements approximates their fair value and are classified as Level 2 in the fair value hierarchy. These transactions are primarily repurchase agreements of United States government and agency securities and corporate bonds. The Company's exposure to credit risk associated with the nonperformance of customers in fulfilling these contractual obligations can be directly affected by volatile trading markets, which may impair the customers' ability to satisfy their obligations to the Company. Where appropriate under applicable accounting guidance, reverse repurchase agreements and repurchase agreements with the same counterparty are reported on a net basis.

It is the Company's policy to obtain possession of securities purchased under agreements to resell. The Company manages the credit risk associated with these transactions by monitoring the market value of the collateral obtained, including accrued interest, and by requesting additional collateral when deemed appropriate.

(c) Securities Transactions

Customers' securities transactions are recorded on a settlement date basis with related commission revenue and expenses recorded on a trade date basis. Securities owned by customers, including those that collateralize margin or other similar transactions, are not reflected on the statement of financial condition as the Company does not have title to those assets. In the event of uncompleted transactions on settlement date, the Company records corresponding receivables and payables, respectively. The carrying value of the receivables and payables approximates their fair values.

Financial instruments owned and financial instruments sold, not yet purchased are carried at fair value on a trade date basis.

(d) Securities Lending Activity

Securities borrowed and securities loaned are reported as collateralized financing transactions and are carried at the contracted amounts of cash collateral received or paid in connection with those transactions. The carrying value of securities borrowed and securities loaned approximates their fair value and are classified as Level 2 in the fair value hierarchy. The Company receives collateral generally in excess of the market value of securities loaned. The Company monitors the market

value of securities borrowed and loaned on a daily basis, with additional collateral obtained or refunded as necessary.

(e) Derivatives

Derivative financial instruments are used for trading purposes, including economic hedges of trading instruments, and are recorded at fair value. Fair values for exchange-traded derivatives, principally futures and certain options, are based on quoted market prices. Fair values for over-the-counter derivative financial instruments, principally interest rate, credit default or total return swaps, forwards, and options, are based on quoted market prices for similar instruments, pricing models and discounted cash flow analyses are included in financial instruments owned and financial instruments sold, not yet purchased in the accompanying statement of financial condition.

(f) Benefit Plans

The Holding Company accounts for post-employment benefits in accordance with FASB Accounting Standards Codification (ASC) 712, *Nonretirement Postemployment Benefits*, which requires the accrual of a liability for all types of benefits paid to former or inactive employees after employment but before retirement. Eligible employees participate in the noncontributory defined benefit pension plan and the matched savings plan of the Holding Company. In addition, the Holding Company provides postretirement benefits, principally healthcare, to employees and their beneficiaries and dependents.

On April 28, 2009, the Board of Directors approved amendments to freeze the benefits earned under the Wells Fargo qualified and supplemental Cash Balance Plans and the Wachovia Corporation Pension Plan, a cash balance plan that covered eligible employees of the legacy Wachovia Corporation, and to merge the Wachovia Pension Plan into the qualified Cash Balance Plan. These actions became effective on July 1, 2009.

Prior to July 1, 2009, eligible employees' cash balance plan accounts were allocated a compensation credit based on a percentage of their qualifying compensation. The compensation credit percentage was based on age and years of credited service. The freeze discontinues the allocation of compensation credit for services after June 30, 2009. Investment credits continue to be allocated to participants based on their accumulated balances. Employees become vested in their Cash Balance Plan accounts after completing three years of vesting service.

(g) Income Taxes

The Company is a single-member Limited Liability company (SMLLC) and is treated as a disregarded entity pursuant to Treasury Regulation 301.7701-3 for federal income tax purposes. Generally, disregarded entities are not subject to entity-level federal or state income taxation and as such, the Company does not provide for income taxes under FASB ASC 740, *Income Taxes*. The Company's taxable income is primarily reported in the tax return of its member, Everen. Certain state jurisdictions will subject the Company to entity-level taxation as a SMLLC; therefore, state tax expense may be incurred. Similarly, the Company may be subjected to foreign taxation.

Based upon its evaluation, the Company has concluded that there are no significant uncertain income tax positions relevant to the jurisdictions where it is required to file income tax returns requiring recognition in the statement of financial condition. Management monitors proposed and

issued tax law, regulations and cases to determine the potential impact to uncertain income tax positions. At June 30, 2015, management had not identified any potential subsequent events that would have a material impact on unrecognized income tax benefits within the next twelve months.

The Company files tax returns in various states and local jurisdictions and it is subject to income tax examinations by tax authorities for years 2009 and forward.

(h) Goodwill

Goodwill is not subject to amortization but is subject to impairment testing on an annual basis, or more often if events or circumstances indicate possible impairment. The Company initially performs a qualitative assessment of goodwill to test for impairment. If, based on qualitative review, it is concluded that more likely than not the fair value is less than carrying amount, then quantitative steps are completed to determine if there is goodwill impairment. If it is concluded that fair value is not less than carrying amount, quantitative tests are not required. Various quantitative valuation methodologies are applied when required to compare the estimated fair value to the carrying value. Valuation methodologies include discounted cash flow and earnings multiple approaches. If the fair value is less than the carrying amount, an additional test is required to measure the amount of impairment. The Company recognizes impairment losses as a charge to expenses and an adjustment to the carrying value of the goodwill asset. The Company's impairment evaluation for the year ended December 31, 2014, indicated that none of the Company's goodwill is impaired and there are no events or circumstances that indicate possible impairment as of June 30, 2015.

(i) Property, Equipment, and Leasehold Improvements

Property, equipment, and leasehold improvements are stated at cost, less accumulated depreciation and amortization. Depreciation of property and equipment is recognized on a straight-line basis using estimated useful lives, which generally range from three to ten years. Leasehold improvements are amortized over the lesser of the estimated useful life of the improvement or the term of the lease.

(j) Other

The Company's statement of financial condition is prepared in accordance with U.S. generally accepted accounting principles (GAAP). The preparation of the statement of financial condition in conformity with GAAP requires management to make estimates and assumptions that affect reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the statement of financial condition. Actual results could differ from those estimates.

Assets owned by customers, including those that collateralize margin or other similar transactions, are not assets of the Company, and are not included on the statement of financial condition.

(3) Cash and Securities Segregated Pursuant to Federal and Other Regulations

Under the provisions of Rule 15c3-3 of the Securities Exchange Commission (SEC), a qualifying security with a fair value of $756,753,000 has been segregated for the exclusive benefit of customers at June 30, 2015. A qualifying security with a fair value of $10,000,000 has been segregated for the proprietary

accounts of brokers (PAB). The securities are included in financial instruments owned in the accompanying statement of financial condition.

As an FCM, the Company is required to segregate funds in a cleared swap customer account, a secured funds account and a segregated funds account under rules mandated by the CFTC. For these purposes, $862,803,000, $94,905,000, and $694,923,000, respectively, is held in accounts at non affiliate banks and is reflected in cash segregated pursuant to federal regulations in the accompanying statement of financial condition.

The Company deposited $888,039,000 of investments of customer funds in securities with clearing organizations as margin at June 30, 2015. These segregated securities are included in financial instruments owned in the statement of financial condition.

Additionally, the Company segregated $2,900,116,000 of customer specific owned securities deposited at non-affiliated banks and clearing organizations at June 30, 2015. These segregated securities are not included in the statement of financial condition.

Cash and securities segregated pursuant to federal and other regulations are classified as Level 1 in the fair value hierarchy.

(4) Receivable from and Payable to Customers

Receivables from and payable to customers represent the net amounts receivable from and payable to customers in connection with normal cash securities, derivative transactions, and securities-based lending transactions. Receivables from customers also include margin loans to customers and customer cash debits. Payable to customers also includes customer free credits. The amounts receivable from customers are generally collateralized by securities, the value of which is not reflected in the accompanying statement of financial condition. At June 30, 2015, customer receivables of $42,466,000 were unsecured.

Receivables from and payables to customers are classified as Level 2 in the fair value hierarchy.

(5) Receivable from and Payable to Broker-Dealers and Clearing Organizations

Receivable from and payable to broker-dealers and clearing organizations consist of the following at June 30, 2015 (in thousands):

Receivable from broker dealers and clearing organizations:		
Deposits paid for securities borrowed	$	18,706,209
Unsettled regular way transactions, net		502,441
Securities failed to deliver		353,112
Syndicate receivable		196,399
Clearing fund deposits		132,369
Federal funds sold – overnight		8,000
Guaranty deposits		88,686
Receivable from derivative clearing organizations		1,636,214
Receivable from carrying brokers		38,969
Other		11,224
	$	21,673,623
Payable to broker dealers and clearing organizations:		
Deposits received for securities loaned	$	7,854,273
Securities failed to receive		203,028
Syndicate payable		124,389
Payable to derivative clearing organizations		195,810
Other		1,229
	$	8,378,729

Receivables from and payables to broker dealers and clearing organizations are classified as Level 2 in the fair value hierarchy.

(6) Financial Instruments Owned and Financial Instruments Sold, Not Yet Purchased

At June 30, 2015, financial instruments owned and financial instruments sold, not yet purchased consisted of trading securities and derivatives reported at fair value as presented below (in thousands):

		Financial instruments owned	Financial instruments sold, not yet purchased and derivative liabilities
Corporate obligations	$	7,265,481	3,864,901
Collateralized loan obligations and asset-backed securities		1,936,118	3,003
Mortgage-backed securities		20,163,924	641
US government, US agency and municipal government obligations		11,677,923	8,105,654
Equity securities		1,469,338	1,752,893
Derivatives:			
Interest rate contracts		69,289	51,324
Equity contracts		744,974	550,323
Credit contracts		—	15,525
	$	43,327,047	14,344,264

U.S. government securities with a fair value of $196,722,000 at June 30, 2015, have been pledged to clearing corporations. Financial instruments owned at June 30, 2015, included debt securities issued by the Holding Company with a fair value of $185,696,000 included in corporate obligations in the table above.

(7) Variable Interest Entities (VIEs) and Securitizations

The Company acts as underwriter for other subsidiaries of the Holding Company and third parties that securitize financial assets, and may make a market in these securitized financial assets. These securities are accounted for at fair value and are included in financial instruments owned in the statement of financial condition.

The Company purchases and sells financial instruments in VIEs in connection with its market-making activities. These financial instruments in VIEs include senior and subordinated tranches of collateralized mortgage obligations (CMOs), collateralized debt obligations (CDOs), and collateralized loan obligations (CLOs), and other asset-backed securities. The Company has made no liquidity arrangements, guarantees or commitments by third parties related to these holdings. The Company's maximum exposure to loss related to these VIEs is limited to the carrying amount of the financial instruments owned.

During the six month ended June 30, 2015, the Company transferred $5,704,814,017 of debt securities into securitizations structured as sales. The securitizations are primarily U.S. government agency or

U.S. Government-Sponsored Enterprise (GSE) sponsored collateralized mortgage obligations. These securitizations are done principally on behalf of customers to help them obtain agency-backed mortgage securities that conform to their investment profile. The Company is not the primary beneficiary for these transactions because it does not have the power to direct the activities that most significantly impact the U.S. government agency or U.S. GSE sponsored collateralized mortgage obligation entities. As of June 30, 2015, the Company held $1,048,980,000 of securities related to current and prior period securitizations which are included in financial instruments owned in the statement of financial condition.

The Company would consolidate a VIE if it is the primary beneficiary, which is defined as the party that has both the power to direct the activities that most significantly impact the VIE's performance and the obligation to absorb losses or right to receive benefits that could potentially be significant to the VIE. The Company was required to consolidate any interests in VIEs.

The following table sets forth the total VIE assets for VIEs for which the Company has a variable interest and the Company's financial instruments owned in those nonconsolidated VIEs and does not include offsetting financial instruments that are held to mitigate the risks associated with these variable interests (in thousands):

	Total VIE assets	Financial instruments owned
Collateralized mortgage obligations	$ 2,923,216	41,393
U.S. agency issued mortgage-backed securities	38,743,261	1,007,587
Collateralized loan obligations	514,124	—
	$ 42,180,601	1,048,980

(8) Fair Value Measurements

In accordance with FASB ASC 820, *Fair Value Measurement*, the Company groups its assets and liabilities measured at fair value in three levels, based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value. These levels are:

Level 1 – Valuation is based upon quoted prices for identical instruments traded in active markets.

Level 2 – Valuation is based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.

Level 3 – Valuation is generated from techniques that use significant assumptions not observable in the market. These unobservable assumptions reflect estimates of assumptions that market participants would use in pricing the asset or liability. Valuation techniques include use of option pricing models, discounted cash flow models and similar techniques.

In the determination of the classification of financial instruments in Level 2 or Level 3 of the fair value hierarchy, the Company considers all available information, including observable market data,

indications of market liquidity and orderliness, and the Company's understanding of the valuation techniques and significant inputs used. Based upon the specific facts and circumstances of each instrument or instrument category, judgments are made regarding the significance of the Level 3 inputs to the instruments' fair value measurement in its entirety. If Level 3 inputs are considered significant, the instrument is classified as Level 3.

The following sections describe the valuation methodologies used by the Company to measure classes of financial instruments at fair value and specify the level in the fair value hierarchy where various financial instruments are generally classified. Valuation models, significant inputs to those models and any significant assumptions are included where appropriate.

The Company uses quoted prices in active markets, where available and classifies such instruments within Level 1 of the fair value hierarchy. Examples include exchange-traded equity securities and some highly liquid government securities such as U.S. Treasuries. When instruments are traded in secondary markets and quoted market prices do not exist for such securities, the Company generally relies on internal valuation techniques or on prices obtained from third-party pricing services or brokers (collectively, vendors) or combination thereof, and accordingly, classifies these instruments as Level 2 or 3.

Financial instruments are mostly valued using internal trader prices that are subject to price verification procedures performed by separate internal personnel. The majority of fair values derived using internal valuation techniques are verified against multiple pricing sources, including prices obtained from third-party vendors. Vendors compile prices from various sources and often apply matrix pricing for similar securities when no price is observable. The Company reviews pricing methodologies provided by the vendors in order to determine if observable market information is being used, versus unobservable inputs. When evaluating the appropriateness of an internal trader price compared with vendor prices, considerations include the range and quality of vendor prices. Vendor prices are used to ensure the reasonableness of a trader price; however valuing financial instruments involves judgments acquired from knowledge of a particular market. If a trader asserts that a vendor price is not reflective of market value, justification for using the trader price, including recent sales activity where possible, must be provided to and approved by the appropriate levels of management.

Similarly, while investment securities traded in secondary markets are typically valued using unadjusted vendor prices or vendor prices adjusted by weighting them with internal discounted cash flow techniques, these prices are reviewed and, if deemed inappropriate by a trader who has the most knowledge of a particular market, can be adjusted. Securities measured with these internal valuation techniques are generally classified as Level 2 of the hierarchy and often involve using quoted market prices for similar securities, pricing models, discounted cash flow analyses using significant inputs observable in the market where available or combination of multiple valuation techniques. Examples include certain residential and commercial MBS, municipal bonds, U.S. government and agency MBS, and corporate debt securities.

Security fair value measurements using significant inputs that are unobservable in the market due to limited activity or a less liquid market are classified as Level 3 in the fair value hierarchy. Such measurements include securities valued using internal models or a combination of multiple valuation techniques such as weighting of internal models and vendor or broker pricing, where the unobservable inputs are significant to the overall fair value measurement. Securities classified as Level 3 include

certain residential and commercial MBS, other asset-backed securities, CDOs and certain CLOs, and certain residual and retained interests in residential mortgage loan securitizations. The Company values CDOs using the prices of similar instruments, the pricing of completed or pending third party transactions or the pricing of the underlying collateral within the CDO. Where vendor or broker prices are not readily available, the Company uses management's best estimate.

The Company enters into both exchange-traded and over-the-counter (OTC) derivatives. Quoted market prices are available and used for the Company's exchange-traded derivatives, such as certain interest rate futures and option contracts, which the Company classifies as Level 1. However, substantially all of the Company's derivatives are traded in OTC markets where quoted market prices are not readily available. OTC derivatives are valued using internal valuation techniques. Valuation techniques and inputs to internally developed models depend on the type of derivative and nature of the underlying rate, price or index upon which the derivative's value is based. Key inputs can include yield curves, credit curves, foreign-exchange rates, prepayment rates, volatility measurements and correlation of such inputs. Where model inputs can be observed in a liquid market and the model does not require significant judgment, such derivatives are typically classified as Level 2 of the fair value hierarchy. Examples of derivatives classified as Level 2 include generic interest rate swaps and certain option and forward contracts. When instruments are traded in less liquid markets and significant inputs are unobservable, such derivatives are classified as Level 3. Examples of derivatives classified as Level 3 include complex and highly structured derivatives such as certain credit default swaps. Additionally, significant judgments are required when classifying financial instruments within the fair value hierarchy, particularly between Level 2 and 3, as is the case for certain derivatives.

WELLS FARGO SECURITIES, LLC
(A Subsidiary of Wells Fargo & Company)

Notes to Statement of Financial Condition

June 30, 2015

(Unaudited)

Assets and liabilities measured at fair value at June 30, 2015 on a recurring basis are summarized below (in thousands):

	Fair value measurements				
	Level 1	**Level 2**	**Level 3**	**Netting (a)**	**Total**
Financial instruments owned:					
Corporate obligations	$ -	7,358,883	34,581	(127,983)	7,265,481
Collateralized loan obligations and asset-backed securities	-	1,528,590	407,528	-	1,936,118
Mortgage-backed securities	-	20,163,852	72	-	20,163,924
US government, US agency and municipal government obligations	11,948,808	2,217,372	8,107	(2,496,364)	11,677,923
Equity securities	1,816,095	82,453	7	(429,217)	1,469,338
Money markets		-	-	-	-
Derivatives:					
Interest rate contracts	792	70,037	-	(1,540)	69,289
Equity contracts	744,698	276		-	744,974
Credit contracts	-	29,749	228	(29,977)	-
	$ 14,510,393	31,451,212	450,523	(3,085,081)	43,327,047
Financial instruments sold, not yet purchased:					
Corporate obligations	$ -	(3,992,884)	-	127,983	(3,864,901)
Collateralized loan obligations and asset-backed securities	-	(3,003)	-	-	(3,003)
Mortgage-backed securities	-	(641)	-	-	(641)
US government, US agency and municipal government obligations	(9,908,678)	(693,340)	-	2,496,364	(8,105,654)
Equity securities	(2,180,411)	(1,699)	-	429,217	(1,752,893)
Money markets	-	-	-	-	-
Derivatives:					
Interest rate contracts	(2,610)	(50,254)	-	1,540	(51,324)
Equity contracts	(526,976)	(23,347)		-	(550,323)
Credit contracts	-	(34,450)	(11,052)	29,977	(15,525)
	$ (12,618,675)	(4,799,618)	(11,052)	3,085,081	(14,344,264)

(a) The netting of securities owned (assets) by the amount of securities sold but not yet purchased (liabilities) occurs when the securities owned and the securities sold but not yet purchased have identical Committee on Uniform Security Identification Procedures (CUSIPs) numbers. All derivative assets and derivative liabilities subject to an enforceable master netting arrangement are netted on the statement of financial condition when GAAP conditions have been met.

	Changes in Level 3 Assets and Liabilities					
	Beginning balance January 1 2015	Total net gains/(losses) included in earnings	Purchases, issuances, sales and settlements, net	Transfers into Level 3	Transfers out of Level 3	Ending balance June 30 2015
			(in thousands)			
Financial instruments owned:						
Corporate obligations	$ 54,134	2,454	(13,665)	187	(8,529)	34,581
Collateralized loan obligations and asset-backed securities	434,111	42,255	(68,838)	-	-	407,528
Mortgage-backed securities	-	-	-	72	-	72
US government, US agency and municipal government obligations	6,809	118	1,180	-	-	8,107
Equity securities	10	(3)	-	3	(3)	7
	$ 495,064	44,824	(81,323)	262	(8,532)	450,295
Net derivative assets and liabilities:						
Equity contracts, net	(187)	187	-	-	-	-
Credit contracts, net	(11,028)	913	(709)	-	-	(10,824)
	$ (11,215)	1,100	(709)	-	-	(10,824)

	Purchases, Sales, Issuances and Settlements Related to Changes in Level 3 Assets and Liabilities				
	Purchases	Sales	Issuances	Settlements	Net
			(in thousands)		
Financial instruments owned:					
Corporate obligations	$ 26,904	(40,569)	-	-	(13,665)
Collateralized loan obligations and asset-backed securities	908,151	(976,989)	-	-	(68,838)
Mortgage-backed securities	-	-	-	-	-
US government, US agency and municipal government obligations	3,150	(1,869)	-	(101)	1,180
Equity securities	-	-	-	-	
	$ 938,205	(1,019,427)	-	(101)	(81,323)
Net derivative assets and liabilities:					
Equity contracts	-	-	-		-
Credit contracts	-	-	-	(709)	(709)
	$ -	-	-	(709)	(709)

The Company monitors the availability of observable market data to assess the appropriate classification of financial instruments within the fair value hierarchy. Changes in economic conditions or model-based valuation techniques may require the transfer of financial instruments from one fair value level to another. The amounts reported as transfers represent the fair value as of the beginning of the period in which the transfer occurred.

For the period ended June 30, 2015 the Company transferred $8,532,000 of financial instruments owned from Level 3 to Level 2 due to an increase in observable market inputs. The Company also transferred $262,000 of financial instruments from Level 2 to Level 3 as a result of a decline in observable market inputs. There were no transfers between Level 1 and Level 2 during the period.

	Fair value amount reported (level 3)	Valuation technique	Significant unobservable inputs	Range of unobservable inputs	
				Low end of range	High end of range
		(in thousands)			
Financial instruments owned:					
Corporate obligations	$ 34,581	Market comparable pricing	Comparability adjustment	-4.15%	4.13%
Collateralized loan obligations	407,528	Market comparable pricing	Comparability adjustment	-14.00%	20.50%
Asset-backed securities	72	Discounted cash flow model	Discount rate	—%	—%
US government, US agency and municipal government obligations	8,107	Market comparable pricing	Comparability adjustment	0.19%	0.43%
Equity securities	7	Market comparable pricing	Comparability adjustment	—%	—%
Total financial instruments owned	$ 450,295				
Derivative liabilities:					
Credit contracts	(10,824)	Market comparable pricing	Comparability adjustment	-24.97%	19.84%
Total derivative liabilities	$ (10,824)				

The valuation techniques used for our Level 3 assets and liabilities, as presented above, are described as follows:

Discounted Cash Flow Model

Generally consist of developing an estimate of future cash flows that are expected to occur over the life of an instrument and then discounting those cash flows at a rate of return that results in the fair value amount.

Market Comparable Pricing

Used to determine the fair value of certain instruments by incorporating known inputs such as recent transaction prices, pending transactions, or prices of other similar investments which require significant adjustment to reflect differences in instrument characteristics.

Significant unobservable inputs presented in the table above are those we consider significant to the fair value of the Level 3 asset or liability. We consider unobservable inputs to be significant, if by their exclusion, the fair value of the Level 3 asset or liability would be impacted by a predetermined percentage change or based upon qualitative factors, such as the nature of the instrument, type of valuation technique used, and the significance of the unobservable inputs relative to other inputs used within the valuation. Following is a description of the significant unobservable inputs provided in the table:

Comparability Adjustment

An adjustment made to observed market data, such as a transaction price in order to reflect dissimilarities in underlying collateral, issuer, rating, or other factors used within a market valuation approach, expressed as a percentage of an observed price.

Discount Rate

Rate of return used present value the future expected cash flows to arrive at the fair value of an instrument. The discount rate consists of a benchmark rate component and a risk premium component. The benchmark rate component is generally observable within the market and is necessary to appropriately reflect the time value of money. The risk premium component reflects the amount of compensation market participants require due to the uncertainty inherent in the instruments' cash flows resulting from risks such as credit and liquidity.

(9) Collateral Arrangements

The Company has accepted securities, which it is permitted to repledge or sell, as collateral for securities borrowed transactions and for securities purchased under agreements to resell transactions. At June 30, 2015, the fair value of this collateral was $42,361,115,303 substantially all of which had been repledged or sold by the Company. The collateral is received primarily from other broker-dealers or institutional customers and is used by the Company to enter into securities lending agreements for securities sold with agreements to repurchase transactions and settlements related to financial instruments sold, not yet purchased.

(10) Property, Equipment, and Leasehold Improvements

Property, equipment, and leasehold improvements consist of the following at June 30, 2015 (in thousands):

Property and leasehold improvements	$	1,099
Furniture and equipment		415
Communications and computer equipment		6,580
		8,094
Less accumulated depreciation and amortization		5,605
Total	$	2,489

(11) Subordinated Borrowings

Subordinated note due January 31, 2018; variable rate of 0.72365% at June 30, 2015	$	300,000
Revolving subordinated note facility of $3,000,000 due February 15, 2018; variable rate of 0.72365% at June 30, 2015		2,023,500
	$	2,323,500

The interest rate is reset monthly based on 6-month LIBOR plus 30 basis points. Interest payable to Holding Company related to these borrowings totaled $1,401,000 at June 30, 2015. All subordinated borrowings have been approved by the Financial Industry Regulatory Authority (FINRA) and the Chicago Mercantile Exchange (CME) and therefore qualify as capital in computing net capital under the SEC's Uniform Net Capital Rule. To the extent that such borrowings are required for the Company's continued compliance with minimum net capital requirements, they may not be repaid.

Management believes that the carrying value of the subordinated notes at June 30, 2015, approximate their fair value and are classified as Level 2 in the fair value hierarchy.

(12) Transactions with Affiliated Parties

The following items present the Company's significant transactions with affiliated parties.

(a) Securities Purchased Under Agreements to Resell and Securities Borrowed

The Company enters into securities purchased under agreements to resell transactions with affiliates, of which $148,076,000 is outstanding at June 30, 2015. The agreements are generally overnight transactions. Included in interest payable at June 30, 2015, is $94,000 due to affiliates. The Company also enters into securities borrowed transactions with affiliates, of which $5,397,447,000 were outstanding at June 30, 2015. Deposits paid for these transactions are included in receivable from broker-dealers and clearing organizations in the statement of financial condition.

(b) Securities Sold Under Agreements to Repurchase and Securities Loaned

The Company enters into securities sold under agreements to repurchase transactions with affiliates, of which $1,046,886,000 is outstanding at June 30, 2015. The agreements are generally overnight transactions. Included in accrued interest payable from affiliates is $9,000 at June 30, 2015. The Company also enters into securities loaned transactions with affiliates, of which $133,356,000 were outstanding at June 30, 2015.

(c) Services Provided by the Company to Affiliates

Approximately $12,615,000 of receivables in other assets at June 30, 2015, are primarily related to expense reimbursements due from affiliates.

(d) Interest Rate, Equity and Credit Default Swap Transactions

The Company has entered into interest rate, equity and credit default swap transactions with WFBNA to economically hedge financial instruments owned. At June 30, 2015, the notional value of interest rate swaps are a net purchase of payments of fixed interest rates of $1,301,250,000, equity swaps are a net sale of protection of $192,769,000 and credit default swaps are a net purchase of protection of $75,283,000. The estimated fair values of the interest rate, equity and credit default swaps at June 30, 2015, are ($3,675,000), $276,000 and ($15,525,000) respectively, which are included net in financial instruments owned in the accompanying statement of financial condition. There was cash margin on deposit of $35,014,000 in support of this activity at June 30, 2015. Securities with a market value of $32,958,000 have been pledged by WFBNA to the

Company. The Company also clears certain interest rate swaps and futures for WFBNA as well as other affiliates.

(e) Clearing Services

The Company has entered into a fully disclosed clearing agreement with FCLLC to clear some of its customers' securities transactions. The agreement provides for the Company to pay FCLLC on a cost plus reimbursement arrangement. At June 30, 2015, receivables from broker-dealers and clearing organizations include $20,000 due from FCLLC in connection with the fully disclosed clearing arrangement. With the merger of WFIS into the Company, the fully-disclosed clearing agreement with WFIS has been terminated. Additionally, there is no outstanding balance with WFPS as of June 30, 2015.

(f) Fails to Deliver and Fails to Receive

The Company entered into securities transactions with affiliates registered as brokers and/or dealers. At June 30, 2015, fails to deliver of $190,928,000 and fails to receive of $28,223,000 resulting from these transactions are included in receivables from and payable to broker-dealers and clearing organizations, respectively.

(g) Deferred Compensation and Stock Plans

The Company participates in the Holding Company's unfunded deferred compensation plan in which a select group of management or highly compensated individuals are participants, as defined. This plan requires the participant to defer cash incentive awards on a four-tiered scale ranging from 20% to 60% on awards greater than $100,000. Deferred cash incentive awards generally vest over a three-year period.

The Company participates in various stock option plans of the Holding Company under which incentive and nonqualified stock options may be granted periodically to certain employees. The options are granted at an exercise price equal to the fair value of the underlying shares at the date of grant, vest on continued service with the Holding Company and its subsidiaries including the Company for a specified period, generally three to five years following the date of grant, and have a contractual life of ten years. Restricted stock may also be granted under the stock option plans. The restricted stock generally vests over three to five years, during which time the holder receives dividends and has full voting rights. Stock compensation expense is measured at fair value on the date of the grant and is recognized over the required service period.

(h) Other Borrowings with Affiliates

During the period ended June 30, 2015, the Company had in place an uncommitted short-term promissory note in the amount of $9,000,000,000 with the Holding Company for purposes of meeting short-term liquidity needs. Borrowings were made under this note several times during the period in individual amounts not exceeding $233,853,000. The outstanding balance at June 30, 2015 was $1,743,000.

(13) Derivatives, Guarantees, Commitments, and Contingent Liabilities

The Company is a party to derivative financial instruments and commitments in the normal course of business to meet the financing needs of customers, conduct trading activities, and manage market risks.

These derivative financial instruments include futures, options, swaps, swaptions, forward commitments to purchase and sell securities, securities purchased and sold on a when-issued basis (when-issued securities), and firm underwriting commitments. These instruments and commitments involve, to varying degrees, elements of credit and market risk. Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to the terms of the contract. Market risk is the possibility that a change in interest rates, the underlying assets, indices or a combination of these factors will cause an unfavorable change in the value of a financial instrument.

The Company controls the credit risk arising from these instruments and commitments through its credit approval process and through the use of risk control limits and monitoring procedures. It evaluates each customer's or other broker-dealer's creditworthiness on a case-by-case basis. If collateral is deemed necessary to reduce credit risk, the amount and nature of the collateral obtained is based on management's credit evaluation of the other party. Based on the Company's assessment of each of its counterparties, collateral was not required by the Company at June 30, 2015.

The notional principal or contractual amounts of derivative financial instruments exceed the probable loss that could arise from counterparty default or market-related risks. The fair value of derivative financial instruments represents principally the estimated unrealized gain (asset) or loss (liability) and is recorded in financial instruments owned or financial instruments sold, not yet purchased in the statement of financial condition. The market risk associated with trading financial instruments, including derivatives, the prices of which are constantly fluctuating, is managed by imposing limits as to the type, amounts, and degree of risk that traders may undertake. These limits are approved by senior management, and the risk positions of traders are reviewed on a daily basis to monitor compliance with the limits. As of June 30, 2015, derivative financial instruments and their related fair values are as follows (in thousands):

		Notional or contractual amount	Fair value	
Derivative instruments			**Asset derivatives**	**Liability derivatives**
Interest rate contracts	$	36,434,127	70,829	52,864
Equity contracts		14,762,097	744,974	550,323
Credit contracts - protection sold		673,017	28,855	13,440
Credit contracts - protection purchased		748,300	1,122	32,062
Sub-total		52,617,541	845,780	648,689
Netting		—	(31,517)	(31,517)
Total	$	52,617,541	814,263	617,172

Forward and commodity contracts are contracts for delayed delivery of securities or money market instruments in which the seller agrees to make delivery at a specified future date of a specified instrument, at a specified price or yield. Equity contracts are contracts that allow the holder of the option to purchase or sell a financial instrument at a specified price and within a specified period of time from the seller or writer of the option. As a writer of options, the Company receives a premium at the outset and then bears the risk of an unfavorable change in the price of the financial instrument underlying the option and other market risk factors that may impact the fair value of the option.

The Company uses credit derivatives to manage exposure to credit risk related to its customer accommodation and market-making activity. This may include protection purchased to offset securities owned or sold protection. This credit risk management provides an ability to recover a significant portion of any amounts that would be paid under the credit derivatives written by the Company. All of the credit contracts are executed exclusively with an affiliate, WFBNA, and the Company would be required to perform under the noted credit derivatives in the event of a default by the referenced obligors. Excluded from maximum exposure are written credit protection contracts with a notional amount of $748,300,000 where the Company has also purchased offsetting credit protection with the same counterparty, WFBNA, on the same referenced obligation and where the term and amount of the purchased protection equals or exceeds the term of the written credit protection. Events of default include events such as bankruptcy, capital restructuring or lack principal and/or interest payment. In certain cases, other triggers may exist, such as the credit downgrade of the referenced obligors.

	Fair value liability	Maximum exposure	Higher payment risk	Range of maturities
		(in thousands)		
Credit default swaps – corporate bonds	$ 2,560	612,392	553,980	2015-2020
Credit default swaps – structured products	10,880	60,625	47,025	2020-2022

The higher payment risk category is based on the portion of the maximum loss exposure for which there is a greater risk that the Company will be required to make a payment or perform under the credit derivative. The current status of the risk of payment or performance being required is considered high if the underlying assets under the credit derivative have an external rating that is below investment grade or an internal credit default grade that would be equivalent to below investment grade external rating. It is important to note that the higher payment risk represents the amount of exposure which would be incurred under an assumed hypothetical circumstance and, accordingly, this disclosure is not an indication of expected loss for which payment is of a high likelihood. Such payment may not result in a loss. As such, the higher payment risk column is not an indication of loss probability.

In the normal course of business, the Company has activities that involve the execution, settlement and financing of various customer securities transactions. These activities may expose the Company to off-balance-sheet risk in the event the customer or other broker is unable to fulfill its contractual obligations and the Company has to purchase or sell the financial instrument underlying the contract at a loss.

The Company's customer securities activities are transacted on either a cash or margin basis. In margin transactions, the Company extends credit to customers, subject to various regulatory and internal margin requirements, collateralized by cash and securities in the customers' accounts. In connection with these activities, the Company executes and clears customer transactions involving the sale of securities not yet purchased, substantially all of which are transacted on a margin basis subject to individual exchange regulations. In the event a customer fails to satisfy its obligations, the Company may be required to purchase or sell financial instruments at prevailing market prices to fulfill the customer's obligations. The Company seeks to control the risks associated with its customer activities by requiring customers to maintain margin and other contractual collateral in compliance with various regulatory and internal

guidelines. The Company monitors required margin and other contractual collateral levels daily and, pursuant to such guidelines, requires the customer to deposit additional collateral or to reduce positions when necessary.

The Company's customer financing and securities settlement activities require the Company to pledge customer securities as collateral in support of various secured financing sources such as securities loaned. In the event the counterparty is unable to meet its contractual obligation to return customer securities pledged as collateral, the Company may be exposed to the risk of acquiring the securities at prevailing market prices in order to satisfy its customer obligations. The Company controls this risk by monitoring the market value of securities pledged on a daily basis and by requiring adjustments of collateral levels in the event of excess market exposure. In addition, the Company establishes credit limits for such activities and monitors compliance on a daily basis.

In the normal course of business, the Company enters into debt and equity underwriting commitments. Transactions relating to such underwriting commitments that were open at June 30, 2015, and were subsequently settled had no material impact on the Company's financial condition or results of operations.

The Company introduces certain of its customer transactions to an affiliated clearing broker, FCLLC, with whom it has a correspondent relationship for clearance and depository services in accordance with the terms of the clearance agreement. In connection therewith, the Company has agreed to indemnify FCLLC for credit losses that FCLLC may sustain as a result of the failure of the Company's customers to satisfy their obligations in connection with their securities transactions. As of June 30, 2015, substantially all customer obligations were collateralized by securities with a market value in excess of the obligations.

The Company has been named as a defendant in various legal actions arising from its normal business activities in which damages in various amounts are claimed. When establishing a liability for contingent litigation losses, the Company determines a range of potential losses for each matter that is both probable and estimable, and records the amount it considers to be the best estimate within the range. For these matters and others where an unfavorable outcome is reasonably possible but not probable, there may be a range of possible losses in excess of the established liability that cannot be estimated. Based on information currently available, advice of counsel, available insurance coverage and established reserves, the Company believes that the eventual outcome of the actions against it, including the matters described above, will not, individually or in the aggregate, have a material adverse effect on the Company's consolidated financial position. However, in the event of unexpected future developments, it is possible that the ultimate resolution of those matters, if unfavorable, may be material to the Company's results of operations for any particular period.

The Company leases office space related to its branch offices under operating leases expiring at various dates through 2018. Minimum future rental payments required under such leases, that have initial or remaining non-cancelable lease terms in excess of one year at June 30, 2015 are as follows:

	Operating leases
	(in thousands)
Years ending December 31:	
2015	$ 1,272
2016	1,388
2017	257
2018	108

Minimum future rental commitments do not include operating leases entered into by affiliates for which the Company shares office space. The affiliates allocate rent expense to the Company for its share of rent expense incurred under these operating leases, under an expense sharing agreement.

Some of the Company's leases contain escalation clauses and renewal options. Some contracts that the Company enters into in the normal course of business include indemnification provisions that obligate the Company to make payments to the counterparty or others in the event certain events occur. The contingencies generally relate to the changes in the value of underlying assets, liabilities, or equity securities or upon the occurrence of events, such as an adverse litigation judgment or an adverse interpretation of the tax law. The indemnification clauses are often standard contractual terms and were entered into in the normal course of business based on an assessment that the risk of loss would be remote. Since there are no stated or notional amounts included in the indemnification clauses and the contingencies triggering the obligation to indemnify have not occurred and are not expected to occur, the Company is not able to estimate the maximum potential amount of future payments under these indemnification clauses. There are no amounts reflected on the statement of financial condition as of June 30, 2015, related to these indemnifications.

The Company is a member of exchanges and clearing houses that the Company uses to clear its trades and those of the Company's customers. It is common that all members in these organizations are required to collectively guarantee the performance of other members. Our obligations under the guarantees are based on a fixed amount or a multiple of the collateral we are required to maintain with these organizations. We have not recorded a liability for these arrangements because we believe the likelihood of loss is remote. The maximum exposure to loss represents the estimated loss that would be incurred under an assumed hypothetical circumstance, despite what we believe is its extremely remote possibility, where the value of our interests and any associated collateral declines to zero. The maximum exposure to loss related to our clearing house arrangements at June 30, 2015 is $1,112,125,000. The Company has made deposits with clearing organization in the form of cash, financial instruments owned, and securities purchased under agreements to resell of $132,369,000, $196,722,000, and $97,535,000 respectively.

The Company clears transactions on behalf of its clients through various clearing houses, and the Company stands behind the performance of its clients on such trades. The Company mitigates its exposure to loss in the event of a client default by requiring that clients provide appropriate amounts of margin at the inception and throughout the life of the transaction. The Company may cease providing

clearing services to clients if they do not adhere to their obligations under the clearing agreement. It is difficult to estimate the Company's maximum exposure under such transactions, as this would require an assessment of transactions that clients may execute in the future. The Company manages the exposure through setting credit limits for clients and maintaining termination right over clearing contracts. However, based upon historical experience, the Company believes it is unlikely that it will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

(14) Offsetting of Resale and Repurchase Agreements and Securities Borrowing and Lending Agreements

The table below presents resale and repurchase agreements subject to master repurchase agreements (MRA) and securities borrowing and lending agreements subject to master securities lending agreements (MSLA). The Company accounts for transactions subject to these agreements as collateralized financings and those with a single counterparty are presented net on our balance sheet, provided certain criteria are met that permit balance sheet netting. Most transactions subject to these agreements do not meet those criteria and thus are not eligible for balance sheet netting. There were no securities borrowing or lending agreements subject to MSLAs that were eligible for netting.

Collateral pledged consists of noncash instruments, such as securities, and is not netted on the statement of financial condition against the related collateralized liability. Collateral received includes securities and is not recognized on the statement of financial condition. Collateral received or pledged may be increased or decreased over time to maintain certain contractual thresholds as the assets underlying each arrangement fluctuate in value. Generally, these agreements require collateral to exceed the asset or liability recognized on the statement of financial condition. The following table includes the amount of collateral pledged or received related to exposures subject to enforceable MRAs. While these agreements are typically over-collateralized, U.S. GAAP requires disclosure in this table to limit the amount of such collateral to the amount of the related recognized asset or liability for each counterparty (in thousands):

Assets:		
Resale and securities borrowing agreements		
Gross amounts recognized	$	42,079,369
Gross amounts offset in statement of financial condition[1]		(10,702,005)
Net amounts in statement of financial condition[2]		31,377,364
Noncash collateral not recognized in statement of financial condition[3]		(30,989,517)
Net amount[4]	$	387,847
Liabilities:		
Repurchase and securities lending agreements		
Gross amounts recognized	$	66,055,373
Gross amounts offset in statement of financial condition[1]		(10,673,325)
Net amounts in statement of financial condition[5]		55,382,048
Noncash collateral pledged but not netted in statement of financial condition[6]		(55,019,493)
Net amount[7]	$	362,555

(1) Represents recognized amount of resale and repurchase agreements with counterparties subject to enforceable MRAs that have been offset in the statement of financial condition.

(2) At June 30, 2015, includes $12.7 billion, classified on our statement of financial condition in Securities Purchased under Agreements to Resell and $18.7 billion, respectively, in Receivable from broker-dealers and clearing organizations.

(3) Represents the fair value of noncash collateral we have received under enforceable MRAs or MSLAs, limited for table presentation purposes to the amount of the recognized asset due from each counterparty. At June 30, 2015, we have received total collateral with a fair value of $42.3 billion, all of which, we have the right to and have sold or re-pledged.

(4) Represents the amount of our exposure that is not collateralized and/or is not subject to an enforceable MRA.

(5) At June 30, 2015, includes $47.5 billion, classified on our statement of financial condition in Securities sold under agreements to repurchase and $7.9 billion, respectively, in Payable to broker-dealers and clearing organizations.

(6) Represents the fair value of noncash collateral we have pledged, related to enforceable MRAs or MSLAs, limited for table presentation purposes to the amount of the recognized liability owed to each counterparty. At June 30, 2015, we have pledged total collateral with a fair value of $67.2 billion, $0.5 billion of which the counterparty does not have the right to sell or repledge.

(7) Represents the amount of our exposure that is not covered by pledged collateral and/or is not subject to an enforceable MRA or MSLA.

(15) Net Capital

The Company is subject to the SEC's Uniform Net Capital Rule (Rule 15c3¬1) and the Commodities Futures Trading Commission (CFTC) Regulation 1.17 which requires the maintenance of minimum net capital. Under SEC Rule 15c3-1, the Company has elected to use the alternative method, permitted by the

rule, which requires that the Company maintain minimum net capital, as defined, or 2% of combined aggregate debit balances arising from customer transactions. Under CFTC Regulation 1.17, the Company is required to maintain an adjusted net capital equivalent to the greater of $1,500,000 or $507,839,000, which was 8% of the total risk margin requirements for all positions carried in customer and non-customer accounts plus additional net capital requirements related to certain reverse repurchase agreements. At June 30, 2015, the Company had net capital of $2,328,649,000, which was 99.76% of aggregate debit items and $1,820,810,000 in excess of the minimum net capital requirement.

(16) Subsequent Events

The Company has evaluated the effects of subsequent events that have occurred subsequent to period end June 30, 2015, and through August 31, 2015, which is the date we issued the statement of financial condition. During this period, there have been no material events that would require recognition or disclosure in the statement of financial condition.

Important Information Regarding Order Flow

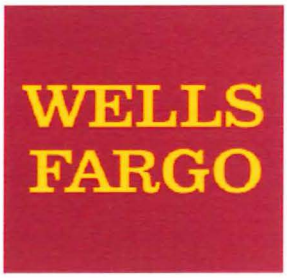
Wells Fargo Securities, LLC is a member of the New York Stock Exchange, and other major national and regional exchanges. Our automated computer systems and our trading procedures for equity securities enable us, in those situations where you have not directed us otherwise, to route your orders to market centers including other broker/dealers that, based on our experience, combine price, speed and size to provide you with what we believe are best executions. Whenever possible, we route such orders to dealers or market centers that have the opportunity to provide executions at prices superior to the nationally displayed best bid or offer. We receive payment per share or in some cases reciprocal order-flow consideration from dealers and credits against exchange fees in return for certain orders that we route or direct. At all times our foremost concern is to obtain the best execution for our clients regardless of any compensation factor. We use the compensation received to help keep our pricing competitive and provide you with our quality investment and execution services.

FINRA Public Disclosure Notice

An investor brochure is available from FINRA under the Public Disclosure Program. Through this program, FINRA provides certain information regarding the disciplinary history of FINRA members and their associated persons in response to written inquiries, electronic inquiries or telephone inquiries via FINRA toll free telephone listing (1-800-326-5897). Additional investor information can be found on the World Wide Web at www.finra.org

The audited Statement of Financial Condition and the Report of Independent Registered Public Accounting Firm on Internal Control of Wells Fargo Securities, LLC as of December 31, 2014, filed with the Securities and Exchange Commission pursuant to Rule 17a-5 of the Securities Exchange Act, is available for inspection at the principal office of the Company and at the regional office of the Securities and Exchange Commission.

This statement may be viewed on our website at www.wellsfargo.com/com/securities/financial-reports



WELLS FARGO SECURITIES, LLC

(A Subsidiary of Wells Fargo & Company)

Statement of Financial Condition

December 31, 2014

(With Report of Independent Registered Public Accounting Firm Thereon)

KPMG LLP
Duke Energy Center
Suite 3200
550 South Tryon Street
Charlotte, NC 28202-4214

Report of Independent Registered Public Accounting Firm

The Board of Managers
Wells Fargo Securities, LLC

We have audited the accompanying statement of financial condition of Wells Fargo Securities, LLC (the Company), a subsidiary of Wells Fargo & Company, as of December 31, 2014 (the financial statement). The financial statement is the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statement based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statement is free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statement. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statement referred to above presents fairly, in all material respects, the financial position of Wells Fargo Securities, LLC as of December 31, 2014, in conformity with U.S. generally accepted accounting principles.

KPMG LLP

Charlotte, North Carolina
February 27, 2015

KPMG LLP is a Delaware limited liability partnership, the U.S. member firm of KPMG International Cooperative ("KPMG International"), a Swiss entity.

WELLS FARGO SECURITIES, LLC
(A Subsidiary of Wells Fargo & Company)

Statement of Financial Condition

December 31, 2014

(In thousands)

Assets

Cash	$	150,714
Cash segregated pursuant to federal regulations		1,038,246
Financial instruments owned, at fair value ($35,206,403 pledged as collateral)		35,236,074
Receivable from broker-dealers and clearing organizations		20,178,482
Securities purchased under agreements to resell		7,743,114
Receivable from customers		154,217
Goodwill		79,687
Property, equipment, and leasehold improvements, net		3,290
Other assets		251,917
Total assets	$	64,835,741

Liabilities and Member's Equity

Liabilities:		
Securities sold under agreements to repurchase	$	37,137,715
Financial instruments sold, not yet purchased, at fair value		13,815,416
Payable to broker-dealers and clearing organizations		4,099,997
Payable to customers		2,369,579
Other liabilities		814,775
Total liabilities		58,237,482
Subordinated borrowings		2,323,500
Member's equity:		
Member's contributions		1,529,736
Accumulated earnings		2,745,023
Total member's equity		4,274,759
Total liabilities and member's equity	$	64,835,741

See accompanying notes to financial statements.

WELLS FARGO SECURITIES, LLC
(A Subsidiary of Wells Fargo & Company)

Notes to Statement of Financial Condition

December 31, 2014

(1) Organization

Wells Fargo Securities, LLC (the Company) is organized as a Limited Liability Company. The Company is a wholly owned subsidiary of Everen Capital Corporation (Everen). Everen is a wholly owned subsidiary of Wells Fargo & Company (the Holding Company). The Holding Company is registered with the Federal Reserve Board as a financial holding company in accordance with the Gramm-Leach-Bliley Act of 1999 (GLBA).

The Company is registered as a broker-dealer with the Securities and Exchange Commission (SEC) and is a member organization of the Financial Industry Regulatory Authority (FINRA). The Company is also a registered Futures Commission Merchant (FCM) registered with the Commodities Futures Trading Commission (CFTC). The Company engages in a wide variety of securities activities in accordance with its status as an affiliate of a financial holding company under the provisions of the GLBA. In general, securities sold by the Company are not bank deposits and are not insured by the Federal Deposit Insurance Corporation.

The Company clears some of its customers' transactions through First Clearing, LLC (FCLLC), an affiliated broker dealer, on a fully disclosed basis.

The Company self clears the majority of its institutional customer accommodation and market-making transactions. Some futures are carried and cleared by an unaffiliated broker-dealer. In February 2013, the Company began to self-clear its own futures transactions and also became a clearing member of the Options Clearing Corporation in December 2013.

The Company clears transactions for Wells Fargo Institutional Securities, LLC (WFIS), an affiliated broker dealer, and WFIS customers on a fully disclosed basis. The Company also clears some customer transactions for Wells Fargo Prime Services, LLC (WFPS), an affiliated broker dealer, on a fully disclosed basis.

The Company is a member of the Chicago Mercantile Exchange (CME), Eris Exchange LLC, ICE Clear Credit LLC, ICE Clear Europe, ICE Clear US, ICE Futures Europe, ICE Futures US, LCH LLC and LCH Ltd. where it is approved to clear interest rate swaps and futures.

On October 25, 2014, Standard & Poors Ratings Services (S & P) affirmed its 'AA-/A-1+' long – and short-term counterparty credit ratings on the Company. The ratings on the Company are based on its core status to the Holding Company under S & P's group ratings methodology.

(2) Summary of Significant Accounting Policies

(a) Securities Purchased/Sold Under Agreements to Resell/Repurchase

Transactions involving securities purchased under agreements to resell (reverse repurchase agreements) or securities sold under agreements to repurchase (repurchase agreements) are treated as collateralized financing transactions and are recorded at their contracted resale or repurchase amounts. The carrying value of repurchase and reverse repurchase agreements approximates their fair value and are classified as Level 2 in the fair value hierarchy. These transactions are primarily repurchase agreements of United States government and agency securities and corporate bonds.

(Continued)

The Company's exposure to credit risk associated with the nonperformance of customers in fulfilling these contractual obligations can be directly affected by volatile trading markets, which may impair the customers' ability to satisfy their obligations to the Company. Where appropriate under applicable accounting guidance, reverse repurchase agreements and repurchase agreements with the same counterparty are reported on a net basis.

It is the Company's policy to obtain possession of securities purchased under agreements to resell. The Company manages the credit risk associated with these transactions by monitoring the market value of the collateral obtained, including accrued interest, and by requesting additional collateral when deemed appropriate.

(b) Securities Transactions

Customers' securities transactions are recorded on a settlement date basis with related commission revenue and expenses recorded on a trade date basis. In the event of uncompleted transactions on settlement date, the Company records corresponding receivables and payables, respectively. The carrying value of the receivables and payables approximates their fair values.

Financial instruments owned and financial instruments sold, not yet purchased are carried at fair value on a trade date basis.

(c) Securities Lending Activity

Securities borrowed and securities loaned are reported as collateralized financing transactions and are carried at the contracted amounts of cash collateral received or paid in connection with those transactions. The carrying value of securities borrowed and securities loaned approximates their fair value and are classified as Level 2 in the fair value hierarchy. The Company receives collateral generally in excess of the market value of securities loaned. The Company monitors the market value of securities borrowed and loaned on a daily basis, with additional collateral obtained or refunded as necessary.

(d) Derivatives

Derivative financial instruments are used for trading purposes, including economic hedges of trading instruments, and are recorded at fair value. Fair values for exchange-traded derivatives, principally futures and certain options, are based on quoted market prices. Fair values for over-the-counter derivative financial instruments, principally interest rate, credit default or total return swaps, forwards, and options, are based on quoted market prices for similar instruments, pricing models and discounted cash flow analyses are included in financial instruments owned and financial instruments sold, not yet purchased in the accompanying statement of financial condition.

(e) Benefit Plans

The Holding Company accounts for post-employment benefits in accordance with FASB Accounting Standards Codification (ASC) 712, *Nonretirement Postemployment Benefits*, which requires the accrual of a liability for all types of benefits paid to former or inactive employees after employment but before retirement. Eligible employees participate in the noncontributory defined benefit pension plan and the matched savings plan of the Holding

Company. In addition, the Holding Company provides postretirement benefits, principally healthcare, to employees and their beneficiaries and dependents.

On April 28, 2009, the Board of Directors approved amendments to freeze the benefits earned under the Wells Fargo qualified and supplemental Cash Balance Plans and the Wachovia Corporation Pension Plan, a cash balance plan that covered eligible employees of the legacy Wachovia Corporation, and to merge the Wachovia Pension Plan into the qualified Cash Balance Plan. These actions became effective on July 1, 2009.

Prior to July 1, 2009, eligible employees' cash balance plan accounts were allocated a compensation credit based on a percentage of their qualifying compensation. The compensation credit percentage was based on age and years of credited service. The freeze discontinues the allocation of compensation credit for services after June 30, 2009. Investment credits continue to be allocated to participants based on their accumulated balances. Employees become vested in their Cash Balance Plan accounts after completing three years of vesting service.

(f) Income Taxes

The Company is a single-member Limited Liability company (SMLLC) and is treated as a disregarded entity pursuant to Treasury Regulation 301.7701-3 for federal income tax purposes. Generally, disregarded entities are not subject to entity-level federal or state income taxation and as such, the Company does not provide for income taxes under FASB ASC 740, *Income Taxes*. The Company's taxable income is primarily reported in the tax return of its member, Everen. Certain state jurisdictions will subject the Company to entity-level taxation as a SMLLC; therefore, state tax expense may be incurred. Similarly, the Company may be subjected to foreign taxation.

Based upon its evaluation, the Company has concluded that there are no significant uncertain income tax positions relevant to the jurisdictions where it is required to file income tax returns requiring recognition in the financial statements. Management monitors proposed and issued tax law, regulations and cases to determine the potential impact to uncertain income tax positions. At December 31, 2014, management had not identified any potential subsequent events that would have a material impact on unrecognized income tax benefits within the next twelve months.

The Company files tax returns in various states and local jurisdictions and it is subject to income tax examinations by tax authorities for years 2009 and forward.

(g) Goodwill

Goodwill is not subject to amortization but is subject to impairment testing on an annual basis, or more often if events or circumstances indicate possible impairment. The Company initially performs a qualitative assessment of goodwill to test for impairment. If, based on qualitative review, it is concluded that more likely than not the fair value is less than carrying amount, then quantitative steps are completed to determine if there is goodwill impairment. If it is concluded that fair value is not less than carrying amount, quantitative tests are not required. Various quantitative valuation methodologies are applied when required to compare the estimated fair value to the carrying value. Valuation methodologies include discounted cash flow and earnings multiple approaches. If the fair value is less than the carrying amount, an additional test is required to

measure the amount of impairment. The Company recognizes impairment losses as a charge to expenses and an adjustment to the carrying value of the goodwill asset. The Company's impairment evaluation for the year ended December 31, 2014, indicated that none of the Company's goodwill is impaired.

(h) Property, Equipment, and Leasehold Improvements

Property, equipment, and leasehold improvements are stated at cost, less accumulated depreciation and amortization. Depreciation of property and equipment is recognized on a straight-line basis using estimated useful lives, which generally range from three to ten years. Leasehold improvements are amortized over the lesser of the estimated useful life of the improvement or the term of the lease.

(i) Other

The Company's financial statements are prepared in accordance with U.S. generally accepted accounting principles (GAAP). The preparation of the financial statements in conformity with GAAP requires management to make estimates and assumptions that affect reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Assets owned by customers, including those that collateralize margin or other similar transactions, are not assets of the Company, and are not included on the statement of financial condition.

(3) Cash and Securities Segregated Pursuant to Federal and Other Regulations

Under the provisions of Rule 15c3-3 of the Securities Exchange Commission (SEC), a qualifying security with a fair value of $399,951,000 has been segregated for the exclusive benefit of customers at December 31, 2014. A qualifying security with a fair value of $99,997,000 has been segregated for the proprietary accounts of brokers (PAB). The securities are included in financial instruments owned in the accompanying statement of financial condition.

As an FCM, the Company is required to segregate funds in a cleared swap customer account, a secured funds account and a segregated funds account under rules mandated by the CFTC. For these purposes, $442,885,000, $190,363,000, and $404,998,000, respectively, is held in accounts at non affiliate banks and is reflected in cash segregated pursuant to federal regulations in the accompanying statement of financial condition.

The Company deposited $904,092,000 of investments of customer funds in securities with clearing organizations as margin at December 31, 2014. These segregated securities are included in financial instruments owned in the statement of financial condition.

Additionally, the Company segregated $1,939,559,000 of customer specific owned securities deposited at non-affiliated banks and clearing organizations at December 31, 2014. These segregated securities are not included in the statement of financial condition.

Cash and securities segregated pursuant to federal and other regulations are classified as Level 1 in the fair value hierarchy.

(4) Receivable from and Payable to Customers

The balances represent the net amounts receivable from and payable to customers in connection with normal cash securities and derivative transactions. The amounts receivable from customers are generally collateralized by securities, the value of which is not reflected in the accompanying financial statements. At December 31, 2014, customer receivables of $16,820,000 were unsecured.

Receivables from and payables to customers are classified as Level 2 in the fair value hierarchy.

(5) Receivable from and Payable to Broker-Dealers and Clearing Organizations

Receivable from and payable to broker-dealers and clearing organizations consist of the following at December 31, 2014 (in thousands):

Receivable from broker dealers and clearing organizations:		
Deposits paid for securities borrowed	$	14,191,311
Unsettled regular way transactions, net		4,343,246
Securities failed to deliver		102,364
Syndicate receivable		142,317
Clearing fund deposits		133,397
Federal funds sold – overnight		10,000
Guaranty deposits		107,400
Receivable from derivative clearing organizations		814,881
Receivable from carrying brokers		324,056
Other		9,510
	$	20,178,482
Payable to broker dealers and clearing organizations:		
Deposits received for securities loaned	$	3,506,444
Securities failed to receive		106,575
Syndicate payable		121,625
Payable to derivative clearing organizations		222,559
Payable to non-customer derivative counterparties		89,734
Other		53,060
	$	4,099,997

Receivables from and payables to broker dealers and clearing organizations are classified as Level 2 in the fair value hierarchy.

(6) Financial Instruments Owned and Financial Instruments Sold, Not Yet Purchased

At December 31, 2014, financial instruments owned and financial instruments sold, not yet purchased consisted of trading securities and derivatives reported at fair value as presented below (in thousands):

		Financial instruments owned	Financial instruments sold, not yet purchased and derivative liabilities
Corporate obligations	$	7,167,427	4,855,017
Collateralized loan obligations and asset-backed securities		1,481,418	—
Mortgage-backed securities		15,717,581	61,768
US government, US agency and municipal government obligations		7,991,763	6,735,832
Equity securities		2,051,037	1,538,697
Money market securities		50,000	—
Derivatives:			
Interest rate contracts		15,991	66,140
Equity contracts		760,857	545,349
Credit contracts		—	12,613
	$	35,236,074	13,815,416

U.S. government securities with a fair value of $220,469,000 at December 31, 2014, have been pledged to clearing corporations. Financial instruments owned at December 31, 2014, included debt securities issued by the Holding Company with a fair value of $277,881,000 included in corporate obligations in the table above.

(7) Variable Interest Entities (VIEs) and Securitizations

The Company acts as underwriter for other subsidiaries of the Holding Company and third parties that securitize financial assets, and may make a market in these securitized financial assets. These securities are accounted for at fair value and are included in financial instruments owned in the statement of financial condition.

The Company purchases and sells financial instruments in VIEs in connection with its market-making activities. These financial instruments in VIEs include senior and subordinated tranches of collateralized mortgage obligations (CMOs), collateralized debt obligations (CDOs), and collateralized loan obligations (CLOs), and other asset-backed securities. The Company has made no liquidity arrangements, guarantees or commitments by third parties related to these holdings. The Company's maximum exposure to loss related to these VIEs is limited to the carrying amount of the financial instruments owned.

During the year ended December 31, 2014, the Company transferred $9,889,644,000 of debt securities into securitizations structured as sales. The securitizations are primarily U.S. government agency or U.S. Government-Sponsored Enterprise (GSE) sponsored collateralized mortgage obligations. These securitizations are done principally on behalf of customers to help them obtain agency-backed mortgage securities that conform to their investment profile. The Company is not the primary beneficiary for these transactions because they do not have the power to direct the activities that most significantly impact the U.S. government agency or U.S. GSE sponsored collateralized mortgage obligation entities. As of December 31, 2014, the Company held $806,012,000 of securities related to current and prior year securitizations which are included in financial instruments owned in the statement of financial condition.

The Company would consolidate a VIE if it is the primary beneficiary, which is defined as the party that has both the power to direct the activities that most significantly impact the VIE's performance and the obligation to absorb losses or right to receive benefits that could potentially be significant to the VIE. An analysis was conducted to determine if the Company was required to consolidate any interests in VIEs and no such consolidation was required.

The following table sets forth the total VIE assets for VIEs for which the Company has a variable interest and the Company's financial instruments owned in those nonconsolidated VIEs and does not include offsetting financial instruments that are held to mitigate the risks associated with these variable interests (in thousands):

		Total VIE assets	Financial instruments owned
Collateralized mortgage obligations	$	2,365,831	14,717
U.S. agency issued mortgage-backed securities		36,973,666	785,663
Collateralized loan obligations		496,712	5,632
	$	39,836,209	806,012

(8) Fair Value Measurements

In accordance with FASB ASC 820, *Fair Value Measurement*, the Company groups its assets and liabilities measured at fair value in three levels, based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value. These levels are:

Level 1 – Valuation is based upon quoted prices for identical instruments traded in active markets.

Level 2 – Valuation is based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.

Level 3 – Valuation is generated from techniques that use significant assumptions not observable in the market. These unobservable assumptions reflect estimates of assumptions that market participants would

use in pricing the asset or liability. Valuation techniques include use of option pricing models, discounted cash flow models and similar techniques.

In the determination of the classification of financial instruments in Level 2 or Level 3 of the fair value hierarchy, the Company considers all available information, including observable market data, indications of market liquidity and orderliness, and the Company's understanding of the valuation techniques and significant inputs used. Based upon the specific facts and circumstances of each instrument or instrument category, judgments are made regarding the significance of the Level 3 inputs to the instruments' fair value measurement in its entirety. If Level 3 inputs are considered significant, the instrument is classified as Level 3.

The following sections describe the valuation methodologies used by the Company to measure classes of financial instruments at fair value and specify the level in the fair value hierarchy where various financial instruments are generally classified. Valuation models, significant inputs to those models and any significant assumptions are included where appropriate.

For trading securities, the Company uses quoted prices in active markets, where available and classify such instruments within Level 1 of the fair value hierarchy. Examples include exchange-traded equity securities and some highly liquid government securities such as U.S. Treasuries. When instruments are traded in secondary markets and quoted market prices do not exist for such securities, the Company generally relies on internal valuation techniques or on prices obtained from third-party pricing services or brokers (collectively, vendors) or combination thereof, and accordingly, classifies these instruments as Level 2 or 3.

Trading securities are mostly valued using internal trader prices that are subject to price verification procedures performed by separate internal personnel. The majority of fair values derived using internal valuation techniques are verified against multiple pricing sources, including prices obtained from third-party vendors. Vendors compile prices from various sources and often apply matrix pricing for similar securities when no price is observable. The Company reviews pricing methodologies provided by the vendors in order to determine if observable market information is being used, versus unobservable inputs. When evaluating the appropriateness of an internal trader price compared with vendor prices, considerations include the range and quality of vendor prices. Vendor prices are used to ensure the reasonableness of a trader price; however valuing financial instruments involves judgments acquired from knowledge of a particular market. If a trader asserts that a vendor price is not reflective of market value, justification for using the trader price, including recent sales activity where possible, must be provided to and approved by the appropriate levels of management.

Similarly, while investment securities traded in secondary markets are typically valued using unadjusted vendor prices or vendor prices adjusted by weighting them with internal discounted cash flow techniques, these prices are reviewed and, if deemed inappropriate by a trader who has the most knowledge of a particular market, can be adjusted. Securities measured with these internal valuation techniques are generally classified as Level 2 of the hierarchy and often involve using quoted market prices for similar securities, pricing models, discounted cash flow analyses using significant inputs observable in the market where available or combination of multiple valuation techniques. Examples include certain residential and commercial MBS, municipal bonds, U.S. government and agency MBS, and corporate debt securities.

Security fair value measurements using significant inputs that are unobservable in the market due to limited activity or a less liquid market are classified as Level 3 in the fair value hierarchy. Such measurements include securities valued using internal models or a combination of multiple valuation techniques such as weighting of internal models and vendor or broker pricing, where the unobservable inputs are significant to the overall fair value measurement. Securities classified as Level 3 include certain residential and commercial MBS, other asset-backed securities, CDOs and certain CLOs, and certain residual and retained interests in residential mortgage loan securitizations. The Company values CDOs using the prices of similar instruments, the pricing of completed or pending third party transactions or the pricing of the underlying collateral within the CDO. Where vendor or broker prices are not readily available, the Company uses management's best estimate.

The Company enters into both exchange-traded and over-the-counter (OTC) derivatives.

Quoted market prices are available and used for the Company's exchange-traded derivatives, such as certain interest rate futures and option contracts, which the Company classifies as Level 1. However, substantially all of the Company's derivatives are traded in OTC markets where quoted market prices are not readily available. OTC derivatives are valued using internal valuation techniques. Valuation techniques and inputs to internally developed models depend on the type of derivative and nature of the underlying rate, price or index upon which the derivative's value is based. Key inputs can include yield curves, credit curves, foreign-exchange rates, prepayment rates, volatility measurements and correlation of such inputs. Where model inputs can be observed in a liquid market and the model does not require significant judgment, such derivatives are typically classified as Level 2 of the fair value hierarchy. Examples of derivatives classified as Level 2 include generic interest rate swaps and certain option and forward contracts. When instruments are traded in less liquid markets and significant inputs are unobservable, such derivatives are classified as Level 3. Examples of derivatives classified as Level 3 include complex and highly structured derivatives such as certain credit default swaps. Additionally, significant judgments are required when classifying financial instruments within the fair value hierarchy, particularly between Level 2 and 3, as is the case for certain derivatives.

Assets and liabilities measured at fair value at December 31, 2014 on a recurring basis are summarized below (in thousands):

	Fair value measurements				
	Level 1	Level 2	Level 3	Netting (a)	Total
Financial instruments owned:					
Corporate obligations	$ -	7,239,666	54,134	(126,373)	7,167,427
Collateralized loan obligations and asset-backed securities	-	1,047,307	434,111	-	1,481,418
Mortgage-backed securities	-	15,717,581	-	-	15,717,581
US government, US agency and municipal government obligations	8,849,616	1,921,060	6,809	(2,785,722)	7,991,763
Equity securities	2,335,204	21,461	10	(305,638)	2,051,037
Money markets	50,000	-	-	-	50,000
Derivatives:					
Interest rate contracts	671	16,520	-	(1,200)	15,991
Equity contracts	760,813	26,372	6,729	(33,057)	760,857
Credit contracts	-	41,525	552	(42,077)	-
	$ 11,996,304	26,031,492	502,345	(3,294,067)	35,236,074
Financial instruments sold, not yet purchased:					
Corporate obligations	$ -	(4,981,390)	-	126,373	(4,855,017)
Collateralized loan obligations and asset-backed securities	-	-	-	-	-
Mortgage-backed securities	-	(61,768)	-	-	(61,768)
US government, US agency and municipal government obligations	(8,281,210)	(1,240,344)	-	2,785,722	(6,735,832)
Equity securities	(1,844,335)	-	-	305,638	(1,538,697)
Money markets	-	-	-	-	-
Derivatives:					
Interest rate contracts	(2,395)	(64,945)	-	1,200	(66,140)
Equity contracts	(560,222)	(11,268)	(6,916)	33,057	(545,349)
Credit contracts	-	(43,110)	(11,580)	42,077	(12,613)
	$ (10,688,162)	(6,402,825)	(18,496)	3,294,067	(13,815,416)

(a) The netting of securities owned (assets) by the amount of securities sold but not yet purchased (liabilities) occurs when the securities owned and the securities sold but not yet purchased have identical Committee on Uniform Security Identification Procedures (CUSIPs) numbers. The netting of derivative assets and derivative liabilities occurs when specific conditions under GAAP are met, including the existence of a legally enforceable master netting agreement or similar agreements.

	Changes in Level 3 Assets and Liabilities					
	Beginning balance January 1 2014	Total net gains/(losses) included in earnings	Purchases, issuances, sales and settlements, net	Transfers into Level 3	Transfers out of Level 3	Ending balance December 31 2014
			(in thousands)			
Financial instruments owned:						
Corporate obligations	$ 55,300	180	(23,598)	26,322	(4,070)	54,134
Collateralized loan obligations and asset-backed securities	571,703	37,515	(158,480)	3,640	(20,267)	434,111
Mortgage-backed securities	-	-	-	-	-	-
US government, US agency and municipal government obligations	38,671	525	(1,619)	-	(30,768)	6,809
Equity securities	7	5	(1)	-	(1)	10
Money markets	-	-	-	-	-	-
	$ 665,681	38,225	(183,698)	29,962	(55,106)	495,064
Financial instruments sold, not yet purchased:						
Corporate obligations	$ -	-	-	-	-	-
Collateralized loan obligations and asset-backed securities	-	318	(318)	-	-	-
Mortgage-backed securities	-	-	-	-	-	-
US government, US agency and municipal government obligations	-	-	-	-	-	-
Equity securities	-	-	-	-	-	-
Money markets	-	-	-	-	-	-
	$ -	318	(318)	-	-	-
Net derivative assets and liabilities:						
Equity contracts, net	-	(240)	53	-	-	(187)
Credit contracts, net	(21,577)	11,986	(1,437)	-	-	(11,028)
	$ (21,577)	11,746	(1,384)	-	-	(11,215)

The Company monitors the availability of observable market data to assess the appropriate classification of financial instruments within the fair value hierarchy. Changes in economic conditions or model-based valuation techniques may require the transfer of financial instruments from one fair value level to another. The amounts reported as transfers represent the fair value as of the beginning of the year in which the transfer occurred.

	Purchases, Sales, Issuances and Settlements Related to Changes in Level 3 Assets and Liabilities				
	Purchases	Sales	Issuances	Settlements	Net
			(in thousands)		
Financial instruments owned:					
Corporate obligations	$ 81,742	(105,340)	-	-	(23,598)
Collateralized loan obligations and asset-backed securities	881,033	(1,039,513)	-	-	(158,480)
Mortgage-backed securities	-	-	-	-	-
US government, US agency and municipal government obligations	10,439	(11,750)	-	(308)	(1,619)
Equity securities	-	(1)	-	-	(1)
Money markets	-	-	-	-	-
	$ 973,214	(1,156,604)	-	(308)	(183,698)
Financial instruments sold, not yet purchased:					
Corporate obligations	$ -	-	-	-	-
Collateralized loan obligations and asset-backed securities	19,957	(20,275)	-	-	(318)
Mortgage-backed securities	-	-	-	-	-
US government, US agency and municipal government obligations	-	-	-	-	-
Equity securities	-	-	-	-	-
Money markets	-	-	-	-	-
	$ 19,957	(20,275)	-	-	(318)
Net derivative assets and liabilities:					
Equity contracts	-	-	-	53	53
Credit contracts	-	-	-	(1,437)	(1,437)
	$ -	-	-	(1,384)	(1,384)

The Company monitors the availability of observable market data to assess the appropriate classification of financial instruments within the fair value hierarchy. Changes in economic conditions or model-based valuation techniques may require the transfer of financial instruments from one fair value level to another. The amounts reported as transfers represent the fair value as of the beginning of the year in which the transfer occurred.

For the period ended December 31, 2014 the Company transferred $55,106,000 of financial instruments owned from Level 3 to Level 2 due to an increase in observable market inputs. The Company also transferred $29,962,000 of financial instruments from Level 2 to Level 3 as a result of a decline in observable market inputs. There were no transfers between Level 1 and Level 2 during the year.

	Fair value amount reported (level 3)	Valuation technique	Significant unobservable inputs	Range of unobservable inputs: Low end of range	Range of unobservable inputs: High end of range
		(in thousands)			
Financial instruments owned:					
Corporate obligations	$ 54,134	Market comparable pricing	Comparability adjustment	-5.92%	1.20%
Collateralized loan obligations	429,322	Market comparable pricing	Comparability adjustment	-21.50%	25.00%
Asset-backed securities	4,789	Discounted cash flow model	Discount rate	3.33%	3.45%
US government, US agency and		Market comparable pricing	Comparability adjustment	0.19%	4.31%
municipal government			Discount rate	1.70%	7.49%
obligations	6,809		Weighted average life	12.00%	13.00%
Equity securities	10	Market comparable pricing	Comparability adjustment	0.00%	0.00%
Total financial instruments owned	$ 495,064				
Derivative liabilities:					
Equity contracts	$ (187)	Option model	Credit spread	14.58%	20.17%
Credit contracts	(11,028)	Market comparable pricing	Comparability adjustment	-3.05%	18.27%
Total derivative liabilities	$ (11,215)				

Discounted Cash Flow Model

Generally consist of developing an estimate of future cash flows that are expected to occur over the life of an instrument and then discounting those cash flows at a rate of return that results in the fair value amount.

Market Comparable Pricing

Used to determine the fair value of certain instruments by incorporating known inputs such as recent transaction prices, pending transactions, or prices of other similar investments which require significant adjustment to reflect differences in instrument characteristics.

Option Model

Generally used for instruments in which the holder has a contingent right or obligation based on the occurrence of a future event, such as the price of a referenced asset going above or below a predetermined strike price. Option models estimate the likelihood of the specified event occurring by incorporating assumptions such as volatility estimates, price of the underlying instrument and expected rate of return.

(9) Collateral Arrangements

The Company has accepted securities, which it is permitted to repledge or sell, as collateral for securities borrowed transactions and for securities purchased under agreements to resell transactions. At December 31, 2014, the fair value of this collateral was $29,808,001,000 all of which had been repledged or sold by the Company. The collateral is received primarily from other broker-dealers or institutional customers and is used by the Company to enter into securities lending agreements for securities sold with

agreements to repurchase transactions and settlements related to financial instruments sold, not yet purchased.

(10) Property, Equipment, and Leasehold Improvements

Property, equipment, and leasehold improvements consist of the following at December 31, 2014 (in thousands):

Property and leasehold improvements	$	1,101
Furniture and equipment		415
Communications and computer equipment		6,560
		8,076
Less accumulated depreciation and amortization		4,786
Total	$	3,290

(11) Payable to Banks

During the year, the Company had a secured and uncommitted line of credit of $250,000,000 with an affiliated bank in place to borrow funds for the purpose of financing securities owned and securities not yet delivered obligations which arise in the normal course of business. This facility was not used during the year and was terminated in December 2014.

(12) Subordinated Borrowings

At December 31, 2014, the Company was indebted to the Holding Company for the following (in thousands):

Subordinated note due January 31, 2018; variable rate of 0.629% at December 31, 2014	$	300,000
Revolving subordinated note facility of $3,000,000 due February 15, 2018; variable rate of 0.629% at December 31, 2014		2,023,500
	$	2,323,500

The interest rate is reset monthly based on 6-month LIBOR plus 30 basis points. Interest payable to Holding Company related to these borrowings totaled $1,258,000 at December 31, 2014. All subordinated borrowings have been approved by the Financial Industry Regulatory Authority (FINRA) and the Chicago Mercantile Exchange (CME) and therefore qualify as capital in computing net capital under the SEC's Uniform Net Capital Rule. To the extent that such borrowings are required for the Company's continued compliance with minimum net capital requirements, they may not be repaid.

Management believes that the carrying value of the subordinated notes at December 31, 2014, approximate their fair value and are classified as Level 2 in the fair value hierarchy.

(13) Transactions with Affiliated Parties

The following items present the Company's significant transactions with affiliated parties.

(a) Securities Purchased Under Agreements to Resell and Securities Borrowed

The Company enters into securities purchased under agreements to resell transactions with affiliates of which $315,320,000 is outstanding at December 31, 2014. The agreements are generally overnight transactions. Included in interest payable at December 31, 2014, is $20,000 due to affiliates. The Company also enters into securities borrowed transactions with affiliates of which $3,209,952,000 were outstanding at December 31, 2014. Deposits paid for these transactions are included in receivable from broker-dealers and clearing organizations in the statement of financial condition.

(b) Securities Sold Under Agreements to Repurchase and Securities Loaned

The Company enters into securities sold under agreements to repurchase transactions with affiliates of which $1,085,915,000 is outstanding at December 31, 2014. The agreements are generally overnight transactions. Included in accrued interest receivable from affiliates is $1,000 at December 31, 2014. The Company also enters into securities loaned transactions with affiliates of which $380,086,000 were outstanding at December 31, 2014.

(c) Services Provided by the Company to Affiliates

The Company acts as an agent for the Holding Company and its subsidiaries providing various services. Approximately $5,440,000 of receivables in other assets at December 31, 2014, are primarily related to expense reimbursements due from affiliates.

(d) Interest Rate, Equity and Credit Default Swap Transactions

The Company has entered into interest rate, equity and credit default swap transactions with WFBNA to economically hedge financial instruments owned. At December 31, 2014, the notional value of interest rate swaps are a net purchase of payments of fixed interest rates of $907,650,000, equity swaps are a net sale of protection of $109,765,000 and credit default swaps are a net purchase of protection of $64,883,000. The estimated fair values of the interest rate, equity and credit default swaps at December 31, 2014, are ($4,098,000), $15,110,000 and ($12,613,000) respectively, which are included net in financial instruments owned in the accompanying statement of financial condition. There was no cash margin on deposit in support of this activity at December 31, 2014. Securities with a market value of $36,158,000 have been pledged by WFBNA to the Company. The Company also clears certain interest rate swaps and futures for WFBNA as well as other affiliates.

(e) Clearing Services

The Company has entered into a fully disclosed clearing agreement with FCLLC to clear some of its customers' securities transactions. The agreement provides for the Company to pay FCLLC on a cost plus reimbursement arrangement. The charges incurred by the Company for the year were insignificant. At December 31, 2014, receivables from broker-dealers and clearing organizations include $24,000 due from FCLLC in connection with the fully disclosed clearing arrangement. The

Company clears transactions for WFIS. As of December 31, 2014, payables to broker-dealers and clearing organizations include $53,035,000 due to WFIS in connection with the fully disclosed clearing arrangement. There is no outstanding balance with WFPS.

(f) ***Fails to Deliver and Fails to Receive***

The Company entered into securities transactions with affiliates registered as brokers and/or dealers. At December 31, 2014, fails to deliver of $58,010,000 and fails to receive of $15,906,000 resulting from these transactions are included in receivables from and payable to broker-dealers and clearing organizations, respectively.

(g) ***Deferred Compensation and Stock Plans***

The Company participates in the Holding Company's unfunded deferred compensation plan in which a select group of management or highly compensated individuals are participants, as defined. This plan requires the participant to defer cash incentive awards on a four-tiered scale ranging from 20% to 60% on awards greater than $100,000. Deferred cash incentive awards generally vest over a three-year period.

The Company participates in various stock option plans of the Holding Company under which incentive and nonqualified stock options may be granted periodically to certain employees. The options are granted at an exercise price equal to the fair value of the underlying shares at the date of grant, vest on continued service with the Holding Company and its subsidiaries including the Company for a specified period, generally three to five years following the date of grant, and have a contractual life of ten years. Restricted stock may also be granted under the stock option plans. The restricted stock generally vests over three to five years, during which time the holder receives dividends and has full voting rights. Stock compensation expense is measured at fair value on the date of the grant and is recognized over the required service period.

(h) ***Other Borrowings with Affiliates***

During the year, the Company had in place an uncommitted short-term promissory note in the amount of $2,500,000,000 with the Holding Company for purposes of meeting short-term liquidity needs. Subsequent to year end, the amount of the note was increased to $9,000,000,000. Borrowings were made under this note several times during the year in individual amounts not exceeding $237,000,000.

(14) Derivatives, Guarantees, Commitments, and Contingent Liabilities

The Company is a party to derivative financial instruments and commitments in the normal course of business to meet the financing needs of customers, conduct trading activities, and manage market risks. These derivative financial instruments include futures, options, swaps, swaptions, forward commitments to purchase and sell securities, securities purchased and sold on a when-issued basis (when-issued securities), and firm underwriting commitments. These instruments and commitments involve, to varying degrees, elements of credit and market risk. Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to the terms of the contract. Market risk is the possibility that a change in interest rates, the underlying assets, indices or a combination of these factors will cause an unfavorable change in the value of a financial instrument.

The Company controls the credit risk arising from these instruments and commitments through its credit approval process and through the use of risk control limits and monitoring procedures. It evaluates each customer's or other broker-dealer's creditworthiness on a case-by-case basis. If collateral is deemed necessary to reduce credit risk, the amount and nature of the collateral obtained is based on management's credit evaluation of the other party. Based on the Company's assessment of each of its counterparties, collateral was not required by the Company at December 31, 2014.

The notional principal or contractual amounts of derivative financial instruments exceed the probable loss that could arise from counterparty default or market-related risks. The fair value of derivative financial instruments represents principally the estimated unrealized gain (asset) or loss (liability) and is recorded in financial instruments owned or financial instruments sold, not yet purchased in the statement of financial condition. The market risk associated with trading financial instruments, including derivatives, the prices of which are constantly fluctuating, is managed by imposing limits as to the type, amounts, and degree of risk that traders may undertake. These limits are approved by senior management, and the risk positions of traders are reviewed on a daily basis to monitor compliance with the limits. As of December 31, 2014, derivative financial instruments and their related fair values are as follows (in thousands):

		Notional or contractual amount	Fair value	
Derivative instruments			**Asset derivatives**	**Liability derivatives**
Interest rate contracts	$	25,824,287	17,191	67,340
Equity contracts		14,769,876	793,914	578,406
Credit contracts - protection sold		788,063	38,729	13,426
Credit contracts - protection purchased		852,946	3,348	41,264
Sub-total		42,235,172	853,182	700,436
Netting		—	(76,334)	(76,334)
Total	$	42,235,172	776,848	624,102

Forward and commodity contracts are contracts for delayed delivery of securities or money market instruments in which the seller agrees to make delivery at a specified future date of a specified instrument, at a specified price or yield. Equity contracts are contracts that allow the holder of the option to purchase or sell a financial instrument at a specified price and within a specified period of time from the seller or writer of the option. As a writer of options, the Company receives a premium at the outset and then bears the risk of an unfavorable change in the price of the financial instrument underlying the option and other market risk factors that may impact the fair value of the option.

The Company uses credit derivatives to manage exposure to credit risk related to its customer accommodation and market-making activity. This may include protection purchased to offset securities owned or sold protection. This credit risk management provides an ability to recover a significant portion of any amounts that would be paid under the credit derivatives written by the Company. All of the credit contracts are executed exclusively with an affiliate, WFBNA, and the Company would be required to perform under the noted credit derivatives in the event of a default by the referenced obligors. Excluded from maximum exposure are written credit protection contracts with a notional amount of $852,946,000 where the Company has also purchased offsetting credit protection with the same counterparty, WFBNA, on the same referenced obligation and where the term and amount of the purchased protection equals or

exceeds the term of the written credit protection. Events of default include events such as bankruptcy, capital restructuring or lack principal and/or interest payment. In certain cases, other triggers may exist, such as the credit downgrade of the referenced obligors.

	Fair value liability	Maximum exposure	Higher payment risk	Range of maturities
		(in thousands)		
Credit default swaps – corporate bonds	$ 2,251	722,438	614,027	2015-2019
Credit default swaps – structured products	11,175	65,625	47,025	2017-2022

The higher payment risk category is based on the portion of the maximum loss exposure for which there is a greater risk that the Company will be required to make a payment or perform under the credit derivative. The current status of the risk of payment or performance being required is considered high if the underlying assets under the credit derivative have an external rating that is below investment grade or an internal credit default grade that would be equivalent to below investment grade external rating. It is important to note that the higher payment risk represents the amount of exposure which would be incurred under an assumed hypothetical circumstance and, accordingly, this disclosure is not an indication of expected loss for which payment is of a high likelihood. Such payment may not result in a loss. As such, the higher payment risk column is not an indication of loss probability.

In the normal course of business, the Company enters into debt and equity underwriting commitments. Transactions relating to such underwriting commitments that were open at December 31, 2014, and were subsequently settled had no material impact on the Company's financial condition or results of operations.

The Company introduces certain of its customer transactions to an affiliated clearing broker, FCLLC, with whom it has a correspondent relationship for clearance and depository services in accordance with the terms of the clearance agreement. In connection therewith, the Company has agreed to indemnify FCLLC for credit losses that FCLLC may sustain as a result of the failure of the Company's customers to satisfy their obligations in connection with their securities transactions. As of December 31, 2014, substantially all customer obligations were collateralized by securities with a market value in excess of the obligations.

The Company has been named as a defendant in various legal actions arising from its normal business activities in which damages in various amounts are claimed. When establishing a liability for contingent litigation losses, the Company determines a range of potential losses for each matter that is both probable and estimable, and records the amount it considers to be the best estimate within the range. For these matters and others where an unfavorable outcome is reasonably possible but not probable, there may be a range of possible losses in excess of the established liability that cannot be estimated. Based on information currently available, advice of counsel, available insurance coverage and established reserves, the Company believes that the eventual outcome of the actions against it, including the matters described above, will not, individually or in the aggregate, have a material adverse effect on the Company's consolidated financial position. However, in the event of unexpected future developments, it is possible

that the ultimate resolution of those matters, if unfavorable, may be material to the Company's results of operations for any particular period.

The Company leases office space related to its branch offices under operating leases expiring at various dates through 2018. Minimum future rental payments required under such leases, that have initial or remaining non-cancelable lease terms in excess of one year at December 31, 2014 are as follows:

	Operating leases
	(in thousands)
Years ending December 31:	
2015	$ 1,272
2016	1,388
2017	257
2018	108

Minimum future rental commitments do not include operating leases entered into by affiliates for which the Company shares office space. The affiliates allocate rent expense to the Company for its share of rent expense incurred under these operating leases, under an expense sharing agreement.

Some contracts that the Company enters into in the normal course of business include indemnification provisions that obligate the Company to make payments to the counterparty or others in the event certain events occur. The contingencies generally relate to the changes in the value of underlying assets, liabilities, or equity securities or upon the occurrence of events, such as an adverse litigation judgment or an adverse interpretation of the tax law. The indemnification clauses are often standard contractual terms and were entered into in the normal course of business based on an assessment that the risk of loss would be remote. Since there are no stated or notional amounts included in the indemnification clauses and the contingencies triggering the obligation to indemnify have not occurred and are not expected to occur, the Company is not able to estimate the maximum potential amount of future payments under these indemnification clauses. There are no amounts reflected on the statement of financial condition as of December 31, 2014, related to these indemnifications.

The Company is a member of exchanges and clearing houses that the Company uses to clear its trades and those of the Company's customers. It is common that all members in these organizations are required to collectively guarantee the performance of other members. Our obligations under the guarantees are based on a fixed amount or a multiple of the collateral we are required to maintain with these organizations. We have not recorded a liability for these arrangements because we believe the likelihood of loss is remote. The maximum exposure to loss represents the estimated loss that would be incurred under an assumed hypothetical circumstance, despite what we believe is its extremely remote possibility, where the value of our interests and any associated collateral declines to zero. The maximum exposure to loss related to our clearing house arrangements at December 31, 2014 is $905,463,000. The Company has made deposits with clearing organization in the form of cash, financial instruments owned, and securities purchased under agreements to resell of $133,397,000, $220,469,000, and $6,600,000 respectively.

The Company clears transactions on behalf of its clients through various clearing houses, and the Company stands behind the performance of its clients on such trades. The Company mitigates its exposure to loss in the event of a client default by requiring that clients provide appropriate amounts of margin at the inception and throughout the life of the transaction. The Company may cease providing clearing services to clients if they do not adhere to their obligations under the clearing agreement. It is difficult to estimate the Company's maximum exposure under such transactions, as this would require an assessment of transactions that clients may execute in the future. The Company manages the exposure through setting credit limits for clients and maintaining termination right over clearing contracts. However, based upon historical experience, the Company believes it is unlikely that it will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

(15) Offsetting of Resale and Repurchase Agreements and Securities Borrowing and Lending Agreements

The table below presents resale and repurchase agreements subject to master repurchase agreements (MRA) and securities borrowing and lending agreements subject to master securities lending agreements (MSLA). The Company accounts for transactions subject to these agreements as collateralized financings and those with a single counterparty are presented net on our balance sheet, provided certain criteria are met that permit balance sheet netting. Most transactions subject to these agreements do not meet those criteria and thus are not eligible for balance sheet netting. There were no securities borrowing or lending agreements subject to MSLAs that were eligible for netting.

Collateral pledged consists of noncash instruments, such as securities, and is not netted on the statement of financial condition against the related collateralized liability. Collateral received includes securities and is not recognized on the statement of financial condition. Collateral received or pledged may be increased or decreased over time to maintain certain contractual thresholds as the assets underlying each arrangement fluctuate in value. Generally, these agreements require collateral to exceed the asset or liability recognized on the statement of financial condition. The following table includes the amount of collateral pledged or received related to exposures subject to enforceable MRAs. While these agreements are typically over-collateralized, U.S. GAAP requires disclosure in this table to limit the amount of such collateral to the amount of the related recognized asset or liability for each counterparty (in thousands):

Assets:		
Resale and securities borrowing agreements		
Gross amounts recognized	$	25,889,977
Gross amounts offset in statement of financial condition[1]		(3,955,552)
Net amounts in statement of financial condition[2]		21,934,425
Noncash collateral not recognized in statement of financial condition[3]		(21,635,861)
Net amount[4]	$	298,564
Liabilities:		
Repurchase and securities lending agreements		
Gross amounts recognized	$	44,599,711
Gross amounts offset in statement of financial condition[1]		(3,955,552)
Net amounts in statement of financial condition[5]		40,644,159
Noncash collateral pledged but not netted in statement of financial condition[6]		(40,196,560)
Net amount[7]	$	447,599

(1) Represents recognized amount of resale and repurchase agreements with counterparties subject to enforceable MRAs that have been offset in the statement of financial condition.

(2) At December 31, 2014, includes $7.7 billion, classified on our statement of financial condition in Securities Purchased under Agreements to Resell and $14.2 billion, respectively, in Receivable from broker-dealers and clearing organizations.

(3) Represents the fair value of noncash collateral we have received under enforceable MRAs or MSLAs, limited for table presentation purposes to the amount of the recognized asset due from each counterparty. At December 31, 2014, we have received total collateral with a fair value of $29.8 billion, all of which, we have the right to and have sold or re-pledged.

(4) Represents the amount of our exposure that is not collateralized and/or is not subject to an enforceable MRA.

(5) At December 31, 2014, includes $37.1 billion, classified on our statement of financial condition in Securities sold under agreements to repurchase and $3.5 billion, respectively, in Payable to broker-dealers and clearing organizations.

(6) Represents the fair value of noncash collateral we have pledged, related to enforceable MRAs or MSLAs, limited for table presentation purposes to the amount of the recognized liability owed to each counterparty. At December 31, 2014, we have pledged total collateral with a fair value of $50.5 billion, of which, the counterparty does not have the right to sell or repledge $0.8 billion as of December 31, 2014.

(7) Represents the amount of our exposure that is not covered by pledged collateral and/or is not subject to an enforceable MRA or MSLA.

(16) Net Capital

The Company is subject to the SEC's Uniform Net Capital Rule (Rule 15c3¬1) and the Commodities Futures Trading Commission (CFTC) Regulation 1.17 which requires the maintenance of minimum net capital. Under SEC Rule 15c3-1, the Company has elected to use the alternative method, permitted by the rule, which requires that the Company maintain minimum net capital, as defined, or 2% of combined aggregate debit balances arising from customer transactions. Under CFTC Regulation 1.17, the Company is required to maintain an adjusted net capital equivalent to the greater of $1,000,000 or $335,209,000, which was 8% of the total risk margin requirements for all positions carried in customer and non-customer accounts plus additional net capital requirements related to certain reverse repurchase agreements. At December 31, 2014, the Company had net capital of $2,889,678,000, which was 1,203.62% of aggregate debit items and $2,554,469,000 in excess of the minimum net capital requirement.

(17) Subsequent Events

The Company has evaluated the effects of subsequent events that have occurred subsequent to period end December 31, 2014, and through February 27, 2014, which is the date we issued the financial statements. During this period, there have been no material events that would require recognition or disclosure in the financial statements other than the item disclosed in note 13(h).

Important Information Regarding Order Flow

Wells Fargo Securities, LLC is a member of the New York Stock Exchange, and other major national and regional exchanges. Our automated computer systems and our trading procedures for equity securities enable us, in those situations where you have not directed us otherwise, to route your orders to market centers including other broker/dealers that, based on our experience, combine price, speed and size to provide you with what we believe are best executions. Whenever possible, we route such orders to dealers or market centers that have the opportunity to provide executions at prices superior to the nationally displayed best bid or offer. We receive payment per share or in some cases reciprocal order-flow consideration from dealers and credits against exchange fees in return for certain orders that we route or direct. At all times our foremost concern is to obtain the best execution for our clients regardless of any compensation factor. We use the compensation received to help keep our pricing competitive and provide you with our quality investment and execution services.

FINRA Public Disclosure Notice

An investor brochure is available from FINRA under the Public Disclosure Program. Through this program, FINRA provides certain information regarding the disciplinary history of FINRA members and their associated persons in response to written inquiries, electronic inquiries or telephone inquiries via FINRA toll free telephone listing (1-800-326-5897). Additional investor information can be found on the World Wide Web at www.finra.org

The audited Statement of Financial Condition and the Report of Independent Registered Public Accounting Firm on Internal Control of Wells Fargo Securities, LLC as of December 31, 2013, filed with the Securities and Exchange Commission pursuant to Rule 17a-5 of the Securities Exchange Act, is available for inspection at the principal office of the Company and at the regional office of the Securities and Exchange Commission.

This statement may be viewed on our website at www.wellsfargo.com/com/securities/financial-reports

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

2016-02-24 04:12PM EST
Status: Accepted

FORM X-17A-5

FOCUS REPORT
(FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT)
PART II 11

(Please read instructions before preparing Form)

This report is being filed pursuant to (Check Applicable Block(s)):

1) Rule 17a-5(a) X 16 2) Rule 17a-5(b) 17 3) Rule 17a-11 18

4) Special request by designated examining authority 19 5) Other 26

NAME OF BROKER-DEALER

WELLS FARGO SECURITIES, LLC 13

ADDRESS OF PRINCIPAL PLACE OF BUSINESS (Do not use P.O. Box No.)

550 SOUTH TRYON STREET, 6TH FLOOR, D1086-060 20
(No. and Street)

CHARLOTTE 21 (City) NC 22 (State) 28202 23 (Zip Code)

SEC. FILE NO.
8-65876 14

FIRM ID NO.
126292 15

FOR PERIOD BEGINNING (MM/DD/YY)
01/01/16 24

AND ENDING (MM/DD/YY)
01/31/16 25

NAME AND TELEPHONE NUMBER OF PERSON TO CONTACT IN REGARD TO THIS REPORT

David Pitelka 30

(Area code) - Telephone No.
(704)410-1070 31

NAME(S) OF SUBSIDIARIES OR AFFILIATES CONSOLIDATED IN THIS REPORT

32 33
34 35
36 37
38 39

OFFICIAL USE

DOES RESPONDENT CARRY ITS OWN CUSTOMER ACCOUNTS ? YES X 40 NO 41

CHECK HERE IF RESPONDENT IS FILING AN AUDITED REPORT 42

EXECUTION:

The registrant/broker or dealer submitting this Form and its attachments and the person(s) by whom it is executed represent hereby that all information contained therein is true, correct and complete. It is understood that all required items, statements, and schedules are considered integral parts of this Form and that the submisson of any amendment represents that all unamended items, statements and schedules remain true, correct and complete as previously submitted.

Dated the _____ day of _____ 20 _____

Manual Signatures of:

1) _____
Principal Executive Officer or Managing Partner

2) _____
Principal Financial Officer or Partner

3) _____
Principal Operations Officer or Partner

ATTENTION - Intentional misstatements or omissions of facts constitute Federal Criminal Violations. (See 18 U.S.C. 1001 and 15 U.S.C. 78:f (a))

FINRA

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

2016-02-24 04:12PM EST
Status: Accepted

BROKER OR DEALER			
WELLS FARGO SECURITIES, LLC	N	2	100

STATEMENT OF FINANCIAL CONDITION

as of (MM/DD/YY) 01/31/16 [99]

SEC FILE NO. 8-65876 [98]

Consolidated [ ] [198]

Unconsolidated [X] [199]

ASSETS	Allowable		Nonallowable		Total	
1. Cash	$ 276,510,526	200			$ 276,510,526	750
2. Cash segregated in compliance with federal and other regulations	1,077,285,346	210			1,077,285,346	760
3. Receivable from brokers or dealers and clearing organizations:						
A. Failed to deliver:						
1. Includable in "Formula for Reserve Requirements"	4,340,405	220				
2. Other	159,600,695	230			163,941,100	770
B. Securities borrowed:						
1. Includable in "Formula for Reserve Requirements"	3,050,286,368	240				
2. Other	17,364,722,852	250			20,415,009,220	780
C. Omnibus accounts:						
1. Includable in "Formula for Reserve Requirements"	0	260				
2. Other	0	270			0	790
D. Clearing Organizations:						
1.Includable in "Formula for Reserve Requirements"	1,888,100	280				
2. Other	1,177,403,218	290			1,179,291,318	800
E. Other	14,438,838,543	300	$ 102,610,944	550	14,541,449,487	810
4. Receivables from customers:						
A. Securities accounts:						
1. Cash and fully secured accounts	2,813,676,226	310				
2. Partly secured accounts	20,546,214	320	2,144,751	560		
3. Unsecured Accounts			73,583,236	570		
B. Commodity accounts	362,384,068	330	855,690	580		
C. Allowance for doubtful accounts	(0)	335	(0)	590	3,273,190,185	820
5. Receivables from non-customers:						
A. Cash and fully secured accounts	0	340				
B. Partly secured and unsecured accounts	0	350	0	600	0	830
6. Securities purchased under agreements to resell	12,076,081,830	360	128,302,980	605	12,204,384,810	840
7. Securities and spot commodities owned, at market value:						
A. Banker's acceptances, certificates of deposit and commercial paper	1,293,992,457	370				
B. U.S. and Canadian government obligations	32,076,302,933	380				
C. State and municipal government obligations	84,522,086	390				
D. Corporate obligations	7,755,495,765	400				

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2016-02-24 04:12PM EST
Status: Accepted

BROKER OR DEALER
WELLS FARGO SECURITIES, LLC
as of 01/31/16

STATEMENT OF FINANCIAL CONDITION

ASSETS (continued)

		Allowable		Nonallowable		Total	
E. Stocks and warrants		$ 1,181,625,429	410				
F. Options		310,523,515	420				
G. Arbitrage		0	422				
H. Other securities		1,700,000,000	424				
I. Spot Commodities		0	430				
J. Total inventory - includes encumbered securities of	$ 45,570,867,087 120					$ 44,402,462,185	850
8. Securities owned not readily marketable:							
A. At Cost	$ 0 130	0	440	$ 1,168,404,902	610	1,168,404,902	860
9. Other investments not readily marketable:	$ 0 140						
B. At estimated fair value		0	450	0	620	0	870
10. Securities borrowed under subordination agreements and partners' individual and capital securities accounts, at market value:							
A. Exempted securities	$ 0 150						
B. Other	$ 0 160	0	460	0	630	0	880
11. Secured demand notes- market value of collateral:							
A. Exempted securities	$ 0 170						
B. Other	$ 0 180	0	470	0	640	0	890
12. Memberships in exchanges:							
A. Owned, at market value	$ 6,329,000 190						
B. Owned at cost				10,152,336	650		
C. Contributed for use of company, at market value				0	660	10,152,336	900
13. Investment in and receivables from affiliates, subsidiaries and associated partnerships		0	480	19,150,825	670	19,150,825	910
14. Property, furniture, equipment, leasehold improvements and rights under lease agreements: At cost (net of accumulated depreciation and amortization)		0	490	1,563,797	680	1,563,797	920
15. Other Assets:							
A. Dividends and interest receivable		363,430,079	500	9,100,135	690		
B. Free shipments		0	510	0	700		
C. Loans and advances		0	520	0	710		
D. Miscellaneous		4,224,879	530	122,852,236	720		
E. Collateral accepted under SFAS 140		9,277,071,996	536				
F. SPE Assets		0	537			9,776,679,325	930
16. TOTAL ASSETS		$ 106,870,753,530	540	$ 1,638,721,832	740	$ 108,509,475,362	940

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

2016-02-24 04:12PM EST
Status: Accepted

BROKER OR DEALER
WELLS FARGO SECURITIES, LLC

as of 01/31/16

STATEMENT OF FINANCIAL CONDITION
LIABILITIES AND OWNERSHIP EQUITY

Liabilities	A.I. Liabilities *		Non-A.I. Liabilities *		Total	
17. Bank loans payable:						
A. Includable in "Formula for Reserve Requirements"	$	1030	$	1240	$ 0	1460
B. Other		1040		1250	0	1470
18. Securities sold under repurchase agreements.				1260	56,052,121,588	1480
19. Payable to brokers or dealers and clearing organizations:						
A. Failed to receive:						
1. Includable in "Formula for Reserve Requirements"		1050		1270	15,573,855	1490
2. Other		1060		1280	165,962,210	1500
B. Securities loaned:						
1. Includable in "Formula for Reserve Requirements"		1070			1,937,727,840	1510
2. Other		1080		1290	7,162,837,768	1520
C. Omnibus accounts:						
1. Includable in "Formula for Reserve Requirements"		1090			0	1530
2. Other		1095		1300	0	1540
D. Clearing organizations:						
1. Includable in "Formula for Reserve Requirements"		1100			933,900	1550
2. Other		1105		1310	373,647,559	1560
E. Other		1110		1320	152,439,819	1570
20. Payable to customers:						
A. Securities accounts - including free credits of $ 257,011,215	950	1120			2,750,935,597	1580
B. Commodities accounts		1130		1330	4,558,926,789	1590
21. Payable to non customers:						
A. Securities accounts		1140		1340	0	1600
B. Commodities accounts		1150		1350	378,339,871	1610
22. Securities sold not yet purchased at market value - including arbitrage of $ 0	960			1360	17,688,349,618	1620
23. Accounts payable and accrued liabilities and expenses:						
A. Drafts payable		1160			15,650,701	1630
B. Accounts payable		1170			201,675,679	1640
C. Income taxes payable		1180			15,108	1650
D. Deferred income taxes				1370	0	1660
E. Accrued expenses and other liabilities		1190			900,480,395	1670
F. Other		1200		1380	29,632,134	1680
G. Obligation to return securities				1386	9,277,071,996	1686
H. SPE Liabilities				1387	0	1687

OMIT PENNIES

*Brokers or Dealers electing the alternative net capital requirement method need not complete these columns.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
WELLS FARGO SECURITIES, LLC
as of 01/31/16

STATEMENT OF FINANCIAL CONDITION
LIABILITIES AND OWNERSHIP EQUITY (continued)

Liabilities	A.I. Liabilities *		Non-A.I. Liabilities *		Total	
24. Notes and mortgages payable:						
A. Unsecured	$	1210			$ 0	1690
B. Secured		1211	$	1390	0	1700
25. Liabilities subordinated to claims of general creditors:						
A. Cash borrowings:				1400	2,323,500,000	1710
1. from outsiders $ 0	0970					
2. Includes equity subordination(15c3-1(d)) of $ 300,000,000	0980					
B. Securities borrowings, at market value: from outsiders $ 0	0990			1410	0	1720
C. Pursuant to secured demand note collateral agreements:				1420	0	1730
1. from outsiders $ 0	1000					
2. Includes equity subordination(15c3-1(d)) of $ 0	1010					
D. Exchange memberships contributed for use of company, at market value				1430	0	1740
E. Accounts and other borrowings not qualified for net capital purposes		1220		1440	0	1750
26. TOTAL LIABILITIES	$	1230	$	1450	$ 103,985,822,427	1760

Ownership Equity

27. Sole proprietorship		$ 0	1770
28. Partnership - limited partners	$ 0 1020	0	1780
29. Corporation:			
A. Preferred stock		0	1791
B. Common stock		0	1792
C. Additional paid- in capital		1,565,243,358	1793
D. Retained Earnings		2,958,409,577	1794
E. Total		4,523,652,935	1795
F. Less capital stock in treasury		(0)	1796
30. TOTAL OWNERSHIP EQUITY		$ 4,523,652,935	1800
31. TOTAL LIABILITIES AND OWNERSHIP EQUITY		$ 108,509,475,362	1810

OMIT PENNIES

* Brokers or Dealers electing the alternative net capital requirement method need not complete these columns.

2016-02-24 04:12PM EST
Status: Accepted

BROKER OR DEALER
WELLS FARGO SECURITIES, LLC

as of 01/31/16

COMPUTATION OF NET CAPITAL

1. Total ownership equity (from Statement of Financial Condition - Item 1800)			$ 4,523,652,935	3480
2. Deduct: Ownership equity not allowable for Net Capital			(0)	3490
3. Total ownership equity qualified for Net Capital			4,523,652,935	3500
4. Add:				
A. Liabilities subordinated to claims of general creditors allowable in computation of net capital			2,323,500,000	3520
B. Other (deductions) or allowable credits (List)			0	3525
5. Total capital and allowable subordinated liabilities			$ 6,847,152,935	3530
6. Deductions and/or charges:				
A. Total non-allowable assets from Statement of Financial Condition (Notes B and C)		$ 1,638,721,832 3540		
1. Additional charges for customers' and non-customers' security accounts		209,654,034 3550		
2. Additional charges for customers' and non-customers' commodity accounts		0 3560		
B. Aged fail-to-deliver:		1,877,648 3570		
1. number of items	15 3450			
C. Aged short security differences-less reserve of	$ 0 3460	0 3580		
number of items	0 3470			
D. Secured demand note deficiency		0 3590		
E. Commodity futures contracts and spot commodities - proprietary capital charges		4,781,145 3600		
F. Other deductions and/or charges		113,371,370 3610		
G. Deductions for accounts carried under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x)		0 3615		
H. Total deductions and/or charges			(1,968,406,029)	3620
7. Other additions and/or allowable credits (List)			0	3630
8. Net Capital before haircuts on securities positions			$ 4,878,746,906	3640
9. Haircuts on securities: (computed, where applicable, pursuant to 15c3-1(f)):				
A. Contractual securities commitments		$ 126,846,250 3660		
B. Subordinated securities borrowings		0 3670		
C. Trading and investment securities:				
1. Bankers' acceptances, certificates of deposit and commercial paper		1,166,657 3680		
2. U.S. and Canadian government obligations		396,285,903 3690		
3. State and municipal government obligations		33,876,134 3700		
4. Corporate obligations		373,585,485 3710		
5. Stocks and warrants		552,879,739 3720		
6. Options		64,899,993 3730		
7. Arbitrage		0 3732		
8. Other securities		34,000,000 3734		
D. Undue concentration		0 3650		
E. Other (List)		0 3736	(1,583,540,161)	3740
10. Net Capital			$ 3,295,206,745	3750

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
WELLS FARGO SECURITIES, LLC

as of 01/31/16

COMPUTATION OF BASIC NET CAPITAL REQUIREMENT

Part A

11. Minimal net capital required (6-2/3% of line 19)		$	3756
12. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)		$	3758
13. Net capital requirement (greater of line 11 or 12)		$	3760
14. Excess net capital (line 10 less 13)		$	3770
15. Net capital less greater of 10% of line 19 or 120% of line 12		$	3780

COMPUTATION OF AGGREGATE INDEBTEDNESS

16. Total A.I. liabilities from Statement of Financial Condition				$	3790
17. Add:					
A. Drafts for immediate credit	$		3800		
B. Market value of securities borrowed for which no equivalent value is paid or credited	$		3810		
C. Other unrecorded amounts (List)	$		3820	$	3830
18. Deduct: Adjustment based on deposits in Special Reserve Bank Accounts(15c3-1(c)(1)(vii))				$	3838
19. Total aggregate indebtedness				$	3840
20. Percentage of aggregate indebtedness to net capital (line 19 divided by line 10)				%	3850
21. Percentage of aggregate indebtedness to net capital after anticipated capital withdrawals (line 19 divided by line 10 less item 4880 page 12)				%	3853

COMPUTATION OF ALTERNATE NET CAPITAL REQUIREMENT

Part B

22. 2% of combined aggregate debit items as shown in Formula for Reserve Requirements pursuant to Rule 15c3-3 prepared as of the date of net capital computation including both brokers or dealers and consolidated subsidiaries' debits	$	723,506,966	3870
23. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note(A)	$	1,500,000	3880
24. Net capital requirement (greater of line 22 or 23)	$	723,506,966	3760
25. Excess net capital (line 10 less 24)	$	2,571,699,779	3910
26. Percentage of Net Capital to Aggregate Debits (line 10 divided by line 18 page 8)	%	56.93	3851
27. Percentage of Net Capital, after anticipated capital withdrawals, to Aggregate Debits item 10 less Item 4880 page 12 divided by line 17 page 8)	%	56.93	3854
28. Net capital in excess of the greater of: 5% of combined aggregate debit items or 120% of minimum net capital requirement	$	2,532,143,765	3920

OTHER RATIOS

Part C

29. Percentage of debt to debt-equity total computed in accordance with Rule 15c3-1 (d)	%	29.55	3860
30. Options deductions/Net Capital ratio (1000% test) total deductions exclusive of liquidating equity under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x) divided by Net Capital	%		3852

NOTES:

(A) The minimum net capital requirement should be computed by adding the minimum dollar net capital requirement of the reporting broker dealer and, for each subsidiary to be consolidated, the greater of:

1. Minimum dollar net capital requirement, or
2. 6-2/3% of aggregate indebtedness or 2% of aggregate debits if alternate method is used.

(B) Do not deduct the value of securities borrowed under subordination agreements or secured demand notes covered by subordination agreements not in satisfactory form and the market values of memberships in exchanges contributed for use of company (contra to item 1740) and partners' securities which were included in non-allowable assets.

(C) For reports filed pursuant to paragraph (d) of Rule 17a-5, respondent should provide a list of material non-allowable assets.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

2016-02-24 04:12PM EST
Status: Accepted

BROKER OR DEALER
WELLS FARGO SECURITIES, LLC

as of 01/31/16

FORMULA FOR DETERMINATION OF CUSTOMER ACCOUNT RESERVE REQUIREMENTS OF BROKERS AND DEALERS UNDER RULE 15c3-3

(See Rule 15c3-3, Exhibit A and Related Notes)

CREDIT BALANCES

1. Free credit balances and other credit balances in customers' security accounts (See Note A)	$ 2,375,743,249	4340		
2. Monies borrowed collateralized by securities carried for the accounts of customers (See Note B)	379,382	4350		
3. Monies payable against customers' securities loaned (See Note C)	1,937,727,840	4360		
4. Customers' securities failed to receive (See Note D)	16,524,471	4370		
5. Credit balances in firm accounts which are attributable to principal sales to customers	1,509,502,168	4380		
6. Market value of stock dividends, stock splits and similar distributions receivable outstanding over 30 calendar days	0	4390		
7. ** Market value of short security count differences over 30 calendar days old	0	4400		
8. ** Market value of short securities and credits (not to be offset by longs or by debits) in all suspense accounts over 30 calendar days	1,510,870	4410		
9. Market value of securities which are in transfer in excess of 40 calendar days and have not been confirmed to be in transfer by the transfer agent or the issuer during the 40 days	0	4420		
10. Other (List)	6,171,715	4425		
11. TOTAL CREDITS			$ 5,847,559,695	4430

DEBIT BALANCES

12. ** Debit balances in customers' cash and margin accounts excluding unsecured accounts and accounts doubtful of collection (See Note E)	$ 2,732,085,876	4440		
13. Securities borrowed to effectuate short sales by customers and securities borrowed to make delivery on customers' securities failed to deliver	3,050,286,368	4450		
14. Failed to deliver of customers' securities not older than 30 calendar days	6,242,424	4460		
15. Margin required and on deposit with the Options Clearing Corporation for all option contracts written or purchased in customer accounts (See Note F)	0	4465		
16. Margin required and on deposit with a clearing agency registered with the Commission under section 17A of the Act (15 U.S.C. 78q-1) or a derivatives clearing organization registered with the Commodity Futures Trading Commission under section 5b of the Commodity Exchange Act (7 U.S.C. 7a-1) related to the following types of positions written, purchased or sold in customer accounts: (1) security futures products and (2) futures contracts (and options thereon) carried in a securities account pursuant to an SRO portfolio margining rule (See Note G)	0	4467		
17. Other (List)	0	4469		
18. ** Aggregate debit items			$ 5,788,614,668	4470
19. ** Less 3% (for alternative method only - see Rule 15c3-1(a)(1)(ii))			(173,658,440)	4471
20. ** TOTAL 15c3-3 DEBITS			5,614,956,228	4472

RESERVE COMPUTATION

21. Excess of total debits over total credits (line 20 less line 11)			$ 0	4480
22. Excess of total credits over total debits (line 11 less line 20)			232,603,467	4490
23. If computation is made monthly as permitted, enter 105% of excess of total credits over total debits				4500
24. Amount held on deposit in "Reserve Bank Account(s)", including value of qualified securities, at end of reporting period	$ 942,018,303	4505	942,018,303	4510
25. Amount of deposit (or withdrawal) including value of qualified securities	$ (348,909,300)	4515	(348,909,300)	4520
26. New amount in Reserve Bank Account(s) after adding deposit or subtracting withdrawal including value of qualified securities	$ 593,109,003	4525	$ 593,109,003	4530
27. Date of deposit (MMDDYY)			02/02/16	4540

FREQUENCY OF COMPUTATION

OMIT PENNIES

28. Daily _____ 4332 Weekly X 4333 Monthly _____ 4334

** In the event the Net Capital Requirement is computed under the alternative method, this "Reserve Formula" shall be prepared in accordance with the requirements of paragraph (a)(1)(ii) of Rule 15c3-1.

2016-02-24 04:12PM EST
Status: Accepted

BROKER OR DEALER
WELLS FARGO SECURITIES, LLC

as of 01/31/16

FORMULA FOR DETERMINATION OF PAB ACCOUNT RESERVE REQUIREMENTS OF BROKERS AND DEALERS UNDER RULE 15c3-3

(See Rule 15c3-3, Exhibit A and Related Notes*)

CREDIT BALANCES

1. Free credit balances and other credit balances in PAB security accounts (See Note A)	$ 0	2110		
2. Monies borrowed collateralized by securities carried for the accounts of PAB (See Note B)	0	2120		
3. Monies payable against PAB securities loaned (See Note C)	0	2130		
4. PAB securities failed to receive (See Note D)	0	2140		
5. Credit balances in firm accounts which are attributable to principal sales to PAB	0	2150		
6. Market value of stock dividends, stock splits and similar distributions receivable outstanding over 30 calendar days		2152		
7. ** Market value of short security count differences over 30 calendar days old		2154		
8. ** Market value of short securities and credits (not to be offset by longs or by debits) in all suspense accounts over 30 calendar days		2156		
9. Market value of securities which are in transfer in excess of 40 calendar days and have not been confirmed to be in transfer by the transfer agent or the issuer during the 40 days		2158		
10. Other (List)	0	2160		
11. TOTAL PAB CREDITS			$ 0	2170

DEBIT BALANCES

12. Debit balances in PAB cash and margin accounts excluding unsecured accounts and accounts doubtful of collection (See Note E)	$ 0	2180		
13. Securities borrowed to effectuate short sales by PAB and securities borrowed to make delivery on PAB securities failed to deliver	0	2190		
14. Failed to deliver of PAB securities not older than 30 calendar days	0	2200		
15. Margin required and on deposit with the Options Clearing Corporation for all option contracts written or purchased in PAB accounts (See Note F)	0	2210		
16. Margin required and on deposit with a clearing agency registered with the Commission under section 17A of the Act (15 U.S.C. 78q-1) or a derivatives clearing organization registered with the Commodity Futures Trading Commission under section 5b of the Commodity Exchange Act (7 U.S.C. 7a-1) related to the following types of positions written, purchased or sold in PAB accounts: (1) security futures products and (2) futures contracts (and options thereon) carried in a securities account pursuant to an SRO portfolio margining rule (See Note G)	0	2215		
17. Other (List)	0	2220		
18. TOTAL PAB DEBITS			$ 0	2230

RESERVE COMPUTATION

19. Excess of total PAB debits over total PAB credits (line 18 less line 11)			$ 0	2240
20. Excess of total PAB credits over total PAB debits (line 11 less line 18)			0	2250
21. Excess debits in customer reserve formula computation			0	2260
22. PAB Reserve Requirement (line 20 less line 21)			0	2270
23. Amount held on deposit in "Reserve Bank Account(s)", including $ 0 2275 value of qualified securities, at end of reporting period			0	2280
24. Amount of deposit (or withdrawal) including $ 0 2285 value of qualified securities			0	2290
25. New amount in Reserve Bank Account(s) after adding deposit or subtracting withdrawal including $ 0 2295 value of qualified securities			$ 0	2300
26. Date of deposit (MMDDYY)			02/02/16	2310

FREQUENCY OF COMPUTATION

OMIT PENNIES

27. Daily _____ 2315 Weekly X 2320 Monthly _____ 2330

* See Notes regarding the PAB Reserve Bank Account Computation (Notes 1 through 10).

** In the event the Net Capital Requirement is computed under the alternative method, this "Reserve Formula" shall be prepared in accordance with the requirements of paragraph (a)(1)(ii) of Rule 15c3-1.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
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BROKER OR DEALER
WELLS FARGO SECURITIES, LLC as of 01/31/16

COMPUTATION FOR DETERMINATION OF RESERVE REQUIREMENTS FOR BROKER-DEALERS UNDER RULE 15c3-3 (continued)

EXEMPTIVE PROVISIONS

26. If an exemption from Rule 15c3-3 is claimed, identify below the section upon which such exemption is based:

A. (k) (1)-Limited business (mutual funds and/or variable annuities only) . . . . . $ _____ 4550

B. (k) (2)(i)-"Special Account for the Exclusive Benefit of customers" maintained . . . . . _____ 4560

C. (k) (2)(ii)-All customer transactions cleared through another broker-dealer on a fully disclosed basis.
Name(s) of Clearing Firm(s) - Please separate multiple names with a semi-colon
_____ 4335 _____ 4570

D. (k) (3)-Exempted by order of the Commission . . . . . _____ 4580

Information for Possession or Control Requirements Under Rule 15c3-3

State the market valuation and the number of items of:

1. Customers' fully paid securities and excess margin securities not in the respondent's possession or control as of the report date (for which instructions to reduce to possession or control had been issued as of the report date) but for which the required action was not taken by respondent within the time frames specified under Rule 15c3-3. Notes A and B. . . . . $ _____ 4586

A. Number of items . . . . . _____ 4587

2. Customers' fully paid securities and excess margin securities for which instructions to reduce to possession or control had not been issued as of the report date, excluding items arising from "temporary lags which result from normal business operations" as permitted under Rule 15c3-3. Notes B,C and D . . . . . _____ 4588

A. Number of items . . . . . $ _____ 4589

OMIT PENNIES

3. The system and procedures utilized in complying with the requirement to maintain physical possession or control of customers' fully paid and excess margin securities have been tested and are functioning in a manner adequate to fulfill the requirements of Rule 15c3-3 . . . Yes X 4584 No _____ 4585

NOTES

A--Do not include in item one customers' fully paid and excess margin securities required by Rule 15c 3-3 to be in possession or control but for which no action was required by the respondent as of the report date or required action was taken by respondent within the time frames specified under Rule 15c3-3.

B--State separately in response to items one and two whether the securities reported in response thereto were subsequently reduced to possession or control by the respondent.

C--Be sure to include in item two only items not arising from "temporary lags which result from normal business operations" as permitted under Rule 15c3-3.

D--Item two must be responded to only with report which is filed as of the date selected for the broker's or dealer's annual audit of financial statements, whether or not such date is the end of a calendar quarter. The response to item two should be filed within 60 calendar days after such date, rather than with the remainder of this report. This information may be required on a more frequent basis by the Commission or the designated examining authority in accordance with Rule 17a-5(a)(2)(iv).

2016-02-24 04:12PM EST
Status: Accepted

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BROKER OR DEALER
WELLS FARGO SECURITIES, LLC

as of 01/31/16

STATEMENT OF SEGREGATION REQUIREMENTS AND FUNDS IN SEGREGATION FOR CUSTOMERS TRADING ON U.S. COMMODITY EXCHANGES

SEGREGATION REQUIREMENTS (Section 4d(2) of the CEAct)

1. Net ledger balance				
A. Cash			$ 1,514,562,280	7010
B. Securities (at market)			839,730,018	7020
2. Net unrealized profit (loss) in open futures contracts traded on a contract market			41,044,387	7030
3. Exchange traded options				
A. Add market value of open option contracts purchased on a contract market			210,813,304	7032
B. Deduct market value of open option contracts granted (sold) on a contract market			(256,123,849)	7033
4. Net equity (deficit) (add lines 1, 2, and 3)			2,350,026,140	7040
5. Accounts liquidating to a deficit and accounts with debit balances				
- gross amount	178,412,330	7045		
Less: amount offset by customer owned securities	(177,556,640)	7047	855,690	7050
6. Amount required to be segregated (add lines 4 and 5)			$ 2,350,881,830	7060

FUNDS IN SEGREGATED ACCOUNTS

7. Deposited in segregated funds bank accounts		
A. Cash	274,214,116	7070
B. Securities representing investments of customers' funds (at market)	109,085,340	7080
C. Securities held for particular customers or option customers in lieu of cash (at market)	193,903,812	7090
8. Margins on deposit with derivatives clearing organizations of contract markets		
A. Cash	$ 36,525,804	7100
B. Securities representing investments of customers' funds (at market)	1,531,106,039	7110
C. Securities held for particular customers or option customers in lieu of cash (at market)	645,826,206	7120
9. Net settlement from (to) derivatives clearing organizations of contract markets	(69,666,215)	7130
10. Exchange traded options		
A. Value of open long option contracts	210,742,804	7132
B. Value of open short option contracts	(255,649,849)	7133
11. Net equities with other FCMs		
A. Net liquidating equity	3,958,868	7140
B. Securities representing investments of customers' funds (at market)	0	7160
C. Securities held for particular customers or option customers in lieu of cash (at market)	0	7170
12. Segregated funds on hand (describe:)	0	7150
13. Total amount in segregation (add lines 7 through 12)	2,680,046,925	7180
14. Excess (deficiency) funds in segregation (subtract line 6 from line 13)	$ 329,165,095	7190
15. Management Target Amount for Excess funds in segregation	$ 200,000,000	7194
16. Excess (deficiency) funds in segregation over (under) Management Target Amount Excess	$ 129,165,095	7198

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BROKER OR DEALER

WELLS FARGO SECURITIES, LLC

as of 01/31/16

STATEMENT OF SEGREGATION REQUIREMENTS AND FUNDS IN SEGREGATION FOR CUSTOMERS' DEALER OPTIONS ACCOUNTS

1. Amount required to be segregated in accordance with Commission regulation 32.6		$	7200
2. Funds in segregated accounts			
A. Cash	$ 7210		
B. Securities (at market)	7220		
C. Total			7230
3. Excess (deficiency) funds in segregation (subtract line 2.C from line 1)		$	7240

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BROKER OR DEALER
WELLS FARGO SECURITIES, LLC

as of 01/31/16

STATEMENT OF SECURED AMOUNTS AND FUNDS HELD IN SEPARATE ACCOUNTS PURSUANT TO COMMISSION REGULATION 30.7

FOREIGN FUTURES AND FOREIGN OPTIONS SECURED AMOUNTS

Amount required to be set aside pursuant to law, rule or regulation of a foreign government or a rule of a self-regulatory organization authorized thereunder			$ 0	7305
1. Net ledger balance - Foreign Futures and Foreign Option Trading - All Customers				
A. Cash			$ 94,417,845	7315
B. Securities (at market)			201,309,068	7317
2. Net unrealized profit (loss) in open futures contracts traded on a foreign board of trade			58,915,361	7325
3. Exchange traded options				
A. Market value of open option contracts purchased on a foreign board of trade			2,279,025	7335
B. Market value of open contracts granted (sold) on a foreign board of trade			(438,193)	7337
4. Net equity (deficit) (add lines 1. 2. and 3.)			$ 356,483,106	7345
5. Accounts liquidating to a deficit and accounts with debit balances - gross amount	$ 28,319,586	7351		
Less: amount offset by customer owned securities	(28,319,586)	7352	0	7354
6. Amount required to be set aside as the secured amount - Net Liquidating Equity Method (add lines 4 and 5)			$ 356,483,106	7355
7. Greater of amount required to be set aside pursuant to foreign jurisdiction (above) or line 6.			$ 356,483,106	7360

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STATEMENT OF SECURED AMOUNTS AND FUNDS HELD IN SEPARATE ACCOUNTS PURSUANT TO COMMISSION REGULATION 30.7

FUNDS DEPOSITED IN SEPARATE REGULATION 30.7 ACCOUNTS

1. Cash in banks				
A. Banks located in the United States	$ 230,183,065	7500		
B. Other banks qualified under Regulation 30.7				
Name(s): 7510	0	7520	$ 230,183,065	7530
2. Securities				
A. In safekeeping with banks located in the United States	$ 116,755,439	7540		
B. In safekeeping with other banks qualified under Regulation 30.7				
Name(s): 7550	0	7560	116,755,439	7570
3. Equities with registered futures commission merchants				
A. Cash	$ (103,546,645)	7580		
B. Securities	259,871,990	7590		
C. Unrealized gain (loss) on open futures contracts	68,388,472	7600		
D. Value of long option contracts	2,279,025	7610		
E. Value of short option contracts	(422,383)	7615	226,570,459	7620
4. Amounts held by clearing organizations of foreign boards of trade				
Name(s): 7630				
A. Cash	$ 0	7640		
B. Securities	0	7650		
C. Amount due to (from) clearing organizations - daily variation	0	7660		
D. Value of long option contracts	0	7670		
E. Value of short option contracts	(0)	7675	0	7680
5. Amounts held by members of foreign boards of trade				
Name(s): 7690				
A. Cash	$ 54,400,919	7700		
B. Securities	0	7710		
C. Unrealized gain (loss) on open futures contracts	(8,781,725)	7720		
D. Value of long option contracts	0	7730		
E. Value of short option contracts	((15,810))	7735	45,603,384	7740
6. Amounts with other depositories designated by a foreign board of trade				
Name(s): 7750			0	7760
7. Segregated funds on hand (describe:)			0	7765
8. Total funds in separate section 30.7 accounts			$ 619,112,347	7770
9. Excess (deficiency) set Aside Funds for Secured Amount (subtract Line 7 Secured Statement page T10-3 from Line 8)			$ 262,629,241	7380
10. Management Target Amount for Excess funds in separate section 30.7 accounts			$ 30,000,000	7780
11. Excess (deficiency) funds in separate 30.7 accounts over (under) Management Target			$ 232,629,241	7785

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WELLS FARGO SECURITIES, LLC

as of 01/31/16

STATEMENT OF CLEARED SWAPS CUSTOMER SEGREGATION REQUIREMENTS AND FUNDS IN CLEARED SWAPS CUSTOMER ACCOUNTS UNDER 4D(F) OF THE CEA

Cleared Swaps Customer Requirements				
1. Net ledger balance				
A. Cash			$ 6,310,025,565	8500
B. Securities (at market)			3,131,147,531	8510
2. Net unrealized profit (loss) in open cleared swaps			(3,823,278,407)	8520
3. Cleared swaps options				
A. Market value of open cleared swaps option contracts purchased			0	8530
B. Market value of open cleared swaps option contracts granted (sold)			(0)	8540
4. Net equity (deficit) (add lines 1, 2, and 3)			$ 5,617,894,689	8550
5. Accounts liquidating to a deficit and accounts with				
debit balances - gross amount	$ 156,507,842	8560		
Less: amount offset by customer owned securities	(156,507,842)	8570	0	8580
6. Amount required to be segregated for cleared swaps customers (add lines 4 and 5)			$ 5,617,894,689	8590
Funds in Cleared Swaps Customer Segregated Accounts				
7. Deposited in cleared swaps customer segregated accounts at banks				
A. Cash			$ 572,888,165	8600
B. Securities representing investments of cleared swaps customers' funds (at market)			0	8610
C. Securities held for particular cleared swaps customers in lieu of cash (at market)			56,748,442	8620
8. Margins on deposit with derivatives clearing organizations in cleared swaps customer segregated accounts				
A. Cash			569,227,269	8630
B. Securities representing investments of cleared swaps customers' funds (at market)			2,335,956,065	8640
C. Securities held for particular cleared swaps customers in lieu of cash (at market)			3,074,399,089	8650
9. Net settlement from (to) derivatives clearing organizations			(222,665,579)	8660
10. Cleared swaps options				
A. Value of open cleared swaps long option contracts			0	8670
B. Value of open cleared swaps short option contracts			(0)	8680
11. Net equities with other FCMs				
A. Net liquidating equity			0	8690
B. Securities representing investments of cleared swaps customers' funds (at market)			0	8700
C. Securities held for particular cleared swaps customers in lieu of cash (at market)			0	8710
12. Cleared swaps customer funds on hand (describe: _____)			0	8715
13. Total amount in cleared swaps customer segregation (add lines 7 through 12)			$ 6,386,553,451	8720
14. Excess (deficiency) funds in cleared swaps customer segregation (subtract line 6 from line 13)			$ 768,658,762	8730
15. Management Target Amount for Excess funds in cleared swaps segregated accounts			$ 450,000,000	8760
16. Excess (deficiency) funds in cleared swaps customer segregated accounts over (under) Management Target Excess			$ 318,658,762	8770

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WELLS FARGO SECURITIES, LLC as of 01/31/16

COMPUTATION OF CFTC MINIMUM NET CAPITAL REQUIREMENT

Net Capital required

A. Risk-Based Requirement

i. Amount of Customer Risk Maintenance Margin requirement	7,564,956,813	7415		
ii. Enter 8% of line A.i			605,196,545	7425
iii. Amount of Non-Customer Risk Maintenance Margin requirement	1,106,213,415	7435		
iv. Enter 8% of line A.iii			88,497,073	7445
v. Add lines A.ii and A.iv.			693,693,618	7455
B. Minimum Dollar Amount Requirement			1,000,000	7465
C. Other NFA Requirement			0	7475

D. Minimum CFTC Net Capital Requirement.
Enter the greatest of lines A, B or C 693,693,618 7490

Note: If amount on Line D (7490) is greater than minimum net capital requirement computed on Line 3760 (Page 6) then enter this greater amount on Line 3760. The greater of the amount required by SEC or CFTC is the minimum net capital requirement.

CFTC Early Warning Level 763,062,980 7495

Note: If the Minimum Net Capital Requirement computed on Line D (7490) is:

(1) Risk Based Requirement, enter 110% of Line A (7455), or

(2) Minimum Dollar Requirement of $1,000,000 enter 150% of Line B (7465), or

(3) Minimum Dollar Requirement of $20,000,000 for FCMs offering or engaging in retail forex transactions or Retail Foreign Exchange Dealers (“RFED”), enter 110% of Line B (7465), or

(4) Other NFA Requirement of $20,000,000 plus five percent of the FCM’s offering or engaging in retail forex transactions or Retail Foreign Exchange Dealers (“RFED”) total retail forex obligations in excess of $10,000,000 enter 110% of Line C (7475), or

(5) Other NFA Requirement, enter 150% of Line C (7475).

Appendix D. Finance Team Resumes

Please see below for resumes of our finance team.

Lead Investment Bankers

LAURA POWELL, *Managing Director* **T: (210) 856-5155**
40 NE Loop 410, Suite 335 **F: (210) 856-5122**
San Antonio, TX 78216 **laura.s.powell@wellsfargo.com**

Percentage of time devoted to the City: 20-50%, depending on whether a transaction is underway.

Ms. Powell joined Wells Fargo in 2015 as a Managing Director based in our San Antonio office, after 15 years at J.P. Morgan, UBS and PaineWebber. She has executed senior managed transactions for to a wide range of issuers in Texas and across the United States, including the City of Austin, City of San Antonio, CPS Energy, Bexar County, Dallas Independent School District, the Houston Community College System, Harris County-Houston Sports Authority, San Antonio Water System, the University of Texas System, the Texas A&M University System, the State of Tennessee and the Tennessee State School Bond Authority, among others. Ms. Powell has extensive experience with general obligation, revenue and special tax credits, including the following:

- $148,845,000 Bexar County Venue Project Revenue Bonds Series 2000: This transaction provided financing for the SBC (now AT&T) Center, and a new home for the San Antonio Spurs and the San Antonio Livestock and Exposition Show ("SALE"). Revenues supporting the debt included an additional 1.75% Hotel Occupancy Tax ("HOT") and an additional 5% tax on short term motor vehicle rentals ("MVRT").
- $461,551,142 Harris County-Houston Sports Authority Series 2001A-E Revenue Bonds: The Series 2001 Bonds were issued for Reliant (now NRG) Stadium, the home of the Houston Texans and the Houston Livestock Show and Rodeo. The two series of fixed rate bonds (including capital appreciation bonds) were secured by a 5% MVRT and a 2% HOT. The three series of variable rate bonds were secured by a variety of revenue streams, including Rodeo rental payments, ticket surcharges, parking fees and taxes, sales tax rebates for certain events, and guaranteed annual payments by the Houston Texans franchise.
- $550,373,642 City of San Antonio Public Facility Corporation Improvement and Refunding Lease Revenue Bonds, Series 2012: This financing refunded all outstanding Convention Center debt, which was backed by HOT revenues, and also provided $325 million for an expansion of the Convention Center. The security for the Series 2012 Bonds is Lease Payments to be made from Appropriated Funds. The City identified HOT revenues, ad valorem taxes and sales and use taxes as potential sources of funds to pay debt service. A failure to pay Lease Payments can result in the loss of use of the Convention Center Facilities.

Ms. Powell holds a BA from Stanford University, an MS from the University of Texas at Austin and an MBA from Columbia University. She serves as Vice Chair of the Board of the Texas Municipal Advisory Council and as a Board member of the San Antonio Parks Foundation. She maintains Series 7, 24, 53 and 63 registrations.

RICHARD MOLKE, *Managing Director* **T: (212) 214-6737**
150 East 42nd Street, 25th Floor **F: (212) 214-6669**
New York, NY 10017 **richard.molke@wellsfargo.com**

Percentage of time devoted to the City: 10-50%, depending on transaction status

Mr. Molke is the Co-Head of Wells Fargo Securities' Energy & Corporate group. He is a 35 year veteran Public Finance banker and most recently a Managing Director and the Co-Head of the Public Power Group at Morgan Stanley. Rick was the head of the Public Power Groups at Bear Stearns and Merrill Lynch prior to joining Morgan Stanley. Rick has a long history of leading bond transactions for Public Power issuers including Orlando Utilities Commission, LIPA, PREPA, MEAG, JEA, FMPA, MMWEC, NCPA, OPPD, NPPD, NYPA, MEAN, PPGA, Santee Cooper,

Lower Colorado River Authority, CPS Energy and the Salt River Project. He received his BA from Brown University and MBA from Harvard Business School.

KEVIN CARNEY, *Managing Director* **T: (212) 214-6721**
150 East 42nd Street, 25th Floor **F: (212) 214-6669**
New York, NY 10017 **kevin.g.carney@wellsfargo.com**

Percentage of time devoted to the City: 10-50%, depending on transaction status

Mr. Carney joined Wells Fargo Securities in February 2011 and has served as Wells Fargo Securities' airport banker on all airport transactions, totaling $9.4 billion, which include serving as lead airport banker for Wells Fargo's senior managed financings for San Francisco, Clark County McCarran (Las Vegas), San Antonio, Austin and Miami. In addition, Mr. Carney is the lead banker serving as Joint Books Senior Managing Underwriter on a $2 billion* financing for the Consortium selected to design-build-finance-operate-and-maintain the LaGuardia Airport Central Terminal Building and the upcoming transactions at Los Angeles International and Minneapolis-St. Paul International airports. Over the course of his 28-year career, Mr. Carney has served as senior investment banker on over $11 billion of airport financings, developed financial and capital plans for numerous medium and large-hub airports, negotiated airline lease agreements, prepared feasibility studies and was the airport sector lead rating agency analyst for Moody's Investors Service. Prior to joining WFS, Mr. Carney operated Infrastructure Capital Advisors (ICA) , a consulting and financial advisory business focusing on the U.S. airport and port sectors, whose airport clients included the Los Angeles World Airports, San Francisco International Airport and Luis Munoz Marin International Airport in San Juan, Puerto Rico. Prior to forming ICA, Mr. Carney was an Executive Director at JP Morgan, responsible for debt underwriting of municipal securities and was responsible for 24 financings. Previously, Mr. Carney was the lead analyst for the US airport and port sectors at Moody's Investors Service, where he covered Austin-Bergstrom International Airport and was responsible for more than 50 credits representing $31 billion of debt for airport, port, toll road and project finance infrastructure. Mr. Carney also spent more than 11 years at LeighFisher, a leading airport consulting firm after starting his career at the Massachusetts Port Authority.

Mr. Carney received a B.S. in Business Administration from Northeastern University and he currently holds the Series 7 and 63 FINRA licenses.

Lead Underwriting Professionals

J. WALKER MCQUAGE, *Managing Director* **Tel: (704) 410-4082**
550 South Tryon Street, 4th Floor **Fax: (704) 410-0203**
Charlotte, NC 28202 **walker.mcquage@wellsfargo.com**

Percentage of time devoted to the City: Available at all times during a transaction, 100% during a pricing

Walker McQuage, Managing Director and Head of Wells Fargo's municipal syndicate desk, is responsible for and coordinates the marketing, distribution, and underwriting of all fixed rate municipal transactions managed by Wells Fargo's institutional trading, sales, and underwriting operations. He has accumulated more than 20 years of underwriting experience (16 with Wells Fargo) with general obligation, revenue, taxable, and other special credits, as well as prior experience in the financial futures markets.

Since 2009, Mr. McQuage has overseen Wells Fargo's participation in nearly 3,300 transactions totaling almost $600 billion of par amount; of these transactions our desk has senior managed nearly 1,000 transaction across almost $100 billion of par. Mr. McQuage has also personally led Wells Fargo's underwriting participation in 544 transactions in Texas aggregating to nearly $50 billion of par amount; of these deals, he has served as lead underwriter on $10.5 billion of par across 157 transactions.

Mr. McQuage holds a Bachelor of Science degree in Finance from the University of South Carolina, and holds FINRA Series 3, 7, 53, and 63 licenses.

TODD BLEAKNEY, *Managing Director* **T: (704) 410-4067**
550 South Tryon Street, 4th Floor **F: (704) 410-0203**
Charlotte, NC 28202 **todd.bleakney@wellsfargo.com**

Percentage of time devoted to the City: Available at all times during a transaction, 100% during a pricing

With over 13 years of experience, Mr. Bleakney joined Wells Fargo's Municipal Product Group in June 2009 as the Head of Tax-Exempt Short-Term Municipal Trading, Underwriting and Sales. He was previously employed at Banc of America Securities where he held a similar role for seven years. Under Mr. Bleakney's leadership, the VRDN book at Banc of America grew from twelfth to second in the industry and maintained a #1 ranking in notes for his last four years.

His group currently remarkets $385 million outstanding par amount for Texas clients, including those for the University of Texas System, Memorial Hermann Health System, and Rockwall I.S.D. Mr. Bleakney holds a Bachelor of Science degree in finance from the University of Oregon and Series 7, 24, 53, and 63 licenses.

Derivatives Professional

FELIPE CAMACHO, *Director* **T: (415) 644-9391**
45 Fremont Street, 34th Floor **F: (415) 977-9990**
San Francisco, CA 94105 **felipe.camacho@wellsfargo.com**

Percentage of time devoted to the City: Available at all times during a transaction

Felipe has 10 years of experience in the municipal market, including 9 years structuring and executing interest rate swaps and investment agreements primarily for issuers of tax-exempt debt. He currently covers clients in the western United States as part of a team of three derivatives specialists based out of San Francisco. Prior to May of 2011, Felipe worked with Wells Fargo's tax-exempt derivatives desk in Charlotte, NC, serving clients primarily in the eastern half of the United States. Felipe graduated summa cum laude from Purdue University, with a B.S. in Industrial Management and a minor in Finance.

Government Credit Professionals

JOSE HERNANDEZ, *Vice President* **T: (512) 899-2023**
4801 Southwest Parkway, Suite 175 **F: (877) 433-7543**
Austin, TX 78735 **jose.a.hernandez@wellsfargo.com**

Percentage of time devoted to the City: 10-30%, depending on credit needs

Mr. Hernández joined Wells Fargo in July 2010 as a vice president and loan team manager in the Government and Institutional Banking Group. He specializes in general government, water and sewer, and surface transportation credit analysis. Before joining Wells Fargo, Mr. Hernández served as debt and portfolio manager for the Texas Department of Transportation. He has also served as Senior Director and Southwest Regional Manager of Fitch Ratings, and Executive Director of the Texas Bond Review Board.

As Debt Manager for the Texas Department of Transportation for over four years, Mr. Hernández had direct daily responsibility for the municipal debt programs of the department, including the issuance of $8.5 billion in transportation related bonds; management of nearly $1 billion in variable rate debt programs; oversight of the State Infrastructure Bank loan program activities; and participation in the innovative finance programs of the department, such as pass through toll, toll equity, and public/private partnerships. Mr. Hernández was also a primary contact with investment bankers, financial advisors and credit rating agencies for the department.

As a Senior Director for Fitch Ratings, Mr. Hernández was responsible for delivering and monitoring local government credit ratings in Southwest region, including serving as lead analyst on high profile entities in multiple credit sectors. Additionally, he served as Executive Director of the Texas Bond Review Board for the last two years of his seven year tenure at the agency, providing direct support to Board members in consideration of state debt issuance applications and state debt matters; having primary responsibility for all agency programs including state

bond finance, local debt reporting, and private activity bond allocation; as well as testifying before legislative committees on state debt and agency related topics and responding to inquiries from institutional investors.

Mr. Hernández received both B.B.A. and M.B.A. degrees from Corpus Christi State University.

Transaction and Quantitative Support Professionals

GAVIN PALATT, *Managing Director* **T: (314) 955-3639**
1 North Jefferson Avenue, 8th Floor **F: (314) 955-2207**
St. Louis, MO 63103 **gavin.palatt@wellsfargo.com**

Percentage of time devoted to the City: Available on an as-needed basis to provide complex quantitative analysis.

Mr. Palatt joined Wells Fargo Securities in 1993 through the former A.G. Edwards. He has over 20 years of experience in investment banking and has managed the Quantitative Structuring group since 2001. Mr. Palatt has structured hundreds of transactions, including synthetic advance refundings, forward refundings, synthetic fixed rate transactions, and synthetic variable rate transactions. In addition, he has significant experience in the investment of bond proceeds, including construction funds, debt service reserve funds, advance refunding escrows and escrow restructurings. His quantitative expertise includes: cash flow analysis, computer modeling, debt and escrow structuring and reinvestment of municipal bond proceeds, and derivative and hedging products.

Mr. Palatt is an expert at creating and exploiting optionality within large scale funding programs using traditional bond and reinvestment products for a wide range of municipal borrowers including healthcare, utilities, stadiums, airports, TIFs, SRFs, and both single-family and multi-family housing.

Mr. Palatt is a member of the SIFMA Municipal Financial Products Committee. He received a bachelor's degree in economics from Washington University and an M.B.A. in finance from the University of Chicago. He holds FINRA Series 7, 9, 10, 53, and 63 licenses.

JOHN M. P. YOUNG, *Director* **T: (713) 319-1641**
1000 Louisiana Street, Suite 600 **F: (713) 571-0435**
Houston, TX 77002 **john.m.young@wellsfargo.com**

Percentage of time devoted to the City: 5-30%, depending on whether a transaction is underway.

Mr. Young has over 10 years of experience, starting his career in public finance at UBS Investment Bank in 2005. He joined Wells Fargo's Public Finance group in June 2008 when UBS shuttered its department. He is currently a Director in the Southwest Public Finance Group, and in that role, he has assisted a multitude of municipal entities in the region in the execution of their bond transactions by providing detailed quantitative analyses, market updates, and other materials/analyses.

Mr. Young graduated from Rice University in May 2005 with a Bachelor of Science in Physics and a Bachelor of Arts in Economics. He also received an M.B.A. from the McCombs School of Business at the University of Texas, where he was a recipient of the Dean's Award for Academic Excellence. He is a registered securities representative, maintaining Series 7 and 63 registrations.

THOMAS MUNN, *Associate* **T: (713) 319-1800**
1000 Louisiana Street, Suite 600 **F: (713) 571-0435**
Houston, TX 77002 **thomas.j.munn@wellsfargo.com**

Percentage of time devoted to the City: 5 to 30%, depending on whether a transaction is ongoing

Mr. Munn joined Wells Fargo in June 2010. As an associate, he provides transactional support and quantitative analysis for senior bankers, in addition to developing marketing and presentation materials for clients. Before joining Wells Fargo, he interned at Discover Financial Services.

Mr. Munn graduated summa cum laude from Texas A&M University in May of 2010 with a Bachelor of Business Administration degree in Finance. He is a registered securities representative, maintaining Series 7 and 63 registrations.

ALEX PALAZZOLO, *Analyst* **T: (713) 319-1643**
1000 Louisiana Street, Suite 600 **F: (713) 571-0435**
Houston, TX 77002 **alex.palazzolo@wellsfargo.com**

Percentage of time devoted to the City: 5 to 30%, depending on whether a transaction is ongoing

Mr. Palazzolo joined Wells Fargo Securities in November 2014 as an Analyst and provides transactional support, financial and market analysis, in addition to developing marketing and presentation materials for clients. Prior to joining Wells Fargo, he served as an Analyst with Moody's Investors Service in the Public Finance Group for two and a half years.

Mr. Palazzolo holds a B.A. in Political Science from Baylor University, and a Master of Public Administration with an emphasis in Public Finance from the University of North Texas. Mr. Palazzolo is a registered Municipal Securities Representative (Series 52) has passed the Uniform Securities Agent State Law Examination (Series 63).

Appendix E. Innovative Financing Ideas Supporting Information

Hotel Occupancy Tax Credit Assumptions. The analysis in Section V assumes:

- Market rates as of March 2, 2016
- Delivery Date of November 15, 2016
- No change to existing LOC with JP Morgan that expires in June 2017
- No-cost novation of the current Series 2008A&B swap, and no change to the current swap terms and rate
- Debt service reserve release of $10.263 million (Source: Series 2012 official statement)
- Assumes appropriation credit ratings of Aa1/AA+/AA+
- Assumes costs of issuance of $250,000
- Assumes underwriter's discount of $2 per bond for Series 2008AB refunding and $6 per bond for Series 2012 and 2013 bonds

Wells Fargo Direct Purchase with Synthetic Fixed Swap. Please see below for additional information related to the Wells Fargo DP with synthetic fixed rate swap.

How Interest Rate Swap Works

- With an interest rate swap, Austin will pay a fixed rate per annum and Wells Fargo will pay Austin a variable rate per annum based on 70.0% of 1Mo. LIBOR for the term of the swap, subject to the terms of the swap contract
- Austin will separately make variable interest payments on its financing based on 70.0%x(1Mo. LIBOR) + 0.50%[1]
  - Depending on the amount of the financing hedged, as stated in the swap contract, Austin could achieve the results shown below, provided that the floating rate and other terms of the swap and financing match, which is not guaranteed. For further details see "Unmatched Terms" under the Important Information section.
  - Because the swap is a separate contract from the financing, if there is any change to the financing terms, including the floating rate index or credit spread, the swap will not automatically adjust to conform to the new terms, and the overall interest expense will increase or decrease accordingly.

	DP Cashflows			Swap Cashflows			Net Result		
1-Month LIBOR	Base Rate	Credit Spread	Combined Cashflow	Fixed Rate[2]	Floating Rate	Combined Cashflow	DP Cashflow	Swap Cashflow	Net Rate
0.00%	0.00%	0.50%	**0.50%**	1.74%	0.00%	**1.74%**	0.50%	1.74%	**2.24%**
0.44%	0.31%	0.50%	**0.81%**	1.74%	0.31%	**1.43%**	0.81%	1.43%	**2.24%**
2.49%	1.74%	0.50%	**2.24%**	1.74%	1.74%	**0.00%**	2.24%	0.00%	**2.24%**
2.50%	1.75%	0.50%	**2.25%**	1.74%	1.75%	**-0.01%**	2.25%	-0.01%	**2.24%**
5.00%	3.50%	0.50%	**4.00%**	1.74%	3.50%	**-1.76%**	4.00%	-1.76%	**2.24%**
7.50%	5.25%	0.50%	**5.75%**	1.74%	5.25%	**-3.51%**	5.75%	-3.51%	**2.24%**

All rates shown above are to illustrate how a swap works, are not a prediction of future rates, are not based on historical data, and do not constitute a "scenario analysis" for purposes of 17 C.F.R. § 23.431. Indicative net rates assume the swap and financing match, and both the swap and the financing continue to be in place during the same period and in the same amounts (neither the swap nor the financing matures, is prepaid or otherwise terminates).

Notes: 1. Hypothetical only. Not a committed rate or a credit commitment. 2. Indicative only, based on market conditions as of approximately 4:00 PM New York City time on 3/3/16 (credit spread and any other costs and adjustments not included - does not reflect an all-in fixed rate cost of financing). An actual swap fixed rate may be higher or lower depending on market conditions at the time a swap is entered into.

Explanation of Swap Termination Fees

- As illustrated in the example below, if a swap is terminated prior to its scheduled maturity date for any reason,† including if Austin and Wells Fargo mutually agree to terminate the swap early, then:
  - Austin could expect to make an early termination payment to Wells Fargo if the fixed rate of Austin's swap is higher than prevailing fixed rates on the date of termination for an identical swap with the same remaining term
  - Austin could expect to receive an early termination payment from Wells Fargo if the fixed rate of Austin's swap is lower than prevailing fixed rates on the date of termination for an identical swap with the same remaining term

Early Termination Payment Estimates for a Hypothetical Interest Rate Swap

Austin pays 1.74%* / receives 70.0%x(1Mo. LIBOR) — Term: 22.5 Yrs., with 10-year option†

Initial Notional: $107.515 million — Amort.: Custom through 11/15/38

		Prevailing Fixed Rate Vs. Contractual Fixed Rate of 1.74%*			
	Difference:	-2.00%	-1.00%	+1.00%	+2.00%
	Prevailing Fixed Rate:	-0.26%	0.74%	2.74%	3.74%
Remaining Term (Years)	22.7	-$20,906,700	-$10,157,600	$13,907,300	$24,744,800
	15	-$4,969,500	-$2,474,900	$9,053,600	$16,764,100
	8	$0	$0	$3,678,900	$7,064,000
	1	$0	$0	$107,700	$213,600

Early termination amount estimates shown here: (1) are based on assumptions about possible future swap fixed rates at different points in time (additional scenarios can be provided upon request); (2) do not represent the actual early termination amount payable for terminating the swap (actual amounts you owe may exceed these figures depending upon the swap's structure and future market conditions, including the level of swap fixed rates, prevailing discount rates, and the magnitude of interest rate fluctuations); (3) do not include any fees payable for prepayment or acceleration of any underlying financing; and (4) do not include the time value of the Alternate Termination Date option. In the case of the $0 estimates displayed above, it is assumed that the Alternate Termination Date option will have been exercised at the inception of the exercise period. When prevailing fixed rates exceed the contractual fixed rate, it is assumed the option has no value. If a swap is terminated by mutual agreement, Wells Fargo would determine the early termination amount by taking the difference between the discounted present value of the swap's fixed rate cash flows over its scheduled remaining term and a hypothetical replacement swap having the same structure and scheduled maturity date but with a fixed rate that reflects then current market conditions when the swap is terminated. Discounting of cash flows would be based on a series of discount factors corresponding to the swap's scheduled remaining payment dates, and the impact of this discounting on the early termination amount will vary based on the principle that the higher the discount rate used in valuing cash flows as interest rates rise, the lower the valuation (and vice versa as interest rates decline).

† Subject to the Alternate Termination Date option described in this presentation.

** Indicative only, based on market conditions as of approximately 4:00 PM New York City time on 3/3/16 (credit spread and any other costs and adjustments not included - does not reflect an all-in fixed rate cost of financing). An actual swap fixed rate may be higher or lower depending on market conditions at the time a swap is entered into.*

Benefits and Risks of an Interest Rate Swap

Risks and Benefits

		Description	Comments
1	Termination Risk	If the swap terminates early, including if debt is paid off, Austin may owe a termination payment.	Including an option to cancel helps mitigate termination risk.
2	Opportunity Cost Risk	Swap rates may decrease after execution or the variable rate may average less than the swap rate.	Including an option to cancel helps reduce market risk.
3	Counterparty Risk	The performance and value of the swap depends on Wells Fargo Bank, N.A.'s ability to make payments.	Wells Fargo Bank, N.A. is rated Aa2/AA-/AA (Moody's/S&P/Fitch)
4	Renewal Risk	A non-renewal of the credit facility may force Austin to terminate, novate, or collateralize the swap.	Including an option to cancel helps mitigate renewal risk.
5	Mark-to-Market Risk	If rates decline the swap mark-to-market will move against Austin.	Consult with accountants to understand accounting implications.
6	Closing Risk	If the financing fails to close, the swap obligation still exists and may result in a termination payment.	Review and plan for mark-to-market sensitivity to interest rates.
7	Basis Risk	The rate Austin pays on the DP may not be fully offset by the floating rate received on the swap.	Understand events that could cause basis risk and plan accordingly.
8	Tax Risk	If a change in taxation causes the DP rate to increase, the swap will not cover the difference.	Using SIFMA as the swap index may help limit tax risk.
9	Manage Rate Exposure	Swaps allow borrowers to manage their exposure to future interest rates.	Consider the financial impact of potential interest rate increases.
10	Terms Flexibility	Swaps can be executed at any time and the term, amount, effective date, and other aspects can be tailored.	Subject to credit approval and any requirements of the financing.
11	Future Flexibility	Since the swap is a contract separate from the DP, Austin can preserve it even if the financing changes.	This may be subject to collateral requirements or other limitations.
12	Tailored Options	Options to terminate or extend at a specified cost and time can be built to apply to all or a portion of the swap.	Compare to the usually limiting prepayment terms of fixed rate debt.

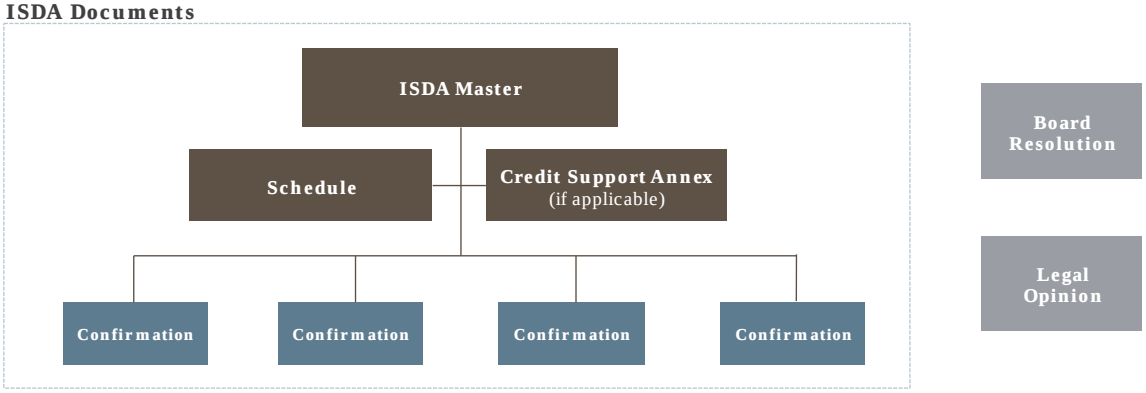
Note: The above is only a summary of key risks and benefits and may not list all risks. Please also review the important information and disclaimer at the end of this document.

Documentation and Execution

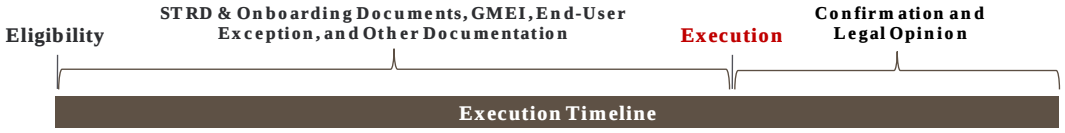
- **Eligibility**: Customer and each of its swap guarantors must meet certain eligibility requirements of the Commodity Exchange Act and rules thereunder for a party to enter into a swap on a privately-negotiated basis without exchange trading and clearing requirements applying.

- **Swap Trading Relationship Documentation ("STRD")**: The **ISDA Master** Agreement is an industry standard form used to document the trading relationship between the parties. Published by the International Swaps and Derivatives Association ("ISDA"), it covers payment obligations, representations, covenants, events of default, early terminations, transfers, governing law and other contractual terms for our swaps. An integral part of the ISDA Master Agreement is its **Schedule**, which contains credit-related provisions and other individually-tailored terms. Once these documents are completed and a transaction is entered into, a **Confirmation** for the transaction will be sent for execution, which becomes part of the ISDA Master Agreement. Additional documentation, including a **legal opinion** and **board resolutions**, may be required as part of this process.

ISDA Documents



Please note that the ISDA Master Agreement contains provisions for the termination of a swap upon the occurrence of an "Event of Default" or "Termination Event", and the method of calculating a swap termination amount under the ISDA Master Agreement may vary from the explanation and examples shown in this presentation. For further details, see Section 6 of the ISDA Master Agreement, a copy of which is available at: www.wellsfargo.com/com/swap-disclosures/isda-materials.



- **Onboarding Documents**: In addition to STRD, we will need certain representations and information from you, and we will be required to furnish you with certain notifications and disclosures, in order to meet certain regulatory requirements. We will ask that you sign certain onboarding documents for this purpose.

- **Derivatives Access**: We furnish our customers with daily marks and other information about their swaps with us through "Derivatives Access", a proprietary service available through our Commercial Electronic Office® (CEO®) portal. Information about this free online service will be provided.

- **Legal Entity Identifier**: Parties to swap transactions are required to have a Global Markets Entity Identifier ("GMEI") (formerly known as a CFTC Interim Compliant Identifier, or "CICI"). This allows regulators to track swaps across markets, products and regions. Information about how to obtain this GMEI is available at https://www.gmeiutility.org/.

- **Election of End-User Exception**: Under US law, swaps subject to mandatory clearing are required to be cleared on a derivatives clearing organization ("DCO") absent an exemption, such as the "End-User Exception". Clearing involves replacing us with a DCO as your counterparty, which will require you to establish a clearing relationship with a futures commission merchant ("FCM") to clear the swap and post initial margin and variation margin through your FCM. In order to enter into swaps with us on an uncleared basis in reliance on the End-User Exception or other available exemption, additional documentation and/or information will be required.

- **Confirmation Templates:** Please see our standard form confirmation templates available at https://www.wellsfargo.com/com/swap-disclosures/confirmation-templates. Prior to entering into a transaction, you may request a draft of the confirmation to be used. Any confirmation we send you in draft or executable form for a potential or executed swap will supersede our templates.

Appendix F. Swap Dealer Exemption Letter

February 25, 2016

CITY OF AUSTIN
Finance and Administrative Services, Treasury
700 Lavaca, Suite 940
Austin, TX 78701
Attention: Mr. Art Alfaro

AUSTIN ENERGY
2526 Kramer Ln
Austin, TX 78758
Attention: Mr. Art Alfaro

CITY OF AUSTIN AVIATION DEPARTMENT
3600 Presidential Blvd #411
Austin, TX 78719
Attention: Mr. Art Alfaro

Re: Communications Regarding Swaps

The Commodity Futures Trading Commission ("CFTC") has adopted rules governing business conduct standards for swap dealers and other parties (the "business conduct standards").[1] The rules apply to communications regarding Swaps, including communications that occur prior to entering into a Swap.[2] The purpose of this letter is to enable us to engage in communications that fall within a "safe harbor" available under those rules for certain types of "special entities."

Please note that we may need to significantly limit our communications regarding Swaps if the conditions of the safe harbor are not satisfied as provided in this letter or otherwise. In addition, any Swap that may be entered into would be subject to a separate written agreement of the parties that satisfies the documentation requirements of the Dodd-

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[1] *Business Conduct Standards for Swap Dealers and Major Swap Participants With Counterparties*, 77 Fed. Reg. 9734 (Feb. 17, 2012).

[2] As used in this letter, "Swap" means a "swap," as defined in the Section 1a(47) of the Commodity Exchange Act and CFTC Regulation 1.3(xxx). The term also includes any foreign exchange swaps and foreign exchange forwards that may be exempted from regulation as "swaps" by the Secretary of the Treasury pursuant to authority granted by Section 1a(47)(E) of the Commodity Exchange Act. For these purposes, "Swap" includes a new swap and any material amendment, mutual unwind or novation of an existing Swap. The term "Swap" also includes any trading strategy involving a Swap.

Frank Act, as well as any other approvals and conditions that each party may require before entering into a Swap.[3] One of those conditions is that you have a representative (who may, but need not, be your employee) that satisfies the applicable requirements of CFTC Regulation 23.450 (a "qualified independent representative"). You may satisfy that condition by delivering to us a letter in the form attached hereto as Annex I, signed by you and a qualified independent representative.

We will not act as your advisor (as such term is used in CFTC Regulations 23.440) within the meaning of the business conduct standards. Accordingly, to satisfy the conditions of the safe harbors for Swap communications, we are making the disclosures and agreements set forth below and ask that you make the representations and agreements set forth below.

We ("SD") hereby make the following disclosures to you ("CP") as of the date hereof:

(1) SD is not undertaking to act in the best interests of CP;

(2) SD is acting in its capacity as a counterparty and is not undertaking to assess the suitability of any Swap for CP; and

(3) SD is not expressing, and has not expressed, an opinion as to whether CP should enter into a Swap.

CP hereby makes the following representations as of the date hereof:

(1) CP will not rely on any "recommendation" (as such term is used in CFTC Regulations 23.434 and 23.440) with respect to a Swap provided by SD;

(2) CP will rely on advice from a "qualified independent representative" (as defined above);

(3) CP is exercising independent judgment in evaluating the "recommendations" of SD with regard to any Swap;

(4) CP will provide its qualified independent representative with all information CP receives from SD in connection with any recommendation provided by SD with respect to any Swap; and

(5) SD is not expressing, and has not expressed, an opinion as to whether CP should enter into a Swap.

SD and CP each hereby agree as follows:

(1) Each disclosure or representation made by it in this letter will be deemed to be repeated by it at the time of each recommendation provided by SD with respect to any Swap and each time SD offers to enter into, or enters into, any Swap with CP; and

(2) If any representation made by it in this letter becomes incorrect or misleading in any material respect, it will promptly correct and update such representation by notifying the other party in writing at the email address provided below.

In connection with CP's execution of this letter and its review of any recommendations that SD may provide, SD is acting, and has acted, solely as a principal, in SD's own best interests, in an arm's-length commercial transaction, and not as Special Entity's agent or advisor and SD has not assumed a fiduciary responsibility in favor of CP. SD's financial and other interests differ from CP's. In addition, nothing in this letter agreement or in any

[3] The documentation requirements of the Dodd-Frank Act are addressed by protocols sponsored by ISDA (available at http://www2.isda.org/functional-areas/protocol-management/open-protocols) and by the Wells Fargo Bank, N.A. Terms of Business for Swap Transactions with non-ERISA Special Entities (the "Wells Fargo Terms of Business").

recommendation or in any prior relationship between CP and SD is to be regarded as evidencing or creating an advisory, fiduciary or agency relationship between CP and SD (whether or not SD or any affiliate of SD has provided or is currently providing other services to CP on related or other matters).

Following the compliance date for the CFTC Regulations, SD will only offer to enter into, or enter into, new swaps and material amendments, mutual unwinds or novations of existing swaps within the safe harbors specified in the CFTC Regulations. Accordingly, in order for SD to offer to transact, or to transact, in swaps, SD and CP will need to supplement any ISDA Master Agreement between SD and CP to reflect all representations and covenants required by the CFTC to satisfy the CFTC Regulations, including the safe harbors, either by the execution of the Wells Fargo Terms of Business or the ISDA Protocol. The "qualified independent representative" will also need to provide representations and information specified in the CFTC Regulations.

Executed and delivered with effect from the date first written above:

WELLS FARGO BANK, N.A., herein "SD"

By: _____
Name: Michele Ratay
Title: Authorized Signatory

For purposes of this letter, notices may be provided to SD via e-mail to: WellsDoddFrankDocs@wellsfargo.com

Agreed and accepted with effect from the date first written above:

CITY OF AUSTIN, herein a "CP"

By: _____
Name:
Title:

AUSTIN ENERGY, herein a "CP"

By: _____
Name:
Title:

CITY OF AUSTIN AVIATION DEPARTMENT, herein a "CP"

By: _____
Name:
Title:

For purposes of this letter, notices may be provided to CP via e-mail to: _____

ANNEX I

[Date]

[Name and address of Swap Dealer]

Re: Communications Regarding Swaps

The undersigned special entity ("CP") and representative ("Designated QIR") are providing this letter to you ("SD") in connection with Commodity Futures Trading Commission ("CFTC") rules[1] governing business conduct standards for swap dealers and other parties with respect to Swaps. [2]

CP hereby makes the following representations as of the date hereof:

(1) CP has selected Designated QIR as a "qualified independent representative" within the meaning of CFTC Regulation 23.450;

(2) CP will provide Designated QIR with all information CP receives from SD in connection with any recommendation provided by SD with respect to any Swap, so that it may fulfill its representations, warranties and agreements set forth herein; and

(3) CP has complied in good faith with written policies and procedures (i) reasonably designed to ensure that Designated QIR satisfies the following requirements (the "Applicable Requirements"): Designated QIR (a) has sufficient knowledge to evaluate the transaction and risks of a particular Swap; (b) is not subject to a statutory disqualification; (c) is independent of SD; (d) undertakes a duty to act in the best interests of CP; (e) makes appropriate and timely disclosures to CP; (f) evaluates, consistent with any guidelines provided by CP, fair pricing and the appropriateness of the Swap; and (g) is subject to restrictions on certain political contributions imposed by the CFTC, the SEC or a self-regulatory organization subject to the jurisdiction of the CFTC or SEC; provided however, that this clause (g) shall not apply if Designated QIR is an employee of CP and (ii) such

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[1] *Business Conduct Standards for Swap Dealers and Major Swap Participants With Counterparties*, 77 Fed. Reg. 9734 (Feb. 17, 2012).

[2] As used in this letter, "Swap" means a "swap," as defined in the Section 1a(47) of the Commodity Exchange Act and CFTC Regulation 1.3(xxx). The term also includes any foreign exchange swaps and foreign exchange forwards that may be exempted from regulation as "swaps" by the Secretary of the Treasury pursuant to authority granted by Section 1a(47)(E) of the Commodity Exchange Act. For these purposes, "Swap" includes a new swap and any material amendment, mutual unwind or novation of an existing Swap. The term "Swap" also includes any trading strategy involving a Swap.

policies and procedures provide for ongoing monitoring of the performance of such representative consistent with the Applicable Requirements.

Designated QIR hereby makes the following representations as of the date hereof:

(1) The true name and address of Designated QIR are set forth on the signature page of this letter;

(2) Designated QIR has written policies and procedures reasonably designed to ensure that Designated QIR:

a. Has sufficient knowledge to evaluate the transaction and risks of a particular Swap;

b. Is not subject to a statutory disqualification;

c. Is independent of SD;

d. Undertakes a duty to act in the best interests of CP;

e. Makes appropriate and timely disclosures to CP;

f. Evaluates, consistent with any guidelines provided by CP, fair pricing and the appropriateness of the Swap; and

g. Is subject to restrictions on certain political contributions imposed by the Commodity Futures Trading Commission (the "CFTC"), the Securities and Exchange Commission (the "SEC"), or a self-regulatory organization subject to the jurisdiction of the CFTC or SEC; provided however, that this clause (g) shall not apply if Designated QIR is an employee of CP.

(3) Designated QIR is exercising independent judgment in evaluating all "recommendations" (as such term is used in CFTC Regulations 23.434 and 23.440) with respect to a Swap provided by SD that are presented to Designated QIR;

(4) unless Designated QIR otherwise notifies SD in writing at the e-mail address provided below:

a. Designated QIR is not and, within one year of representing CP in connection with a Swap with SD has not been, an "associated person" (as that term is defined in Section 1a(4) of the Commodity Exchange Act) of SD;

b. There is no "principal relationship" (as that term is defined in CFTC Regulation 23.450(a)(1)) between Designated QIR and SD;

c. Designated QIR (i) provides timely and effective disclosures to CP of all material conflicts of interest that could reasonably affect Designated QIR's judgment or decision making with respect to Designated QIR's obligations to CP and (ii) comply with policies and procedures reasonably designed to manage and mitigate such material conflicts of interest;

d. Designated QIR is not directly or indirectly, through one or more persons, controlled by, in control of, or under common control with SD; and

e. To the best of Designated QIR's knowledge, SD did not refer, recommend, or introduce Designated QIR to CP within one year of Designated QIR's representation of CP in connection with any Swap with SD; and

(5) Designated QIR is legally obligated to comply with the Applicable Requirements by agreement,

condition of employment, law, rule, regulation, or other enforceable duty.

By signing this letter, CP and Designated QIR each hereby agree as follows:

(1) Each representation made by it in this letter will be deemed to be repeated by it at the time of each recommendation provided by SD with respect to any Swap and each time SD offers to enter into, or enters into, any Swap with CP; and

(2) If any representation made by it in this letter becomes incorrect or misleading in any material respect, it will promptly correct and update such representation by notifying SD in writing at the email address provided below.

In connection with CP's execution of this letter and its review of any recommendations that SD may provide, SD is acting, and has acted, solely as a principal, in SD's own best interests, in an arm's-length commercial transaction, and not as Special Entity's agent or advisor and SD has not assumed a fiduciary responsibility in favor of CP. SD's financial and other interests differ from CP's. In addition, nothing in this letter agreement or in any recommendation or in any prior relationship between CP and SD is to be regarded as evidencing or creating an advisory, fiduciary or agency relationship between CP and SD (whether or not SD or any affiliate of SD has provided or is currently providing other services to CP on related or other matters).

Following the compliance date for the CFTC Regulations, SD will only offer to enter into, or enter into, new swaps and material amendments, mutual unwinds or novations of existing swaps within the safe harbors specified in the CFTC Regulations. Accordingly, in order for SD to offer to transact, or to transact, in swaps, SD and CP will need to amend any ISDA Master Agreement between SD and CP to reflect all representations and covenants required by the CFTC to satisfy the CFTC Regulations, including the safe harbors, either by the execution of the Wells Fargo Terms of Business or the ISDA Protocol. The Designated QIR will also need to provide representations and information specified in the CFTC Regulations.

Executed and delivered with effect from the date first written above:

[Name of CP], herein "CP"

By: _____
Name: _____
Title: _____

Executed and delivered with effect from the date first written above:

[Name of Designated QIR], herein "Designated QIR"

By: _____
Name: _____
Title: _____

Name: _____
Address: _____
Phone: _____
Fax: _____
E-mail: _____

Agreed and accepted with effect from the date first written above:

[Name of SD], herein "SD"

By: _____
Name: _____
Title: _____

For purposes of this letter, notices may be provided to SD via e-mail to: _____

Appendix G. Additional Disclosures

The Materials are provided for general information about the transactions described herein. Although we believe that market data and other information contained in the Materials is reliable, it is not warranted as to completeness or accuracy, is subject to change without notice, and we accept no responsibility for its use or to update or keep it current. The Materials are not an offer or commitment for any products or transactions. Our willingness to enter into any transaction is subject to final credit approval, agreement on transaction terms and compliance to our satisfaction with all applicable legal and regulatory requirements, including without limit, onboarding and swap trading relationship documentation.

Terms, rates, prices and structure in the Materials are indicative only, and should not be relied upon as the terms, rates, prices or structure on which we or anyone else would be willing to enter into, terminate or transfer any transaction with you, including without limit, the swap, bond or loan, letter of credit and/or remarketing agreement (if applicable), or relied upon for any other purpose. Actual rates and prices may be higher or lower depending on market conditions at the time of execution, and are subject to market conditions at deal time, final credit approval and agreement on deal terms. Any historical information provided in the Materials is for information only, and past performance may not be relied upon as a guarantee of future results. Assumptions stated herein may or may not be valid.

Arm's Length Relationship

All transactions described in the Materials are arm's length transactions to be negotiated by each party acting in its own best interests. The price and other terms of any transaction will be individually negotiated, and there is no assurance that they will represent the best price or terms available to you from us or other sources. The decision whether you should enter into any transaction upon mutually agreed terms rests solely with you. Before entering into any transaction described in the Materials, you should consider whether it is appropriate for you in light of your objectives, experience, financial and operational resources, legal capacity and authority, and other relevant circumstances, and you should conduct a thorough and independent evaluation of the financial, tax, accounting, legal and regulatory characteristics, consequences, costs and risks of the transaction in light of your particular circumstances, based upon the advice of your own financial, legal, tax, accounting, and other professional advisors. Neither we nor any of our affiliates will be providing any such advice in connection with any such transaction, and neither we nor they will be acting as your agent, broker, financial advisor, municipal advisor, or fiduciary in connection with any such transaction, whether or not we or they may otherwise be engaged to act in such capacity in connection with other products or services.

Risks to Consider

While certain transactions described in the Materials may be used for hedging purposes to reduce or eliminate certain risks associated with your assets or liabilities, the effectiveness of hedging may depend upon holding these transactions to maturity and not reducing or disposing of all or any portion of the asset or liability during the term of the hedge. If a swap transaction is terminated early, or if you reduce or dispose of all or a portion of the underlying asset or liability before the transaction matures (such as prepaying a floating rate loan you hedge with a swap), you may incur a substantial loss. You may also incur a substantial loss if you enter into a swap transaction in anticipation of hedging an asset or liability that does not materialize. You should understand that significant potential amounts could become payable by you for modifying a swap transaction, terminating it early or transferring your position in the transaction to another person or entity, depending upon then existing market conditions. You should also consider that prepaying your loan or disposing of an asset or other liability does not relieve you of your obligations under a swap transaction, which may be terminated early only in accordance with the terms of the swap trading relationship documentation (such as an ISDA Master Agreement) or other transaction documents, or otherwise by mutual agreement. Such termination may require payment by you of an early termination amount, which amount may be substantial. Whether you use a swap transaction for hedging or another purpose, you should satisfy yourself that you understand these and other risks relative to the benefits you are seeking to achieve and that the transaction and risks are suitable for you. These risks are discussed in greater detail in disclosures provided to you through the following website: **www.wellsfargo.com/swapdisclosures**

Independent Obligation

Although the Materials describe how a swap transaction may be used to hedge against increases in the interest expense of a loan or other financing, the swap transaction would be a separate and independent obligation and would not be contingent on whether or not any loan or other financing closes, is outstanding, or is repaid, in whole or in part, at any time, subject to any contractual requirement to terminate and settle the transaction early upon prepayment of the loan or for other loan-related events. In addition, if you provide any existing or future collateral or other credit support to secure the transaction and any loan or other financing, then you would be entitled to the release of such collateral or credit support only if certain conditions contained in the related collateral agreement or credit support document are completely satisfied for both the transaction and any such loan or other financing, or we otherwise reach agreement with you on alternative collateral, credit support or other arrangements.

Unmatched Terms & Conventions

If the principal amount or duration of a loan or financing differs from that of a transaction used to hedge such loan or financing, you may be exposed to risk of loss from such over-hedging or under-hedging. If any other economic terms or characteristics of a loan or financing differ from those of the related hedge, then in addition to any losses that you could incur from such differences, the hedge may create unanticipated accounting exposure or tax liability for you. To the extent fair value accounting applies to the hedge, you may have to reflect unrealized gains and losses (i.e., the so-called "mark-to-market" value of the hedge) over the life of the hedge on your balance sheet and/or income statement. If hedge accounting applies, any ineffectiveness in the hedge resulting from such differences may likewise need to be taken into account and reflected in your financial results. These swap valuation considerations may also be important to you for tax purposes, including any tax laws that may require unrealized gains or losses on swaps to be taken into account in determining your income tax liability.

Conventions used in the loan or other financing and swap markets may differ, and we are under no obligation to ensure that any swap we offer is a perfect hedge for your financing even if we provide you with both products. For example, if the method for determining a loan's floating

rate differs from that for a swap's floating rate, the loan floating rate payments could diverge from those of the swap. Such divergence may occur by convention or as the result of contractual differences, such as, for illustration purposes only, in the definition of or the reset timing (e.g., 1-month or 3-month) for the London Interbank Offered Rate (LIBOR), the dates or times at which LIBOR is set, the number of days in the payment periods, the fallback floating rate specified if the method for determining LIBOR fails, or the floating rate rounding convention

Applicability of Certain Regulations

WFBNA is a "swap dealer" as defined in the Commodity Exchange Act ("CEA"), and one or more transactions described in the Materials are "swaps" as defined in the CEA and regulations of the Commodity Futures Trading Commission ("CFTC") or "security based swaps" as defined in the CEA and the Securities Exchange Act of 1934 and regulations of the U.S. Securities and Exchange Commission ("SEC"). From time to time, we may furnish you with certain information or request that you furnish us with certain information or representations or take other action we consider necessary or appropriate to comply with applicable legal or regulatory requirements, including the requirement that, in order to enter into a swap with us, you must be an Eligible Contract Participant (as defined in 17 C.F.R. §1.3(m)). Nothing herein or in the Materials constitutes legal advice or purports to be a complete statement of regulations applicable to swaps, matters which you should address with your own legal advisors. For purposes of CFTC Regulations 1.71 and 23.605, please note that the Materials are a "solicitation" of a swap and not a "research report" as defined therein. To the extent the Materials include a scenario analysis, such inclusion shall not supersede your right under CFTC Regulation 23.431(b) to request and consult in the design of a scenario analysis. Nothing in the Materials should be construed as a recommendation or opinion with respect to any swap or trading strategy involving a swap for purposes of CFTC Regulations Part 23 or the CEA. The Materials do not take into account your particular investment objectives, financial condition or needs and are not intended to serve as a basis for entering into a swap or to suggest, through opinion, recommendation, or otherwise, that you should enter into a particular swap or trading strategy involving a swap. You should consult with your own advisors for opinions on whether to enter into any swap or trading strategy involving a swap.

In certain cases, the transactions described in the Materials may be subject to regulations that have not yet been proposed, adopted in final form or become effective, and some or all of such regulations may have a direct or indirect impact on the substantive terms set forth hereunder. Accordingly, the parties acknowledge partial and/or incomplete information with respect to the requirements of such regulations, but acknowledge that to the extent any term contemplated hereunder is in violation of or subject to any current or future regulation, as amended from time to time, we reserve the right to amend the terms contemplated hereby or cease to offer the transaction described herein.

About Wells Fargo

Transactions described in the Materials are not bank deposits or FDIC insured, may expose you to the credit risk of WFBNA and therefore involve risk of loss to you apart from the market risk associated with the underlying rate, price or other economic measure on which the transaction is based. Financial information WFBNA is available at:

https://www.wellsfargo.com/invest_relations/investor_relations

Additional Information

In addition to the information furnished above, you should not enter into any swap transaction described in the Materials without reviewing and understanding our "Disclosure of Material Information for Swaps" and accompanying documents available to you at: **www.wellsfargo.com/swapdisclosures**

Updating the Materials

We reserve the right to amend, supplement or replace the Materials at any time, and your use of the Materials constitutes your agreement to update the Materials with any such amendments, supplements or replacements we furnish you.

Confidentiality

The information in the Materials is confidential and may not be disclosed by you to anyone without our written consent, other than to your advisors, and judicial or other governmental authorities or regulators having jurisdiction over you (including, without limitation, federal, state or local tax authorities). Notwithstanding anything to the contrary contained in the Materials, all persons may disclose to any and all persons, without limitations of any kind, the U.S. federal, state or local tax treatment or tax structure of any transaction, any fact that may be relevant to understanding the U.S. federal, state or local tax treatment or tax structure of any transaction, and all materials of any kind (including opinions or other tax analyses) relating to such U.S. federal, state or local tax treatment or tax structure, other than the name of the parties or any other person named herein, or information that would permit identification of the parties or such other persons, and any pricing terms or nonpublic business or financial information that is unrelated to the U.S. federal, state or local tax treatment or tax structure of the transaction to the taxpayer and is not relevant to understanding the U.S. federal, state or local tax treatment or tax structure of the transaction to the taxpayer.

Limitation of Liability

In no event shall Wells Fargo be liable to you or any third party for any direct or indirect, special, incidental, or consequential damages, losses, liabilities, costs or expenses arising directly or indirectly out of or in connection with the Materials.

Tax Matters

IRS Circular 230 Disclosure: To ensure compliance with requirements imposed by the IRS, we inform you that any advice contained in the Materials does not constitute tax advice and shall not be used for the purpose of (i) avoiding tax penalties or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

If you have any questions or concerns about the disclosures presented herein, you should make those questions or concerns known immediately to Wells Fargo

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Wells Fargo Securities, LLC

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

N/A

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7 Laura Powell

Signature of vendor doing business with the governmental entity

March 8, 2016

Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

CITY OF AUSTIN, TEXAS
SECTION 0810
NON-COLLUSION,
NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING CERTIFICATION

The term **"Offeror"**, as used in this document, includes the individual or business entity submitting the Offer. For the purpose of this Affidavit, an Offeror includes the directors, officers, partners, managers, members, principals, owners, agents, representatives, employees, other parties in interest of the Offeror, and any person or any entity acting for or on behalf of the Offeror, including a subcontractor in connection with this Offer.

1. **Anti-Collusion Statement.** The Offeror has not in any way directly or indirectly:

   a. colluded, conspired, or agreed with any other person, firm, corporation, Offeror or potential Offeror to the amount of this Offer or the terms or conditions of this Offer.

   b. paid or agreed to pay any other person, firm, corporation Offeror or potential Offeror any money or anything of value in return for assistance in procuring or attempting to procure a contract or in return for establishing the prices in the attached Offer or the Offer of any other Offeror.

2. **Preparation of Solicitation and Contract Documents**. The Offeror has not received any compensation or a promise of compensation for participating in the preparation or development of the underlying Solicitation or Contract documents. In addition, the Offeror has not otherwise participated in the preparation or development of the underlying Solicitation or Contract documents, except to the extent of any comments or questions and responses in the solicitation process, which are available to all Offerors, so as to have an unfair advantage over other Offerors, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

3. **Participation in Decision Making Process.** The Offeror has not participated in the evaluation of Offers or other decision making process for this Solicitation, and, if Offeror is awarded a Contract no individual, agent, representative, consultant, subcontractor, or sub-consultant associated with Offeror, who may have been involved in the evaluation or other decision making process for this Solicitation, will have any direct or indirect financial interest in the Contract, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

4, **Present Knowledge.** Offeror is not presently aware of any potential or actual conflicts of interest regarding this Solicitation, which either enabled Offeror to obtain an advantage over other Offerors or would prevent Offeror from advancing the best interests of the City in the course of the performance of the Contract.

5. **City Code.** As provided in Sections 2-7-61 through 2-7-65 of the City Code, no individual with a substantial interest in Offeror is a City official or employee or is related to any City official or employee within the first or second degree of consanguinity or affinity.

6. **Chapter 176 Conflict of Interest Disclosure.** In accordance with Chapter 176 of the Texas Local Government Code, the Offeror:

   a. does not have an employment or other business relationship with any local government officer of the City or a family member of that officer that results in the officer or family member receiving taxable income;

b. has not given a local government officer of the City one or more gifts, other than gifts of food, lodging, transportation, or entertainment accepted as a guest, that have an aggregate value of more than $100 in the twelve month period preceding the date the officer becomes aware of the execution of the Contract or that City is considering doing business with the Offeror. and

c. does not have a family relationship with a local government officer of the City in the third degree of consanguinity or the second degree of affinity.

7. As required by Chapter 176 of the Texas Local Government Code, Offeror must file a Conflict of Interest Questionnaire with the Office of the City Clerk no later than 5:00 P.M. on the seventh (7th) business day after the commencement of contract discussions or negotiations with the City or the submission of an Offer, or other writing related to a potential Contract with the City. The questionnaire is available on line at the following website for the City Clerk:

   http://www.austintexas.gov/department/conflict-interest-questionnaire

   There are statutory penalties for failure to comply with Chapter 176.

   If the Offeror cannot affirmatively swear and subscribe to the forgoing statements, the Offeror shall provide a detailed written explanation with any solicitation responses on separate pages to be annexed hereto.

8. **Anti-Lobbying Ordinance.** As set forth in the Solicitation Instructions, Section 0200, paragraph 7N, between the date that the Solicitation was issued and the date of full execution of the Contract, Offeror has not made and will not make a representation to a City official or to a City employee, other than the Authorized Contact Person for the Solicitation, except as permitted by the Ordinance.

Signed: Laura Powell

Name and Title: Laura Powell, Managing Director

Date: March 8, 2016

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-104853

Date Filed:
08/26/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Wells Fargo Securities, LLC
Charlotte, NC United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

20160818-032-033-034 GO BPA
Bond Underwriting Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Bracewell LLP (Underwriters' Counsel)	Austin, TX United States		X
Deithloff, Tim (Underwriters' Counsel)	Austin, TX United States		X
Weiss, Jonathan G.	New York, NY United States	X	
Smith, Jeremy	Charlotte, NC United States	X	
Smith, Phillip D.	Charlotte, NC United States	X	
Shrewsberry, John R.	San Francisco, CA United States	X	
Schumaker-Krieg, Diane	New York, NY United States	X	
Rettig, Paul A.	San Francisco, CA United States	X	
Pink, Christopher W.	New York, NY United States	X	
Engel, Robert A.	Charlotte, NC United States	X	
DuBose, Mary K.	Charlotte, NC United States	X	
Dolhare, Walter H.	Charlotte, NC United States	X	
EVEREN Capital Corporation	Charlotte, NC United States	X	

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-104853

Date Filed:
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1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Wells Fargo Securities, LLC
Charlotte, NC United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

20160818-032-033-034 GO BPA
Bond Underwriting Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

Laura Powell

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP/SEAL ABOVE

ELLIOT J CUEVAS NOTARY PUBLIC STATE OF TEXAS NOTARY ID 126826 1-5 9/3/2017

Sworn to and subscribed before me, by the said Laura Powell, this the 29th day of August, 20 16, to certify which, witness my hand and seal of office.

Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath
	Elliot Cuevas	Notary Public

UNDERWRITER – INVESTMENT BANKING

REGIONAL CONTRACTS

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Jefferies LLC ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Jefferies LLC having offices at 300 Crescent Court, Suite 500, Dallas, TX 75201 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Jefferies LLC Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

JEFFERIES LLC	**CITY OF AUSTIN**
Tilghman Naylor	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
Managing Director	Senior Buyer Supervisor
Title:	Title:
6/24/2016	6/24/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Jefferies LLC

Company Address: 300 Crescent Court, Suite 500

City, State, Zip: Dallas, Texas 75201

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Tilghman Naylor

Title: Managing Director

Signature of Officer or Authorized Representative: TNaylor

Date: 3/7/16

Email Address: Tnaylor@jefferies.com

Phone Number: 972-701-3038

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

The City of Austin, Texas

Response to Request for Qualifications Statements for Underwriter/Investment Banking Services

Solicitation No. TVN0103REBID

March 8, 2016

Jefferies

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	X	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes		**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Jefferies LLC

Company Name

Tilghman Naylor, Managing Director

Name and Title of Authorized Representative (Print or Type)

Signature — **Date** 3/7/16

Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Utilization Plan
(Please duplicate as needed)

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

PRIME CONTRACTOR / CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant	Jefferies LLC		
Address	300 Crescent Court, Suite 500		
City, State Zip	Dallas, Texas 75201		
Phone Number	972-701-3038	Fax Number	972-692-6983
Name of Contact Person	Tilghman Naylor		
Is Company City certified?	Yes ☐ No x MBE WBE MBE/WBE Joint Venture		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

Tilghman Naylor, Managing Director
Name and Title of Authorized Representative (Print or Type)

Signature **Date** 3/7/16

Provide a list of all proposed subcontractors / sub-consultants / suppliers that will be used in the performance of this Contract. **Attach Good Faith Effort documentation if non MBE/WBE firms will be used.**

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE WBE Ethics / Gender Code: Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE WBE Ethics / Gender Code: Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor _____ **Date** _____ **Director/Deputy Director** _____ **Date** _____

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-102523

Date Filed:
08/22/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Jefferies LLC
New York, NY United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Underwriter/Investment Banking Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Jefferies Group LLC	New York, NY United States	X	

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

LEON J BIJOU
Notary Public, State of New York
No. 02BI4795468
Qualified in Kings County
Commission Expires 08/02/2019

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Neil Flanagan, this the 22nd day of August, 2016, to certify which, witness my hand and seal of office.

Signature of officer administering oath | Printed name of officer administering oath: Leon J. Bijou | Title of officer administering oath: Municipal General Counsel

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Piper Jaffray & Co. ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Piper Jaffray & Co. having offices at 7000 N. Mopac Expressway, Suite 2102, Austin, TX 78731 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Piper Jaffray & Co. Offer, dated 2/18/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

PIPER JAFFRAY & CO.	**CITY OF AUSTIN**
Kimberly K. Edwards	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Kimberly K Edwards	
Signature	Signature
Senior Vice President	Senior Buyer Supervisor
Title:	Title:
July 6, 2016	7/14/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Piper Jaffray & Co.

Company Address: 7000 N. Mopac Expressway, Suite 2102

City, State, Zip: Austin, TX 78731

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Kimberly K. Edwards

Title: Senior Vice President

Signature of Officer or Authorized Representative: Kimberly K Edwards

Date: 2/18/16

Email Address: kimberly.k.edwards@pjc.com

Phone Number: 512.514.6430

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

PiperJaffray

March 8, 2016

City of Austin

Response to: Request for Qualification Statements
Solicitation No: TVN0103REBID

Tim Kelley
Managing Director
Tel: 210-733-0895
Email: timothy.h.kelley@pjc.com

Kim Edwards
Senior Vice President
Tel: 512-514-6430
Email: Kimberly.k.edwards@pjc.com

Danielle Bradford
Assistant Vice President
Tel: 713-655-8643
Email: danielle.n.bradford@pjc.com

AUSTIN | HOUSTON | SAN ANTONIO | THE WOODLANDS | ALBUQUERQUE

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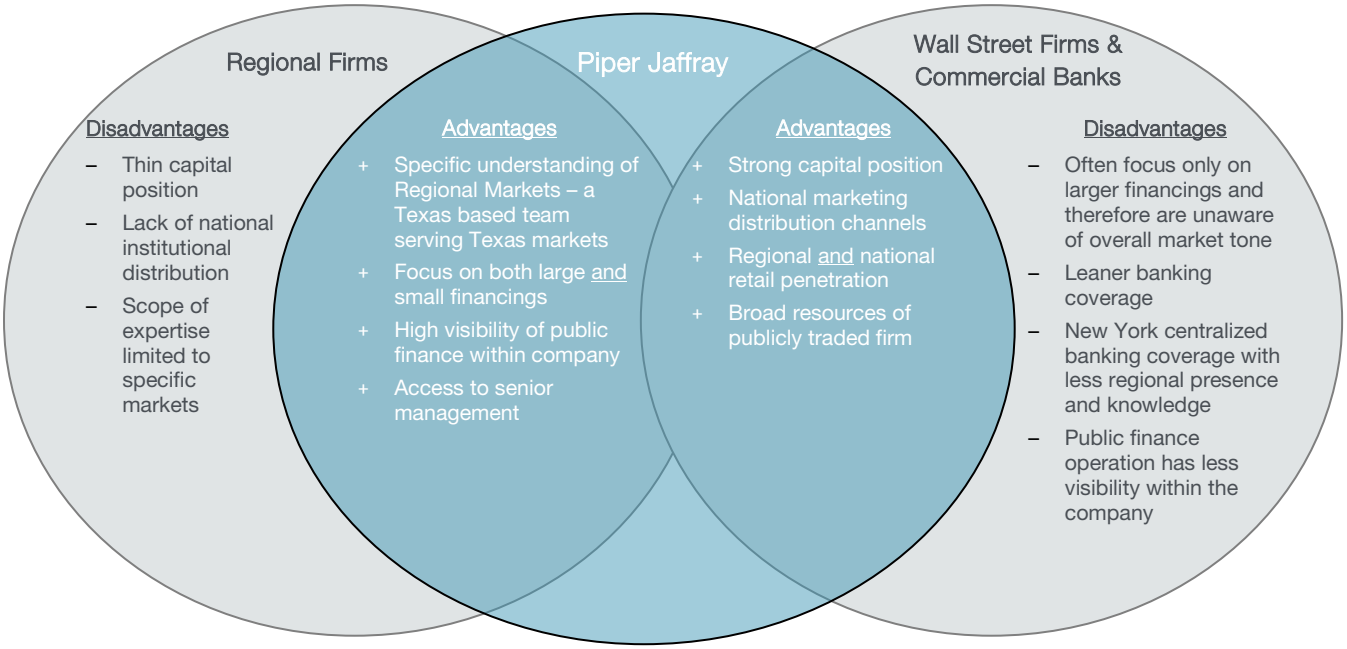
Executive Summary

Piper Jaffray is pleased to submit its qualifications to continue to serve as a member of the City of Austin Underwriting Pool. We hope that you will find that the caliber of Piper Jaffray's underwriting capabilities and our financing expertise and ideas distinguish us as a valuable member of the City's pool and underwriting syndicates. Some of the highlights of our proposal include:

Piper Jaffray's Unique Investment Banking Platform – Piper Jaffray has a unique position among underwriting firms – we are a large, well established and well capitalized regional firm (headquartered in Minneapolis, Minnesota) with many of the strengths of our national competitors. We provide the capital and public finance resources of a large national firm with the distribution network and local market knowledge of a regional firm. For example, Piper Jaffray has the capital to underwrite up to $2.6 billion of municipal bonds, but unlike larger bulge bracket firms, Piper Jaffray has a business model that places high importance on its public finance platform. Public Finance and municipal underwriting represents 30% of our firm's staffing resources. Piper Jaffray has a very flat management structure, with each regional public finance office reporting to the head of Public Finance, Frank Fairman, who reports directly to Piper Jaffray CEO, Andrew Duff. Our flat organizational structure ensures that all levels of management are committed to providing the staff and financial resources needed to effectively serve our clients, including committing capital to underwrite bonds.

Regional Firm with strong Public Finance focus and commitment – In addition, Piper Jaffray offers a full range of Public Finance products and services, including a very active negotiated and competitive underwriting desk, financial advisory services (outside of Texas), remarketing and dealer services for short term and variable rate products such as VRDBs, Soft Puts and SIFMA Notes; derivative products, and syndicated loan participation. We have 10 trading and commitment desks and 25 sales offices in various regions of the country, which creates a sales and distribution platform that can penetrate market segments often not covered by national firms. As illustrated by the graphic below, this unique ability to provide broad financial resources and expertise, while at the same time providing a superior level of client focus and specific understanding of regional markets is unlike any other investment bank.



Strong balance sheet and willingness to commit capital – Piper Jaffray's current total capital is $707 million, and we have no liabilities that would impact the capital position of the firm. All of the firm's excess net capital ($149 million) is available to support our municipal underwriting and secondary trading activities. In 2015 alone, we committed over $1.9 billion to underwrite unsold balances on 692 transactions. We are also very active in the competitive and secondary markets, ensuring market liquidity.

Dedicated Short-term Underwriting Desk – Piper Jaffray is one of the only regional firms with a New York based short term underwriting desk that thoroughly understands the short term investor base and market, as demonstrated by our aggressive pricing of these products for large issuers such as the Texas Transportation Commission, San Antonio CPS Energy, and San Antonio Water System

Broad Distribution Network – Piper Jaffray offers the City the same Tier I coverage of large investors that is provided by Wall Street firms and necessary to support large financings (i.e, over $200 million), but we also provide deep regional coverage of middle market investor accounts, including accounts that invest on behalf of individual retail investors, which have proven to be the back-bone of the market during periods of the financial crisis and interest rate uncertainty. This distribution network can increase demand for the City's bonds, providing more liquidity in the market place and a lower cost of capital. The table below highlights several recent transactions where Piper Jaffray acted as book-running senior manager. Piper Jaffray's sales force has relationships with investors interested in a diverse range of transactions whose capabilities range from a few thousand to millions of bonds per transaction.

Diversity of Investors in Recent Senior Managed Transactions

Sale Date	Par Amount ($)	Issuer	Transaction	# of Different Investors Placing Orders w/Piper	Size of Investor Orders ($)
3/6/2014	1,157,795,000	TxDOT	SHF 2014A	74	15,000 - 164,960,000
10/14/2015	369,800,000	TX Public Finance Auth	GO (Taxable) 2015	55	25,000 - 18,490,000
3/6/2014	300,000,000	TxDOT	SHF 2014B (SIFMA FRN)	16	500,000 - 300,000,000
7/15/2015	249,660,000	Montgomery ISD	ULT Bldg & Rfg 2015	38	25,000 - 62,475,000
7/29/2014	223,245,000	San Antonio	GO 2014A&B	43	15,000 - 19,295,000
2/2/2016	216,340,000	SAWS	Rev 2016A&B	78	10,000 - 17,000,000
12/2/2014	168,730,000	Alvin ISD	ULT GO 2014C	29	25,000 - 15,275,000
4/7/2015	232,325,000	Lone Star College Syst	LT GO 2015A&B	34	30,000 - 39,870,000
7/16/2015	78,360,000	Clint ISD	ULT Schl Bldg 2015	27	5,000 - 35,965,000

National Presence – Piper Jaffray is one of the leading regional investment banking firms in the country, and routinely ranks as one of the top ten underwriters in terms of both number of transactions and par amount. Our underwriting desk is one of the most active in the country, supporting a variety of issues in terms of credit, par amount and type of issuer. Nationally in 2015, Piper Jaffray was ranked 10th in terms of par amount for national negotiated long-term transactions and we were ranked 3rd in terms of number of transactions.

National Negotiated Long-Term Transactions
Senior/Sole Ranked by Par Amount
2015

Full to Book Runner (Equal if Joint)	Par Amount (US$ mil)	Rank	Number of Issues
Bank of America Merrill Lynch	33,007.5	1	305
Citi	32,381.7	2	337
J P Morgan Securities LLC	31,528.7	3	275
RBC Capital Markets	23,481.1	4	669
Morgan Stanley	23,464.2	5	257
Wells Fargo & Co	16,844.2	6	191
Stifel Nicolaus & Co Inc	16,718.3	7	811
Raymond James	13,648.0	8	479
Barclays	13,547.5	9	123
Piper Jaffray & Co	**12,103.4**	**10**	**497**

Texas Public Finance Commitment - Piper Jaffray opened its first Texas office in Houston in 1999 and since that time has participated in all segments of the Texas market, including cities, school districts, community colleges, state agencies, transportation agencies and universities, providing a thorough understanding of the Texas marketplace. **We now have offices in Austin, San Antonio and Houston staffed with a total of nine public finance bankers.** Our Houston office also includes a fixed income sales person and two equity research analysts. **In 2015, Piper Jaffray participated in 83 transactions totaling over $10 billion in Texas.** Thanks to our experienced banking team, exceptional sales force, and our willingness to commit our capital, Piper Jaffray continually ranks among the top underwriters both in Texas and Nationally.

Texas Negotiated Long-Term Transactions
Senior/Sole/Co Ranked by Par Amount
2015

Full to Each Manager	Par Amount (US$ mil)	Rank	Number of Issues
Raymond James	15,513.7	1	322
RBC Capital Markets	13,676.3	2	264
J P Morgan Securities LLC	12,354.3	3	76
Citi	10,399.8	4	88
Piper Jaffray & Co	**10,176.0**	**5**	**83**
Morgan Stanley	9,687.2	6	64
Wells Fargo & Co	9,306.3	7	86
Siebert Brandford Shank & Co	8,795.1	8	45
Frost National Bank	8,274.0	9	95
Ramirez & Co Inc	6,372.9	10	48

Experience with the City of Austin - Since 2000, Piper Jaffray has participated as a senior or co-manager on 20 series of bonds for the City of Austin, totaling $1.4 billion. Most recently, Piper Jaffray has had the opportunity to serve the City of Austin as a co-managing underwriter on four transactions in which we supported the transactions by placing orders that exceeded our liability. In particular, on the Series 2014 Airport System Revenue bonds, we received six priority (group net) orders totaling $4,500,000, indicating that we had a relationship

with an investor that the senior manager did not. We have also actively bid on the City's competitive sales, winning the Series 2012 Certificate of Obligation bid.

Experienced Finance Team – Each of our senior bankers has over 25 years of experience in public finance, serving a variety of public finance clients. Our backgrounds are diverse – as a banker, financial advisor, and an issuer -making our perspective and skill set unique from other investment bankers. **Kim Edwards** and **Tim Kelley** will serve as the lead bankers assigned to the City, supported by **Danielle Bradford**. Prior to joining Piper Jaffray, Mr. Kelley served as financial advisor to some of the largest issuers in the State, including the City of San Antonio and City of Houston, as well as a banker to a broad spectrum of clients. He has considerable expertise in complex quantitative modeling and financing structures for cities, school districts, community colleges and state agencies. **Ms. Edwards** began her career as an intern with the City of Austin's Capital Budget Office in 1986, supporting the debt management staff, and has been a resident of the City of Austin for over 25 years. In addition to banking, her experience includes over a decade with the State of Texas managing the State's primary GO debt portfolio. Ms. Bradford currently provides quantitative analysis and banking support on several large complex financing programs in Texas and New Mexico, including the City of Dallas and the City of Houston, Austin ISD and Austin Community College District.

Strong Analytical Capabilities – Unlike many regional firms, the Piper Jaffray team provides one of the most sophisticated financial modeling and quantitative analytical teams in the industry. This expertise, combined with the local knowledge of the issues and challenges facing the City, allows us to identify financing strategies that are relevant and useful to the City of Austin to meet its debt management objectives. As discussed in more detail in our proposal, we have identified techniques such as the use of short term or variable rate debt to improve the financial position of the Electric and Water Utility, ways to structure future debt issuance for each of the City's credits, as well as traditional refunding opportunities in current market conditions.

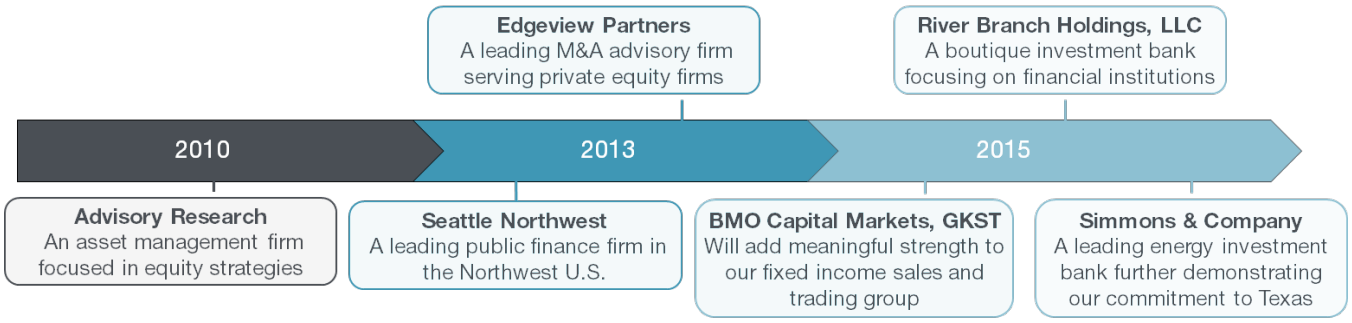
Main Document

A. Part I: Business organization: State full name State full name and address of your organization and identify parent company if you are a subsidiary. Specify the branch office or other subordinate element which will perform, or assist in performing, work herein. Indicate whether you operate as a partnership, corporation, or individual. Include the State in which incorporated or licensed to operate.

Piper Jaffray & Co., a subsidiary of Piper Jaffray Companies, is a leading investment bank and financial services firm. We are organized as publicly traded corporation (NYSE ticker PJC), headquartered in Minneapolis, Minnesota, and incorporated in Delaware. Piper Jaffray has 42 offices across the United States, including 38 public finance offices, 25 sales offices and 10 trading desks. Bankers from our public finance offices in Austin, San Antonio, and Houston will serve the City of Austin on the work described in this RFP. Piper Jaffray & Co. is licensed and FINRA registered in all 50 states, including the State of Texas. Washington D.C., Puerto Rico, and the Virgin Islands are also listed on our FINRA Form BD.

i. Management/Ownership: Provide any recent or proposed changes in the firm's management or ownership.

Piper Jaffray was very resilient financially relative to many financial institutions throughout the financial crisis and has taken the opportunity to grow its public finance, municipal underwriting and fixed income distribution platforms through several acquisitions and strategic hires. In October 2015, Piper Jaffray acquired BMO Capital Markets, GKST, which increased our municipal sales force to 139 professionals, one of the largest in the country. We have also grown our financial advisory practice (outside of Texas) and asset management practices through strategic acquisitions as illustrated below. Furthermore, the firm continues to grow its non-municipal business units as well, most recently acquiring Houston-based Simmons & Co., a globally renowned energy focused investment banking firm that will add over 170 professionals to our workforce. **These acquisitions did not change the firm's management or ownership and there are no proposed changes at this time.**



ii. Confirm that the firm shall complete the City's non-discrimination certificate and submit it with response.

This question removed per Addendum.

iii. Confirm an understanding that the firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.

Piper Jaffray officers, employees or agents will not attempt to lobby or influence a vote or recommendation related to Piper's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by City Council.

iv. Municipal sales offices in the United States. Piper Jaffray has 25 municipal sales offices in the U.S..

v. Account Executives employed selling municipal bonds in the United States. 139 sales professionals.

Piper Jaffray's fixed income sales, trading and underwriting platform supports one of the largest municipal institutional sales forces in the country. Furthermore, our sales force is positioned in 25 locations across the country to provide deeper coverage of regional investor accounts and all segments of the market. **Our Texas accounts are covered by a sales force distributed around the country, including our Denver, Kansas City and Minneapolis offices, as well as our Houston sales office**. Our sales force consists of:

(1) 30 professionals that focus on the large Tier I investors
(2) 104 professionals dedicated to covering Middle Market or "Tier II" institutional investors
(3) 5 professionals who focus on taxable Tier I and Tier II investors.

Municipal Sales Force			
Location	**Professionals**	**Location**	**Professionals**
Atlanta	1	Kansas City	3
Baltimore	6	Memphis	1
Barrington	6	Milwaukee	4
Boca Raton	2	Minneapollis	31
Boston	2	New York	11
Charlotte	6	Philadelphia	4
Chicago	26	Pittsburgh	1
Cleaveland	4	Portland	5
Denver	7	San Francisco	6
Des Moines	2	Seattle	2
El Segundo	1	St. Louis	2
Hapaugge	4	Westport	1
Houston	**1**		
Total Sales Professionals			**139**

Piper Jaffray's middle market sales focus provides a distinct marketing advantage over other members of the underwriting syndicate because we reach potential buyers not typically covered by other dealers. The size of our sales force and its deep footprint in a number of regional areas throughout the U.S. allows us to reach investors that are not given the same attention by other firms in the industry. Other firms lack a geographically balanced presence outside of New York**, but we believe Piper Jaffray's 25 regional institutional sales "hubs" throughout the nation will broaden the investor base for the City's bonds, and is a key competitive advantage to working with Piper Jaffray.**

vi. ***Texas offices and locations, if any, along with the number of Account Executives selling municipal bonds in each Texas office identified.***

Piper Jaffray opened its first Texas office in Houston in 1999, opened an office in San Antonio in 2010, Austin in 2012, and the Woodlands in 2013, and has participated in all segments of the Texas market, including cities, school districts, community colleges, state agencies, transportation agencies and universities, providing a thorough understanding of the Texas marketplace. We now have a total of nine public finance bankers who support our Texas Public Finance business, including two specialty bankers in the Woodlands that focus on Senior Living financing. Our Houston office also includes a fixed income sales person and two equity research analysts. As mentioned above, Our Texas accounts are covered by a sales force distributed around the country, including our Denver, Kansas City and Minneapolis offices, as well as our Houston sales office. The recent acquisition of Simmons will add approximately 170 investment banking, sales & trading, equity research, and private equity professionals, most of who are based in Houston, Texas.

Office Location	Number of Bankers	Muni Sales
Austin	1	0
Houston	5	1
San Antonio	1	0
The Woodlands	2	0

B. Part II – Authorized Negotiator: Include name, address, and telephone number of person in your organization authorized to negotiate Contract terms and render binding decisions on Contract matters.

Kim Edwards is authorized to negotiate terms and tender decisions on this RFQ.

Kimberly K. Edwards
Senior Vice President
Piper Jaffray & Co.
7000 N. Mopac Expressway, Suite 2102
Austin, TX 78731

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

512-514-6430 | Phone
512-857-7886 | Fax
Kimberly.k.edwards@pjc.com

C. Part III – Background and Prior Experience: Describe only relevant corporate experience and individual experience for personnel who will be actively engaged in the contract. Do not include corporate experience unless personnel assigned to this project actively participated. Do not include experience prior to 2000. Supply the project title, year, and reference name, title, present address, and phone number of principal person for whom prior projects were accomplished. This section should include at a minimum the following: (i) Provide the year the firm was founded. (ii) Provide a brief history of the firm (iii) Provide the location of the firm's headquarters and municipal trading desks.

FIRM BACKGROUND

Piper Jaffray & Co. was founded in 1895, and is headquartered in Minneapolis, Minnesota. Piper is a leading investment bank and asset management firm, whose core business lines include public finance and fixed income, asset management, investment banking and equity sales and trading, and equity research. Piper Jaffray offers a full range of Public Finance Products and services including Competitive and Negotiated Underwriting, Variable Rate Remarketing, Financial Advisory, Derivative Products and Direct Loan Placements. Our Texas Public Finance practice was established in 1999, following a merger with U.S. Bancorp, and grew substantially starting with the addition of a San Antonio office in 2010 and an Austin office in 2012. We have 10 fixed income trading desks to support our regional sales and trading distribution network. Please see Question A for additional information.

Fixed Income Trading Locations	
Baltimore	Minneapolis
Charlotte	New York
Chicago	Portland
Kansas City	San Francisco
Milwaukee	Seattle

PRIOR EXPERIENCE

Piper Jaffray is one of the leading regional investment banking firms in the country, and routinely ranks as one of the top ten underwriters in terms of both number of transactions and par amount. Our underwriting desk is one of the most active in the country, supporting a variety of issues in terms of credit, par amount and type of issuer. In 2015, Piper Jaffray served as the senior manager for nearly 500 negotiated transactions totaling $12.1 billion ranking us 3rd in regard to number of issues and 10th in regard to par amount. We served as senior managing underwriter for a deal as small as $165,000 and as large as $911,360,000, illustrating the broad distribution capabilities of our sales force.

Since 2000, Piper Jaffray has participated as a senior or co-manager on 700 negotiated underwritings in Texas totaling $69.5 billion. Included in this experience is 20 series of bond for the City of Austin, totaling $1.4 billion, and 20 other cities throughout Texas including large issuers such as the City of Houston, Dallas, Fort Worth, San Antonio, El Paso, Arlington, Lubbock and local issuers such as, San Marcos, Leander, Round Rock, Lago Vista and Temple. In **Appendix IV,** we list the relevant experience of Piper Jaffray in which the assigned bankers (Mr. Kelley, Ms. Edwards and Ms. Bradford) participated since joining the firm. This includes 249 transactions totaling $40.7 billion since 2008.

National Negotiated Long-Term Transactions Senior/Sole Ranked by Par Amount 2015

Full to Book Runner (Equal if Joint)	Par Amount (US$ mil)	Rank	Number of Issues
Bank of America Merrill Lynch	33,007.5	1	305
Citi	32,381.7	2	337
J P Morgan Securities LLC	31,528.7	3	275
RBC Capital Markets	23,481.1	4	669
Morgan Stanley	23,464.2	5	257
Wells Fargo & Co	16,844.2	6	191
Stifel Nicolaus & Co Inc	16,718.3	7	811
Raymond James	13,648.0	8	479
Barclays	13,547.5	9	123
Piper Jaffray & Co	**12,103.4**	**10**	**497**

Texas Negotiated Long-Term Transactions Senior/Sole/Co Ranked by Par Amount 2015

Full to Each Manager	Par Amount (US$ mil)	Rank	Number of Issues
Raymond James	15,513.7	1	322
RBC Capital Markets	13,676.3	2	264
J P Morgan Securities LLC	12,354.3	3	76
Citi	10,399.8	4	88
Piper Jaffray & Co	**10,176.0**	**5**	**83**
Morgan Stanley	9,687.2	6	64
Wells Fargo & Co	9,306.3	7	86
Siebert Brandford Shank & Co	8,795.1	8	45
Frost National Bank	8,274.0	9	95
Ramirez & Co Inc	6,372.9	10	48

Most recently, Piper Jaffray has had the opportunity to serve the City of Austin as a co-managing underwriter on four transactions (we have separated the Series 2013A&B based on tax status). As outlined in the table below, we have supported the transactions by placing orders that exceeded our liability. In particular, on the Airport transaction, we received six priority (group net) orders totaling $4,500,000 indicating that we had a relationship with an investor that the senior manager did not. We have also actively bid on the City's competitive sales.

Piper Jaffray's Experience Underwriting at the City of Austin						
		Original	PJC Liability		PJC Orders	
Credit	Series	Par Amount ($)	%	Amount ($)	%	Amount ($)
Ltd Tax GO	2013A	43,250,000	5.00%	2,162,500	29.49%	12,755,000
Ltd Tax GO	2013B Taxable	71,455,000	5.00%	3,572,750	13.99%	10,000,000
HOT	2013	26,485,000	12.50%	3,310,625	30.21%	8,000,000
Airport	2014 AMT	244,495,000	8.00%	19,559,600	10.02%	24,500,000
Ltd Tax GO	2015	295,065,000	12.50%	36,883,125	13.35%	39,390,000

Piper Jaffray Bids for City of Austin Competitve Sales 2012 - YTD 2016				
Transaction	Par Amount ($)	Sale Date	PJC Place	# of Bidders
Pub Imp Bds Ser 2012A	74,280,000	8/23/2012	7	10
Pub Imp Bds Taxable Ser 2012B	6,640,000	8/23/2012	3	12
C/O Ser 2012	**24,645,000**	**8/23/2012**	**1**	**9**
Pub Prop Fin Contractual Obligns Ser 2012	27,135,000	8/23/2012	7	12
Pub Imp Bds Ser 2013	104,665,000	8/29/2013	10	11
Pub Prop Fin Contractual Obligns Ser 2013	50,150,000	8/29/2013	5	11
C/O Ser 2013	25,355,000	8/29/2013	3	11

D. Part IV – Personnel: Include names, titles, and qualifications of key professional personnel who will be assigned to this project. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

Piper Jaffray offers the City of Austin an experienced and dedicated financing team, which includes our Texas public finance team, as well as our long-term underwriting desk in our Minneapolis headquarters and our short-term underwriting desk in New York. **Kim Edwards** and **Tim Kelley** will serve as the lead bankers assigned to the City, supported by **Danielle Bradford**. Our main underwriting desk, located in Minneapolis, will be responsible for underwriting the City's fixed-rate issues, and our dedicated short-term desk in New York will be responsible for any variable rate, short term or soft put products.

Prior to joining Piper Jaffray, Mr. Kelley served as financial advisor to some of the largest issuers in the State, including the City of San Antonio and City of Houston, as well as a banker to a broad spectrum of clients. He has considerable expertise in complex quantitative modeling and financing structures for cities, school districts, community colleges and state agencies. Since joining Piper Jaffray, Mr. Kelley has served as the banker for senior managed assignments at the Cities of Houston, Corpus Christi, San Antonio, and CPS Energy and San Antonio Water System and the Texas Public Finance Authority.

Ms. Edwards began her career as an intern with the City of Austin's Capital Budget Office in 1986, supporting the debt management staff, and has been a resident of the City of Austin for over 25 years. Ms. Edwards has served as co-manager to the Cities of Dallas, Austin, Leander, San Marcos and City of Temple, as well as large issuers such as AISD, TWDB, TxDOT and TPFA. Her senior managed experience includes Austin Community College, Texas Water Development Board, City of Temple and Lone Star College, as well as serving as the Executive Director of the Texas Public Finance Authority, prior to joining Piper Jaffray, where she led the financing of 55 financings totaling over $5 billion.

Ms. Bradford currently provides quantitative analysis and banking support on several large complex financing programs in Texas and New Mexico, including the City of Dallas and the City of Houston, Austin ISD and Austin Community College District, as well as large state issuers such as TPFA, TxDOT and Texas Water Development Board, UT and Texas A&M.

See **Appendix V** for the technical qualifications, experience, and resumes of each member of the District's Piper Jaffray banking team, summarized below. If selected as senior manager, the staff below will dedicate its full resources to a successful pricing, execution and closing. In addition, the table below illustrates how the team would allocate work among team members during the transaction.

Name	Title	Role	Office	Industry Experience	Firm Experience
Texas Public Finance Team					
Kim Edwards	Senior Vice President	Lead Banker – 50%	Austin	28 years	4 years
Tim Kelley	Managing Director	Lead Banker – 25%	San Antonio	27 years	6 years
Danielle Bradford	Assistant Vice President	Support Banker and Quantitative Analysis – 25%	Houston	8 years	8 years
Underwriting Sales and Trading					
Stephen Cavalier	Managing Director	Head of Municipal Underwriting	Minneapolis	27 years	13 years
Brent Rivard	Managing Director	Underwriting Tax-Exempt/Taxable	Minneapolis	15 years	15 years
Joanna Brody	Managing Director	Head of Short Term Trading and Sales – as needed	New York	23 years	7 years

In addition to our Texas banking team, Piper Jaffray has several national practices, including transportation, hospitality and real estate, with bankers that can provide expertise as needed for the City's enterprise funds such as the Airport, Hotel and Convention Center, and other economic development projects. As mentioned, resumes of relevant individuals are included in **Appendix V**.

E. <u>Part V – Innovative Financing Techniques:</u> Provide two innovative financing techniques, suggestions or ideas which would be relevant, or of interest to, the City of Austin. This can also include derivatives, debt restructuring, and self liquidity ideas. If the idea(s) was (were) used in actual transaction(s), this section should include the following: (i) Indicate the individuals referenced in Part IV above who were involved in the transaction. (ii) Provide the name, title, organization, address, and telephone number of the issuer.

The size and complexity of the City of Austin's capital improvement program and debt portfolio has grown over the past several decades, reflecting the City's tremendous economic and demographic growth and the transformation of its downtown and neighborhoods under the Smart Growth and Imagine Austin Comprehensive Plans. In particular, current challenges facing the City include:

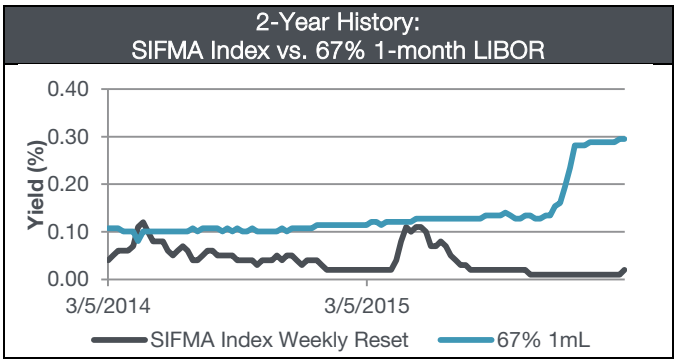
1) funding transportation and mobility - which will require partnerships with the State, County and regional organizations, as well as consideration of additional GO bond authorization,
2) pressures on the electric and water utility system to balance maintenance of sound financial practices (including debt coverage and cash flow) with policy objectives such as conservation, use of sustainable energy sources, and financial transparency of general fund transfers,
3) economic development opportunities and possible expansion of the Convention Center
4) balancing affordability with economic growth.

Pension obligations are another major concern for governments across the country, and in Texas the cities of Dallas and Houston are facing significant challenges to address unfunded liabilities. In order to fund the City's significant CIP requirements, maintain and improve the City's current credit ratings, and minimize the cost of infrastructure improvements to citizens, taxpayers, and utility customers, the City will need to continue to make prudent financial decisions over the next several years. As mentioned previously, the Piper Jaffray team has considerable experience serving large cities in Texas and based on our experience, offer the following financing strategies that could provide significant benefits to the City's financing programs. The table on the following page summarizes the City's debt programs and debt outstanding.

Credit	Par Outstanding*	Rating
General Obligation Debt	1,454,099,994	Aaa/AAA/AAA
Utility System	3,472,048,541	
Electric		A1/AA-/AA-
Water		Aa2/AA/AA-
Airport System	519,908,000	A1/A
Rental Car Special Facility	143,770,000	A3/A-/BBB+
Hotel Occupancy Tax	129,490,000	Aa3/AA-/A; A1/A/A
Mueller Local Government Corp (Contract Revenue)	51,355,000	Aa2/AA+/AA+
Town Lake Park Community Events Center	30,510,000	A (S&P)
Public Improvement Districts	44,139,992	A+/Non-rated

** Source: Municipal Advisory Council*

I. INCREASE USE OF VARIABLE RATE DEBT IN UTILITY SYSTEM'S DEBT FINANCING PROGRAM.



Given the demands for water and electric services, population growth, and the challenges of aging infrastructure, many Texas utilities face similar challenges of funding significant capital improvement programs and maintaining affordable rates and sound financial positions. Variable rate obligations have historically provided a lower cost of funding and can provide structural flexibility compared to fixed rate debt. This increased variable rate capacity could be applied to meet several different financing challenges for the electric and water utility as the City moves forward. This could lower the financing costs and provide the flexibility to cost effectively re-amortize the debt in the future in order to minimize rate increases. The City could issue FRNs such as SIFMA Indexed Bonds, Term mode "Put" Bonds or VRDBs to increase its variable rate exposure. In recent weeks, because of the absolute low rates of the SIFMA index (2 bps), investors have demanded much wider spreads for SIFMA-indexed products. Similarly, the prolonged low rate environment has resulted in investor demand for higher coupons on the term mode "Put" bonds, reducing the benefit to the issuer of a lower interest payment during the initial term. Consequently, some issuers have turned to percent of LIBOR indexed securities, or the use of a daily or weekly VRDB with a letter of credit to obtain more cost effective short term financing. Although soft put bonds in SIFMA Index or Term Rate Mode have been frequently used in the past two years, the City should evaluate other variable rate structures as well as market conditions continue to evolve.

It has been our experience that the City could pursue these strategies and without a negative impact on the current ratings of the utilities. Piper Jaffray has served similar utility clients by employing these strategies. In the course of our engagement we had detailed conversations with rating analysts relating to 1) debt refunding/restructurings 2) employing variable rate as part of a long term financing plan and 3) increasing the average life of a system debt profile. In each case the issuer received no negative impact by employing these strategies. In our view, the rating agencies reacted positively to the client's proactive debt management program. This is particularly true when the actions enhanced their ability to finance projects that meet growing customer needs and maintain the existing infrastructure. Employing debt strategies that limits the rate increase to the minimum amount necessary will be well received.

The City maintains commercial paper programs for the Electric and Water Utilities that are supported by letters of credit. Commercial Paper provides an effective cash flow management tool for capital spending, and allows the City to take advantage of extremely low borrowing rates on the short end of the yield curve. While some large issuers with large cash pools or endowments, such as State governments and universities, have used self-liquidity to support CP and other forms of variable rate debt, given the City's current cash balances, it is unlikely that the daily liquidity constraints imposed by the rating agencies to manage self liquidity and the low investment returns on cash in the current market would make self liquidity cost effective compared to a letter of credit at current market rates. In addition, on the GO credit, the City's practice of reimbursement funding general government capital expenditures from the general fund with bond proceeds in effect achieves a similar goal as self liquidity and helps minimize arbitrage rebate liability (in a higher interest rate environment).

City of San Antonio, Texas Electric and Gas Systems $47,660,000 Variable Rate Junior Lien Revenue Refunding Bonds, Series 2012C

Linda Dzierzanowski
CPS Energy
(210) 353-2396
ldzierzanowski@cpsenergy.com
Banker: Tim Kelley

The Series 2012 Bonds were issued to refinance the outstanding variable rate Junior Lien Obligations and allow CPS to maintain variable interest rate exposure (over term rate periods having durations of two to four years) without the requirement to also maintain third-party bank liquidity. The transaction refunded the outstanding Series 2004 variable rate securities on December 3, 2012. The Series 2012 A, B & C bonds had a final term to maturity of 2027 but were initially marketed in terms of 2-4 years in duration. The transaction allowed CPS Energy to access the short end of the yield curve without the expense of a liquidity facility while maintaining the ability to remarket the bonds in alternative modes upon the expiration of the initial terms. The 2012A, B & C Bonds were issued with a mandatory tender date of 12/1/2014, 12/1/2015 and 12/1/2016, respectively. At the end of the initial terms, CPS will remarket or refund the bonds into another term period or convert the bonds to any other mode provided in the issuing ordinance. A delayed or failed remarketing of the bonds does not constitute an event of default and until such time as CPS redeems or remarkets such Bonds the Bonds shall bear interest at 7.0%.

II. DEBT STRUCTURING THROUGH NEW MONEY AND REFUNDING/RESTRUCTURING

Maximize Liquidity and Debt Capacity through New Issue Structuring

Amortization - As the City proceeds with the debt issuance for general fund supported infrastructure and each of the enterprise systems, the amortization of new issue financings can be tailored to meet the cash flow needs of each system and provide capacity to fund that portion of the CIP. For example, given the extremely low fixed interest rates available today, the City can consider deferring principal and structuring around the near term maximum annual debt service requirements. Structuring debt with a longer average life today while avoiding principal amortization in critical years can be done a relatively low cost and also provides a hedge against higher rates in the future and minimize rate/revenue pressure in the near term. Provided below are specific strategies that could be useful for each component of the city's debt portfolio.

General Obligation Bonds – The City currently has approximately $200 million of remaining GO Bond authorization from the 2006, 2012, and 2013 affordable housing bond elections. The GO debt is structured with generally level principal and declining debt service, providing ample capacity to support new voter authorization. As reflected in the City's most recent CIP, all departments face infrastructure needs, but mobility, streets, and transportation, in particular will be a high priority as the City begins planning for the next bond election.

Airport – The airport system in particular would benefit by deferring principal on its contemplated 2016 issue to "wrap" the new money debt service around the existing debt service, which peaks in 2019 – 2025 at about $45 million a year, and then drops to $20m from 2026 – 2024. Piper Jaffray has provided the City and Airport staff with several analyses over the past year, showing how such a structure would create a more level debt service pattern and debt capacity for future capital improvements. In our most recent analysis, we structured principal from 2026 – 2046, with an overall TIC of 4.16% (23 years average life, AMT). The impact of the amortization on the debt service reserve fund requirements should also be considered.

Water Utility – The Water Utility could also benefit from strategic debt structuring of the upcoming refunding and CP take out to minimize debt service in the current peak years, which are 2016-17, and 2023-2027, and until the Prior Lien obligations mature. Use of a short term debt instrument through 2019, combined with back-loading principal beyond the 2027 debt service peak could create a more level debt service structure and help the utility build liquidity and minimize the need for rate increases, as conservation efforts create less certainty in the revenue stream. Although the City has moved to no reserve, the impact of the amortization on the debt service reserve fund requirements on prior bond issues and surety agreements, should also be considered.

Electric Utility – Similarly, the electric utility faces debt service peaks in 2016 and 2017, and declining debt service after the repayment of the prior lien debt. As the City contemplates a rate increase, the use of short term products such as soft puts or VRDB's could provide lower debt service and flexibility to reamortize debt when the short term debt is fixed out. Although the City has moved to no reserve fund, the impact of the amortization on the debt service reserve fund requirements on prior bond issues should also be considered.

HOT Tax Supported Debt – The majority of the HOT tax debt is the $90 million of Series 2008 variable rate issue that is swapped to fixed, amortizing through 2029, issued to finance the Austin Convention Center, Palmer Events Center, and related parking structures. In addition, the Series 2012 and 2014 Refundings are structured with level debt service. New debt to finance the convention center expansion could be structured to target projected growth in the HOT tax collections to provide sufficient coverage.

Interest Rate Swaps - We have also evaluated the City's three outstanding interest rate swaps on the 2008 Water and Wastewater Revenue Bonds, 2005 Airport Revenue Bonds and the 2008 HOT Tax Bonds and at this point in time do not feel it would be cost effective for the City to terminate these swaps. If requested, Piper Jaffray's derivative desk could assist the City with determining termination payments and restructuring alternatives for these bonds.

Organizational Changes – From time to time there has been discussion about reorganizing the Water Utility and Electric Utility into separate legal entities governed by a separate board of directors, under the control of the City, so that utility management and governance would have dedicated attention and resources. The City of San Antonio went through a similar organization change several decades ago. More recently, the City of San Antonio Water System ("SAWS) assumed the BexarMet Waterworks System. Typically such reorganizations require some restructuring and assumption of the entity's debt. Tim Kelley worked with the City of San Antonio and SAWS on such restructurings when SAWS was created in the early 1990's and most recently, on the BexarMet restructuring.

San Antonio Water System Junior Lien Revenue and Refunding Bonds
$173,565,000 Tax-Exempt Series A
$42,775,000 Taxable Series B

Doug Evanson, CFO
San Antonio Water System
(210) 233-3803
Doug.evanson@saws.org
Banker: Tim Kelley

The San Antonio Water System ("SAWS"), as a result of the passage of Senate Bill 341 ("SB 341") by the 82nd Texas Legislature in 2011, assumed the BexarMet Waterworks System ("BexarMet") on January 28, 2012, and BexarMet as an existing and operating entity was dissolved. SAWS took operational control of the utility through a newly formed "District Special Project" ("DSP") which assumed all of BexarMet's outstanding assets and debt. As prescribed by the legislation, SAWS was required to eventually combine the DSP into the System, including the consolidation of revenues and debt of the two systems. To accomplish the combination of the DSP System into the System, SAWS was required to refund and restructure all of the remaining DSP debt through the issuance of debt on parity with SAWS currently outstanding debt. Piper Jaffray worked closely with SAWS to evaluate several alternative structures in an effort to minimize the cost of restructuring the debt and create a combined debt structure that minimized rate pressure for its existing customers. The analysis included working closely with the City's financial advisor and bond counsel to ascertain the tax law implications and allowable structure of the refunding and providing several scenarios that complied with tax law provisions. Ultimately, Piper Jaffray developed a unique fixed rate structure that amortized a majority of the taxable debt on the short end of the yield curve. This structure captured the lowest interest cost for SAWS and produced the highest present value savings.

Piper Jaffray served as book-running senior manager to SAWS when they priced approximately $216 million bonds on February 2, 2016. The bonds consisted of two Series, the $173,565,000 Tax-Exempt Series A Junior Lien Revenue Refunding Bonds and the $42,775,000 Taxable Series B Junior Lien Revenue and Refunding Bonds. After the final pricing, SAWS was able to achieve present value debt service savings of over $16.9 million dollars. Piper Jaffray's structuring expertise allowed us to achieve the best value for the client while complying with a number of complicated tax laws and structuring requirements. This could become particularly relevant to the City should it ever decide to divest its Electric and/or Water Utility to a separate entity governed by Austin City Council (similar to SAWS and CPS).

Minimize debt service costs by continuing to refund higher cost debt.

As we have presented in the past, the City has several refunding opportunities of its General Obligation, Water and Wastewater, and Electric Systems, as well as a refunding on the Town Lake Park debt. The City could consider a refunding program for each of these entities as a means of achieving debt service savings and increasing debt capacity. These opportunities are summarized below, with a detailed analysis and cash flows in **Appendix VI**.

Summary of Refunding Results				
	GO	WWSS	Electric	Town Lake
Series (or Partial) Included	**2008 C/O, 2008 PIB, 2009 C/O**	**2006A, 2007, 2009, 2009A, 2010A**	**2008A, 2010A**	**2005**
Par Amount of Refunded Bonds ($)	68,760,000	342,550,000	93,695,000	30,510,000
Par Amount of Refunding Bonds ($)	64,650,000	313,840,000	87,970,000	27,970,000
True Interest Cost:	1.99%	2.67%	3.27%	2.41%
Savings ($)	9,559,434	52,004,453	12,607,213	5,890,136
NPV Savings ($)	8,236,844	38,526,795	9,027,340	4,907,825
NPV Savings as a % of Refunded Par	11.98%	11.25%	9.63%	16.09%
Negative Arbitrage	1,662,289	11,781,543	4,724,679	53,747
Negative Arb as % of NPV Savings	20.18%	30.58%	52.34%	0.18%

F. <u>Part VI – Financial Viability:</u> Provide the recent audited annual Audit Report and most recent interim financial reports as an attachment or appendix item. Hard copies must be supplied in response.

Please see the requested financial reports behind **Appendix VII**.

i. Provide the current equity capital positions (total equity capital, net equity capital and excess net equity capital) in accordance with GAAP, or corresponding equity information if a bank. Do not refer to the annual audit as a response to this question.

Piper Jaffray's current total capital is $783 million, and we have no liabilities that would impact the capital position of the firm. All of the firm's excess net capital ($186.8 million) is available to support our municipal underwriting and secondary trading activities. All of our excess net capital is held either in cash, lines of credit, treasuries or municipal securities. The percentage varies from day to day, but all are extremely liquid. **As a legal matter, based on our excess net capital ($186 million) we can underwrite up to $2.6 billion per transaction.**

Capital as of 12/31P/2015	
Total Capital ($)	783,659,000
Equity Capital ($)	783,659,000
Net Equity Capital ($)	187,880,000
Excess Net Capital ($)	186,880,000

Piper Jaffray served as senior manager for the $1,157,795,000 Texas Transportation Commission State Highway Fund Bonds, Series 2014A and took into inventory unsold bonds of $62.21 million. As another example, we served as senior manager for the $476,050,000 City of Houston Combined Utility System Series 2009A and we took into inventory the unsold $72.22 million bonds, or 15% of the transaction, at a time when the market was particularly challenging.

G. <u>Part VII – Austin Bond Experience:</u> In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

Please see Question C above.

H. <u>Part VIII – References</u>: Provide exactly three government client references, at least two of which are covered by individuals listed in Part IV above. For each reference, provide a name, title and organization, address, and telephone number.

Corrine Steeger – Asst Director/Treasury Manager City of Dallas (214) 670-3676 Corrine.steeger@dallascityhall.com Bankers: Kim Edwards and Danielle Bradford	**Margaret Villegas – Assistant Director, Finance** City of San Antonio (210) 207-8632 Margaret.villegas@sanantonio.gov Banker: Tim Kelley
Jennifer Olenick – Deputy Assistant Director – Public Finance City of Houston (832) 393-9112 Jennifer.olenick@houstontx.gov Bankers: Tim Kelley and Danielle Bradford	

I. <u>Part X</u> - Non-Collision, Non-Conflict of Interest, and Anti-Lobbying

Please see Appendix II for the Conflicts of Interest Questionnaire.

Required Regulatory Disclosure

We are providing this material to provide you with certain regulatory disclosures as required by the Municipal Securities Rulemaking Board. As part of our services, Piper Jaffray may provide advice concerning the structure, timing, terms, and other similar matters concerning an issue of municipal securities that Piper Jaffray is underwriting or placing. However, Piper Jaffray intends to serve as an underwriter and not as a financial advisor to you in this transaction; and the primary role of Piper Jaffray is to purchase securities for resale to investors or arrange for the placement of securities in an arm's-length commercial transaction between you and Piper Jaffray. Piper Jaffray has financial and other interests that differ from your interests.

Appendix I

Offer Sheet; No Goals Form; Addendum No. 1 to RFP

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	x	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes		**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Piper Jaffray & Co.

Company Name

Kimberly K. Edwards, Senior Vice President

Name and Title of Authorized Representative (Print or Type)

Kimberly K Edwards — 2/18/16

Signature — **Date**

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. **Questions:**

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16
Terry V. Nicholson, Sr. Buyer Specialist — Date
Purchasing Office, 512-974-2995

ACKNOWLEDGED BY:

Kimberly K. Edwards — Kimberly K Edwards — 3/7/16
Name — Authorized Signature — Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

Appendix II

Conflicts of Interest Questionnaire

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Kimberly K. Edwards

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.** N/A

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

N/A

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.** N/A

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1). N/A

7 Kimberly K Edwards

Signature of vendor doing business with the governmental entity

3/7/2016

Date

Appendix IV

Negotiated Texas Experience of Bankers Assigned to the City's Underwriting Team June 2008 – February 2016

C. Prior Experience of Bankers Assigned to the City of Austin
June 2008 - February 2016

SUMMARY

	Senior/Sole Managed		Co-Managed		Total	
Year	Par Amount ($)	# Transactions	Par Amount ($)	# Transactions	Par Amount ($)	# Transactions
2008	356,940,000	5	1,117,730,000	6	1,474,670,000	11
2009	530,290,000	2	2,708,155,000	12	3,238,445,000	14
2010	-	0	4,114,000,000	19	4,114,000,000	19
2011	565,730,000	7	1,525,200,000	10	2,090,930,000	17
2012	466,800,000	6	4,337,699,000	24	4,804,499,000	30
2013	307,245,000	4	4,424,064,000	27	4,731,309,000	31
2014	2,097,710,000	12	7,377,039,000	35	9,474,749,000	47
2015	1,911,710,000	15	7,287,670,000	52	9,199,380,000	67
2016	589,765,000	6	977,106,000	7	1,566,871,000	13
	6,826,190,000	**57**	**33,868,663,000**	**192**	**40,694,853,000**	**249**

Source: SDC

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

C. Prior Experience of Bankers Assigned to the City of Austin
June 2008 - February 2016

CITIES

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)	Reference
City of Arlington						
06/10/08	34,010,000	Comb Tax & Tax Increment Rev COB	Series 2008 B	SOLE	DB	Ethan Klos Treasurer 101 S. Mesquite, Suite 800 Arlington, TX 76004 (817) 459-6303 ethan.klos@arlingtontx.gov
11/25/08	112,185,000	Special Tax Revenue Bonds	Series 2008	CO-MGR	DB	
04/21/09	13,760,000	Water & Wstwtr Sys Rev Ref Bonds	Series 2009	CO-MGR	DB	
04/23/09	62,820,000	Special Tax Revenue Bonds	Series 2009	CO-MGR	DB	
City of Austin						
09/20/13	43,250,000	Public Improvement Ref Bonds	Series 2013 A	CO-MGR	KE, TK, DB	Art Alfaro Treasurer 700 Lavaca, Suite 940 Austin, TX 78701 (512) 974-7882
09/20/13	71,455,000	Public Improvement Ref Bonds	Series 2013 B	CO-MGR	KE, TK, DB	
12/05/13	26,485,000	Hotel Occupancy Tax Rev Ref Bonds	Series 2013	CO-MGR	KE, TK, DB	
12/09/14	244,495,000	Airport System Revenue Bonds	Series 2014	CO-MGR	KE, TK, DB	
09/10/15	14,450,000	Public Prop Fin Contract Oblig	Series 2015	CO-MGR	KE, TK, DB	
09/10/15	43,710,000	Certificates of Obligation	Series 2015	CO-MGR	KE, TK, DB	
09/10/15	236,905,000	Public Improvement & Ref Bonds	Series 2015	CO-MGR	KE, TK, DB	
City of Corpus Christi						
07/10/13	82,025,000	General Improvement Bonds	Series 2013	CO-MGR	TK	Constance Sanchez, Director of Financial Services 1201 Leopard St. Corpus Christi, TX 78401 (361) 826-3600
12/06/13	97,930,000	Utility Sys Jr Lien Rev Imp Bonds	Series 2013	LEAD	TK	
07/31/15	90,520,000	General Improvement Bonds	Series 2015	CO-MGR	TK	
City of Dallas						
11/10/10	17,570,000	Equipment Acq Contractual Obliga	Series 2010	CO-MGR	DB	Corrine Steeger Cash & Debt Management - Controller's Office 1500 Marilla St. Room 2BS Dallas, TX 75201 (214) 670-3676
11/10/10	77,670,000	GO Refunding Bonds	Series 2010	CO-MGR	DB	
11/10/10	142,035,000	GO Refunding Bonds	Series 2010 C	CO-MGR	DB	
08/22/12	106,720,000	Wtrwks & Swr Sys Rev Ref Bonds	Series 2012 B	CO-MGR	DB	
08/22/12	259,420,000	Wtrwks & Swr Sys Rev Ref Bonds	Series 2012 A	CO-MGR	DB	
07/09/13	42,615,000	GO Refunding Bonds	Series 2013 B	CO-MGR	KE, DB	
07/09/13	194,470,000	GO Refunding & Improvement Bonds	Series 2013 A	CO-MGR	KE, DB	
12/10/14	529,365,000	GO Refunding & Improvement Bonds	Series 2014	CO-MGR	KE, DB	

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)	Reference
City of Fort Worth						
08/11/11	151,160,000	Wtr & Swr Sys Rev Ref & Imp Bonds	Series 2011	CO-MGR	DB	Aaron Bovos CFO, Department of Financial Management Services 1000 Throckmorton Street Fort Worth, TX 76102 (817) 392-8500
City of Frisco						
07/15/15	14,965,000	Comb Tax & Surplus Rev Cert Oblig	Series 2015	CO-MGR	KE, DB	Nell Lange, Assistant City Manager 6101 Frisco Square Blvd. Frisco, TX 75034 (972) 335-1695
07/15/15	107,710,000	GO Refunding & Improvement Bonds	Series 2015 A	CO-MGR	KE, DB	
City of Grand Prairie						
11/03/15	74,825,000	Sales Tax Revenue Bonds	Series 2015	CO-MGR	KE	Diana Ortiz Chief Financial Officer 317 College Street Grand Prairie, TX 75050 (972) 237-8090
City of Houston						
10/29/08	324,030,000	Public Improvement Ref Bonds	Series 2008 A	CO-MGR	DB	Jennifer Olenick Deputy Asst. Director - Public Finance 611 Walker, 11th Floor Houston, TX 77002 (832) 393-9112
04/25/12	101,585,000	Public Improvement Ref Bonds	Series 2012 B	CO-MGR	TK, DB	
04/25/12	268,615,000	Public Improvement Ref Bonds	Series 2012 A	CO-MGR	TK, DB	
03/25/09	476,050,000	Combined Util Sys Rev & Ref Bonds	Series 2009 A	LEAD	DB	Susan Bandy Deputy Director - Public Works & Engineering 611 Walker, 25th Floor (832) 395-2468
02/23/11	273,275,000	First Lien Rev Refunding Bonds	Series 2011 A	CO-MGR	TK, DB	
06/09/11	426,410,000	Comb Util Sys First Lien Rev Bond	Series 2011 D	CO-MGR	TK, DB	
11/29/12	116,065,000	Comb Util First Lien Rev Ref Bond	Series 2012 F	CO-MGR	TK, DB	
03/13/14	692,890,000	First Lien Revenue Ref Bonds	Series 2014 C	CO-MGR	TK, DB	
06/13/14	547,980,000	Comb Utility Sys 1st Ln Rev & Ref	Series 2014 D	CO-MGR	TK, DB	
07/19/11	116,735,000	Hotel Occ Tx & Spec Rev Ref Bonds	Series 2011 A	LEAD	TK, DB	Brenda Bazan CFO, Houston First Corporation 1001 Avenida de las Americas Houston, TX 77010 (713) 853-8201
07/19/11	137,725,000	Hotel Occ Tx & Spec Rev Ref Bonds	Series 2011 B	LEAD	TK, DB	
02/20/15	132,590,000	Hotel Occ Tax & Special Rev & Ref	Series 2015	CO-MGR	TK, DB	

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)	Reference
City of Leander						
01/15/15	24,040,000	Comb Tax & Rev Certs of Oblig	Series 2015	CO-MGR	KE	Robert Powers Finance Director 200 West Willis Street Leander, TX 78641 (512) 528-2734
City of Pasadena						
12/18/15	50,210,000	GO Refunding Bonds	Series 2016	LEAD	DB	Wayne Long, Jr. CPA Controller 1211 E. Southmore Pasadena, TX 77502 (713) 475-5552
City of Robinson						
12/04/12	9,305,000	Comb Tax & Rev Certs of Oblig	Series 2012	CO-MGR	KE	Robert Cervenka City Manager 111 West Lyndale Robinson, TX 76706 (254) 662-1415
02/05/13	9,305,000	Comb Tax & Rev Certs of Oblig	Series 2013	CO-MGR	KE	
City of San Antonio						
10/22/08	10,120,000	General Improvement Ref Bonds	Series 2008	LEAD	DB	Margaret Villegas Assistant Director, Finance 111 Soledad, 5th Floor San Antonio, TX 78205 (210) 207-8632
06/16/10	8,800,000	General Improvement Bonds	Series 2010 A	CO-MGR	DB	
06/16/10	38,375,000	Comb Tax & Rev Certs of Oblig	Series 2010	CO-MGR	DB	
06/16/10	191,550,000	General Improvement Bonds	Series 2010 B	CO-MGR	DB	
07/12/11	139,265,000	Gen Imp & Comb Tax Rev Cert Oblig	Series 2011	CO-MGR	TK	
05/23/12	655,370,000	Electric & Gas Sys Rev Ref Bonds	New Series 2012	CO-MGR	TK	
08/02/12	167,940,000	Comb Tax Rev Crt Ob&Gen Imp Bonds	Series 2012	LEAD	TK	
10/23/12	47,660,000	Elc Gas Sys Jr Lien Rev Ref Bonds	Series 2012 C	LEAD	TK	
10/23/12	47,815,000	Elc Gas Sys Jr Lien Rev Ref Bonds	Series 2012 B	CO-MGR	TK	
10/23/12	48,170,000	Elc Gas Sys Jr Lien Rev Ref Bonds	Series 2012 A	CO-MGR	TK	
07/16/13	129,580,000	Gen Imp & Comb Tax & Rev Certs	Series 2013	CO-MGR	TK	
11/05/13	100,000,000	Water Sys Jr Ln Rev & Ref Bonds	Series 2013 F	SOLE	TK	
07/30/14	233,245,000	Tax Notes & Gen Imp & Ref Bonds	Series 2014 & B	LEAD	TK	
09/23/14	262,530,000	Elec & Gas Sys Jr Lien Ref Bonds	Series 2014	CO-MGR	TK	
07/28/15	43,820,000	Comb Tax & Rev Certs of Oblig	Series 2015	CO-MGR	TK	
07/28/15	275,650,000	Gen Imp Ref & Comb Tax Rev Certs	Series 2015	CO-MGR	TK	
02/02/16	42,775,000	Water Sys Jr Ln Rev Ref Bonds	Series 2016 B	LEAD	TK	
02/02/16	173,565,000	Water Sys Jr Ln Rev Ref Bonds	Series 2016 A	LEAD	TK	

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)	Reference
City of San Marcos						
12/10/14	6,210,000	GO Refunding Bonds	Series 2014 B	CO-MGR	KE, DB	Heather Hurlbert Director of Finance 630 East Hopkins San Marcos, TX 78666 (512) 393-8170
12/10/14	40,690,000	GO Refunding Bonds	Series 2014 A	CO-MGR	KE, DB	
02/25/16	19,345,000	GO Refunding Bonds	Series 2016	CO-MGR	KE, DB	
City of Schertz						
03/29/11	8,250,000	General Obligation Bonds	Series 2011	CO-MGR	TK	Juan Santoya Director of Finance 1400 Schertz Parkway Schertz, TX 78154 (210) 619-1000
City of Temple						
09/24/15	23,685,000	Utility System Revenue Bonds	Series 2015	CO-MGR	KE, DB	Traci Barnard Director of Finance #2 North Main Temple, TX 76501 (254) 298-5631
09/24/15	36,780,000	GO Refunding & Improvement Bonds	Series 2015	CO-MGR	KE, DB	
01/26/16	9,500,000	GO Refunding Bonds	Series 2016	LEAD	KE, DB	
01/26/16	18,285,000	Comb Tax & Rev Certs of Oblig	Series 2016	LEAD	KE, DB	
	9,378,310,000	**Subtotal: Cities**				

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

C. Prior Experience of Bankers Assigned to the City of Austin
June 2008 - February 2016

HIGHER EDUCATION (INCLUDING COMMUNITY COLLEGE DISTRICTS)

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)
Alamo Community College District					
03/01/12	22,295,000	Rev Fin Sys Sr Lien Ref Bonds	Series 2012 B	LEAD	TK
03/01/12	55,800,000	Rev Fin Sys Sr Lien & Ref Bonds	Series 2012 A	LEAD	TK
Austin Community College District					
12/03/14	13,685,000	Combined Fee Rev Ref Bonds	Series 2014 A	LEAD	KE, DB
12/03/14	23,085,000	Combined Fee Rev Ref Bonds	Series 2014 B	LEAD	KE, DB
Lone Star College System					
09/25/13	58,145,000	Revenue Financing System Bonds	Series 2013	CO-MGR	KE
04/08/15	97,455,000	Limited Tax GO Refunding Bonds	Series 2015 B	LEAD	KE
04/08/15	134,870,000	Limited Tax GO Bonds	Series 2015 A	LEAD	KE
Stephen F. Austin State University					
09/11/13	22,255,000	Revenue Financing Sys Ref Bonds	Series 2013	CO-MGR	KE, TK, DB
Texas A&M University System					
02/13/09	251,735,000	Revenue Financing System Bonds	Series 2009 A	CO-MGR	DB
10/14/09	54,240,000	Revenue Financing System Bonds	Series 2009 C	LEAD	DB
05/06/10	95,065,000	Revenue Financing System Bonds	Series 2010 A	CO-MGR	DB
05/06/10	146,120,000	Revenue Financing System Bonds	Series 2010 B	CO-MGR	DB
09/07/11	87,145,000	Permanent University Fund Bonds	Series 2011	LEAD	DB
06/26/12	70,680,000	Permanent University Fund Bonds	Series 2012 A	CO-MGR	DB
06/26/12	125,750,000	Permanent University Fund Bonds	Series 2012 B	CO-MGR	DB
01/07/15	176,925,000	Revenue Financing System Bonds	Series 2015 C	CO-MGR	DB
Texas State University System					
07/31/08	207,395,000	Rev Financing Sys Revenue Bonds	Series 2008	CO-MGR	DB
07/15/10	99,950,000	Revenue Financing Sys Ref Bonds	Series 2010	CO-MGR	DB
06/14/11	86,775,000	Rev Financing System Rev Bonds	Series 2011	CO-MGR	DB
01/11/12	27,860,000	Revenue Fin Sys Rev & Ref Bonds	Series 2012	CO-MGR	DB
01/09/13	87,060,000	Rev Financing Sys Rev & Ref Bonds	Series 2013	CO-MGR	KE, DB
06/04/14	88,415,000	Revenue Fin Sys Rev & Ref Bonds	Series 2014	CO-MGR	KE, DB
02/27/15	132,160,000	Rev Financing Sys & Ref Bonds	Series 2015 B	CO-MGR	KE, DB
02/27/15	183,560,000	Financing Sys Rev & Ref Bonds	Series 2015 A	CO-MGR	KE, DB
Texas Womans University					
07/29/08	21,670,000	Revenue Financing System Bonds	Series 2008	LEAD	DB
02/04/09	20,400,000	Revenue Financing System Bonds	Series 2009	CO-MGR	DB

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)
University of Texas System					
03/24/10	385,380,000	Revenue Financing Sys Ref Bonds	Series 2010 B	CO-MGR	DB
09/14/10	39,785,000	Revenue Financing Sys Bonds	Series 2010 E	CO-MGR	DB
09/14/10	604,310,000	Revenue Financing Sys Bonds	Series 2010 C	CO-MGR	DB
02/22/12	238,135,000	Revenue Financing System Bonds	Series 2012 B	CO-MGR	DB
04/01/14	259,135,000	Revenue Financing System Bonds	Series 2014 A	CO-MGR	KE, DB
02/18/15	197,970,000	Permanent Univ Fund Ref Bonds	Series 2015 A	CO-MGR	KE, DB
01/07/16	255,825,000	Revenue Financing System Bonds	Series 2016 A	CO-MGR	KE, DB
	4,371,035,000	**Subtotal: Higher Education**			

STATE AND LOCAL AUTHORITIES

Central Texas Regional Mobility Authority					
11/10/15	68,785,000	Senior Lien Revenue & Ref Bonds	Series 2015 B	CO-MGR	KE
11/10/15	298,790,000	Senior Lien Revenue Bonds	Series 2015 A	CO-MGR	KE
Dallas Area Rapid Transit Authority					
02/04/16	482,530,000	Sr Lien Sales Tax Rev Ref Bonds	Series 2016 A	CO-MGR	KE
Grand Parkway Transportation Corporation					
07/17/13	276,999,000	Sub Tier Toll Rev Convert CABs	Series 2013 B	CO-MGR	KE, TK, DB
07/17/13	361,810,000	Subordinated Tier Toll Rev Bonds	Series 2013 E	CO-MGR	KE, TK, DB
07/17/13	1,337,935,000	First & Sub Tier Toll Rev Bonds	Series 2013 A & B	CO-MGR	KE, TK, DB
07/31/13	106,890,000	Sub Tier Toll Rev Tender Bonds	Series 2013 D	CO-MGR	KE, TK, DB
07/31/13	836,440,000	Sub Tier Toll Rev Tender Bonds	Series 2013 C	CO-MGR	KE, TK, DB
Guadalupe-Blanco River Authority					
06/13/13	6,830,000	Contract Revenue Refunding Bonds	Series 2013 B	CO-MGR	TK
06/13/13	55,265,000	Contract Revenue Refunding Bonds	Series 2013 A	CO-MGR	TK
Love Field Airport Modernization Corporation					
05/31/12	146,260,000	Special Facilities Revenue Bonds	Series 2012	CO-MGR	DB
07/23/15	109,235,000	General Airport Revenue Bonds	Series 2015	CO-MGR	KE, DB
Port of Houston Authority (Harris County)					
09/20/11	47,345,000	Refunding Bonds	Series 2011 A	CO-MGR	DB
San Antonio Public Facilities Corporation					
10/11/12	550,374,000	Improvement & Ref Lease Rev Bonds	Series 2012	CO-MGR	TK
Lower Colorado River Authority (LCRA)					
11/29/12	200,670,000	Refunding Revenue Bonds	Series 2012 B	CO-MGR	KE, DB
11/29/12	287,460,000	Refunding Revenue Bonds	Series 2012 A	CO-MGR	KE, DB
04/09/13	197,425,000	Transmission Contract Ref Bonds	Series 2013 A	CO-MGR	KE, DB
10/17/13	187,990,000	Refunding Revenue Bonds	Series 2013	CO-MGR	KE, DB
Schertz-Seguin Local Gov Corp					
06/19/12	25,425,000	Contract Revenue Bonds	Series 2012	LEAD	TK

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)
Texas Department of Housing and Community Affairs					
02/09/11	60,000,000	Residential Mortgage Rev Bonds	Series 2011 A	CO-MGR	DB
Texas Public Finance Authority					
07/16/08	214,900,000	General Obligation & Ref Bonds	Series 2008 A	LEAD	DB
08/11/09	181,780,000	General Obligation Bonds	Series 2009 B	CO-MGR	DB
08/11/09	270,920,000	GO Refunding Bonds	Series 2009 A	CO-MGR	DB
06/22/10	333,540,000	GO Refunding Bonds	Series 2010 A & B	CO-MGR	TK, DB
07/26/11	282,820,000	General Obligation & Ref Bonds	Series 2011	CO-MGR	TK, DB
10/31/11	5,250,000	Education Revenue Bonds	Series 2011 Q	SOLE	TK, DB
11/02/11	4,055,000	Education Revenue Bonds	Series 2011 A	SOLE	TK, DB
12/04/13	40,370,000	GO Refunding Bonds	Series 2013	LEAD	TK, DB
06/25/14	233,280,000	GO Refunding Bonds	Series 2014 B	CO-MGR	TK, DB
06/25/14	258,925,000	GO Refunding Bonds	Series 2014 A	CO-MGR	TK, DB
10/15/15	369,800,000	GO & Refunding Bonds	Series 2015 C	LEAD	TK, DB
Texas Transportation Commission					
08/19/09	1,208,495,000	GO Mobility Fund Bonds	Series 2009 A	CO-MGR	DB
07/27/10	1,500,000,000	State Highway Fund Revenue Bonds	Series 2010 B	CO-MGR	TK, DB
11/15/12	585,330,000	First Tier Revenue Ref Bonds	Series 2012-A	CO-MGR	KE, TK, DB
11/26/12	225,000,000	First Tier Revenue Ref Bonds	Series 2012-B	CO-MGR	KE, TK, DB
03/07/14	300,000,000	State Highway Fund Rev Bonds	Series 2014-B	LEAD	KE, TK, DB
03/07/14	1,157,795,000	State Highway Fd Rev & Ref Bonds	Series 2014-A	LEAD	KE, TK, DB
06/19/14	973,775,000	GO Mobility Fund Refunding Bonds	Series 2014	CO-MGR	KE, TK, DB
10/02/14	1,260,000,000	Highway Improvement GO Bonds	Series 2014	CO-MGR	KE, TK, DB
01/21/15	27,995,000	Revenue Refunding Bonds	Series 2015-B	CO-MGR	KE, TK, DB
01/21/15	198,025,000	1st Tier Revenue Refunding Bonds	Series 2015-B	CO-MGR	KE, TK, DB
01/21/15	225,000,000	1st Tier Revenue Ref Put Bonds	Series 2015-A	CO-MGR	KE, TK, DB
01/21/15	1,157,320,000	2nd Tier Revenue Refunding Bonds	Series 2015-C	CO-MGR	KE, TK, DB
09/16/15	911,360,000	GO Mobility Fund Refunding Bonds	Series 2015 A	LEAD	KE, TK, DB
Texas Veterans Land Board					
09/09/14	100,000,000	Veterans Bonds	Series 2014 D	CO-MGR	KE, DB
Texas Water Development Board					
06/24/08	261,425,000	St Revolv Fund Sub Lien Rev Bonds	Series 2008 B	CO-MGR	DB
07/29/09	257,740,000	St Revolv Rev & Rev Ref Bonds	Sub-Ser 09 A- 1 & 2	CO-MGR	DB
10/06/10	32,350,000	GO Wtr Financial Assistance Bonds	Series 2010 D	CO-MGR	DB
09/14/11	92,255,000	GO Water Financial Assist Bonds	Series 2011B	LEAD	DB
07/09/13	68,945,000	State Revolving Fund Rev Ref Bond	Series 2013 A	LEAD	DB
10/07/15	11,960,000	St Wtr Implementation Rev Bonds	Series 2015 B	CO-MGR	KE, DB
10/07/15	798,450,000	St Wtr Implementation Rev Bonds	Series 2015 A	CO-MGR	KE, DB
10/27/15	234,795,000	Water Financial Assistance Bonds	Series 2015 D	CO-MGR	KE, DB

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)
Trinity River Authority					
10/16/14	93,950,000	Reg Wastewater Sys Rev Ref Bonds	Series 2014	CO-MGR	KE, DB
03/26/15	67,785,000	Revenue Refunding Bonds	Series 2015	CO-MGR	KE, DB
Via Metropolitan Transit					
10/17/13	39,965,000	Farebox Revenue Imp & Ref Bonds	Series 2013	CO-MGR	TK
	19,629,813,000	**Subtotal: State and Local Authorities**			

COUNTIES

Denton County					
12/03/14	29,550,000	Permanent Improvement Ref Bonds	Series 2014	CO-MGR	DB
07/22/15	11,020,000	Tax Notes	Series 2015	CO-MGR	DB
07/22/15	61,815,000	Permanent Improvement & Ref Bonds	Series 2015	CO-MGR	DB
Harris County					
11/06/08	158,100,000	Flood Control Contract Tax Refunding Bonds	Series 2008 C	CO-MGR	DB
12/11/08	76,240,000	Toll Rd Sub Lien Rev Ref Bonds	Series 2008	LEAD	DB
04/22/09	215,455,000	Toll Road Senior Lien Rev Bonds	Series 2009 A	CO-MGR	DB
11/18/09	97,855,000	Permanent Improvement Ref Bonds	Series 2009 B	CO-MGR	DB
12/08/09	28,315,000	Tax & Sub Lien Rev Ref Bonds	Series 2009 C	CO-MGR	DB
12/08/09	98,880,000	Unlimited Tax Road Ref Bonds	Series 2009 A	CO-MGR	DB
06/11/10	177,705,000	Road & Permanent Imp Ref Bonds	Series 2010 A & B	CO-MGR	DB
08/31/10	181,885,000	Flood Control Contract Tax Bonds	Series 2010 A	CO-MGR	DB
08/25/11	122,565,000	Unltd Tax Road Refunding Bonds	Series 2011 A	LEAD	DB
11/14/12	43,200,000	Permanent Improvement Ref Bonds	Series 2012 B	CO-MGR	DB
11/14/12	52,815,000	Unlimited Tx Road Refunding Bonds	Series 2012 B	CO-MGR	DB
11/14/12	66,425,000	Unlimited Tx Road Refunding Bonds	Series 2012 A	CO-MGR	DB
11/14/12	77,145,000	Permanent Improvement Ref Bonds	Series 2012 A	CO-MGR	DB
05/09/14	36,590,000	Flood Control District Improvement Ref Bonds	Series 2014	CO-MGR	DB
05/09/14	60,100,000	Flood Control District Contract Tax Ref Bonds	Series 2014	CO-MGR	DB
05/09/14	73,665,000	Flood Control Contract Tax Refunding Bonds	Series 2014 B	CO-MGR	DB
10/22/15	77,020,000	Contract Tax & Imp Ref Bonds	Series 2015 A & B	CO-MGR	TK, DB
10/22/15	50,095,000	Permanent Improvement Ref Bonds	Series 2015 B	CO-MGR	TK, DB
10/22/15	202,680,000	Unltd Tax Road Refunding Bonds	Series 2015 A	CO-MGR	TK, DB
10/30/15	161,575,000	Toll Road Revenue Ref Bonds	Series 2015 B	CO-MGR	TK, DB
Travis County					
06/12/15	20,255,000	Limited Tax Refunding Bonds	Series 2015	CO-MGR	KE, DB
Williamson County					
05/06/15	59,645,000	Combined Tax & Rev Cert Oblig	Series 2015	CO-MGR	KE, TK, DB
	2,240,595,000	**Subtotal: Counties**			

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

SCHOOL DISTRICTS

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)
Alvin ISD (Brazoria Co)					
12/02/14	168,730,000	Schoolhouse & Refunding Bonds	Series 2014 C	LEAD	DB
02/17/16	130,040,000	Unltd Tax Schoolhouse & Ref Bonds	Series 2016	LEAD	DB
Austin ISD (Travis Co)					
08/06/13	1,420,000	Unlimited Tax Refunding Bonds	Series 2013 B	CO-MGR	KE, DB
08/06/13	7,135,000	Unlimited Tax Refunding Bonds	Series 2013 B	CO-MGR	KE, DB
08/06/13	101,100,000	Unlimited Tax Refunding Bonds	Series 2013 A	CO-MGR	KE, DB
07/22/15	63,110,000	Unlimited Tax Refunding Bonds	Series 2015 A	CO-MGR	KE, DB
07/22/15	87,295,000	Unlimited Tax Refunding Bonds	Series 2015 B	CO-MGR	KE, DB
Canutillo ISD (El Paso Co)					
06/04/14	8,795,000	Unlimited Tax Refunding Bonds	Series 2014	SOLE	DB
02/25/15	8,075,000	Unlimited Tax Refunding Bonds	Series 2015	LEAD	DB
12/16/15	8,645,000	Refunding Bonds	Series 2016	LEAD	DB
Clear Creek ISD (Galveston Co)					
03/17/15	180,430,000	Unltd Tax School Bldg & Ref Bonds	Series 2015 A & B	CO-MGR	DB
Clint ISD (El Paso Co)					
07/09/14	23,815,000	Unlimited Tax Refunding Bonds	Series 2014	LEAD	DB
07/09/14	430,000	Unlimited Tax Refunding Bonds	Series 2014	LEAD	DB
03/17/15	23,315,000	Unlimited Tax Refunding Bonds	Series 2015	LEAD	DB
07/15/15	78,360,000	Unlimited Tax Sch Building Bonds	Series 2015	LEAD	DB
10/28/15	15,890,000	Unlimited Tax Refunding Bonds	Series 2015 A	LEAD	DB
Cypress-Fairbanks ISD (Harris Co)					
03/12/14	114,680,000	Unlimited Tax School Bldg Bonds	Series 2014 B 1-3	CO-MGR	KE
10/09/14	435,740,000	Unlimited Tax Sch Bldg&Ref Bonds	Series 2014 C	CO-MGR	KE
10/20/15	209,045,000	Unltd Tax Scool Bldg & Ref Bonds	Series 2015 A	CO-MGR	KE
Deer Park ISD (Harris Co)					
07/14/08	54,595,000	Ltd Tax School Building Bonds	Series 2008	CO-MGR	DB
07/19/10	6,310,000	School Building Bonds	Series 2010 A	CO-MGR	DB
07/19/10	35,600,000	Limited Tax School Building Bonds	Series 2010 B	CO-MGR	DB
03/09/15	37,055,000	Limited Tax Refunding Bonds	Series 2015	LEAD	DB
Dickinson ISD (Galveston Co)					
11/13/14	63,505,000	Unlimited Tax Refunding Bonds	Series 2014	CO-MGR	DB
Friendswood ISD (Galveston Co)					
02/23/16	88,965,000	Refunding Bonds	Series 2016	CO-MGR	DB
Hallsville ISD (Harrison Co)					
08/20/14	5,610,000	Limited Tax Refunding Bonds	Series 2014	SOLE	DB

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

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Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)
Joshua ISD (Johnson Co)					
06/24/15	46,010,000	Unltd Tax School Building Bonds	Series 2015	CO-MGR	DB
02/09/16	26,520,000	Unlimited Tax Refunding Bonds	Series 2016	CO-MGR	DB
Katy ISD (Fort Bend Co)					
05/30/12	147,680,000	Unltd Tax School Bldg & Ref Bonds	Series 2012 A	LEAD	DB
Keller ISD (Tarrant Co)					
09/04/14	56,565,000	Unlimited Tax Refunding Bonds	Series 2014 A	CO-MGR	DB
01/07/15	153,875,000	Unlimited Tax School Bldg Bonds	Series 2015	CO-MGR	DB
04/23/15	1,773,000	Unlimited Tax Refunding Bonds	Series 2015 A	CO-MGR	DB
04/23/15	114,805,000	Unlimited Tax Refunding Bonds	Series 2015 A	CO-MGR	DB
Klein ISD (Harris Co)					
06/25/15	224,600,000	Unltd Tax Schoolhouse & Ref Bonds	Series 2015 A	CO-MGR	DB
Lamar CISD (Fort Bend Co)					
11/05/13	25,640,000	Unlimited Tax Refunding Bonds	Series 2013	CO-MGR	DB
04/07/14	43,865,000	Unlimited Tax Schoolhouse Bonds	Series 2014 B	CO-MGR	DB
04/30/14	90,000,000	Unlimited Tax Schoolhouse Bonds	Series 2014 A	CO-MGR	DB
07/20/11	49,900,000	Unlimited Tax Schoolhouse Bonds	Series 2011	CO-MGR	TK
Lewisville ISD (Denton Co)					
10/02/14	96,330,000	Unltd Tax School Building Bonds	Series 2014 A	CO-MGR	DB
10/02/14	4,044,000	Unlimited Tax Refunding Bonds	Series 2014 B	CO-MGR	DB
10/02/14	50,295,000	Unlimited Tax Refunding Bonds	Series 2014 B	CO-MGR	DB
04/23/15	2,587,000	Unlimited Tax Refunding Bonds	Series 2015	CO-MGR	DB
04/23/15	61,645,000	Unlimited Tax Refunding Bonds	Series 2015	CO-MGR	DB
McKinney ISD (Collin Co)					
10/08/14	99,360,000	Unltd Tax School Bldg & Ref Bonds	Series 2014	CO-MGR	DB
03/04/15	47,170,000	Unlimited Tax Refunding Bonds	Series 2015	LEAD	DB
07/30/15	66,355,000	Unlimited Tax Sch Bldg &Ref Bonds	Series 2015 A	CO-MGR	DB
North East ISD (Bexar Co)					
07/10/13	58,905,000	Unltd Tax School Building Bonds	Series 2013	CO-MGR	TK
05/07/14	70,825,000	School Building Bonds	Series 2014	SOLE	TK
11/06/14	69,925,000	Unlimited Tax Refunding Bonds	Series 2014 B	CO-MGR	TK
03/26/15	345,185,000	Unlimited Tax Refunding Bonds	Series 2015	CO-MGR	TK
Pasadena ISD (Harris Co)					
01/22/15	61,060,000	Unlimited Tax School Bldg Bonds	Series 2015 A	LEAD	DB
04/21/15	50,920,000	Unlimited Tax Refunding Bonds	Series 2015	LEAD	DB
Pflugerville ISD (Travis Co)					
06/26/14	49,670,000	Unlimited Tax School Bldg Bonds	Series 2014 A	CO-MGR	KE, DB
06/26/14	212,795,000	Unlimited Tax School Bldg Bonds	Series 2014	CO-MGR	KE, DB
07/14/14	107,275,000	Unlimited Tax Refunding Bonds	Series 2014	CO-MGR	KE, DB

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

Sale Date	Par Amount ($)	Issue Description	Series	Role of PJC	Banker(s)
Round Rock ISD (Williamson Co)					
02/03/15	67,140,000	Unlimited Tax School Bldg Bonds	Series 2015	CO-MGR	KE, DB
Schertz-Cibolo-Universal City ISD					
09/18/14	1,420,000	Unltd Tax School Bldg & Ref Bonds	Series 2014 A	CO-MGR	TK
09/18/14	90,025,000	Unltd Tax School Bldg & Ref Bonds	Series 2014 A	CO-MGR	TK
02/03/16	10,386,000	Unlimited Tax Refunding Bonds	Series 2016	CO-MGR	TK
02/03/16	93,535,000	Unlimited Tax Refunding Bonds	Series 2016	CO-MGR	TK
Socorro ISD (El Paso Co)					
05/13/15	105,000	Unlimited Tax Refunding Bonds	Series 2015 A	CO-MGR	DB
05/13/15	11,200,000	Unlimited Tax Refunding Bonds	Series 2015 A	CO-MGR	DB
05/13/15	17,525,000	Unlimited Tax Refunding Bonds	Series 2015 B	LEAD	DB
10/10/13	55,670,000	Unlimited Tax Refunding Bonds	Series 2013 A	CO-MGR	TK
Southwest ISD (Bexar Co)					
07/31/14	91,695,000	School Building & Refunding Bonds	Series 2014	LEAD	TK
Tatum ISD (Rusk Co)					
07/10/12	27,530,000	Unltd Tax School Building Bonds	Series 2012	CO-MGR	DB
Ysleta ISD (El Paso Co)					
01/07/16	215,600,000	Unltd Tax School Building Bonds	Series 2016	LEAD	DB
	5,075,100,000	**Subtotal: School Districts**			

Source: SDC
KE: Kim Edwards
TK: Tim Kelley
DB: Danielle Bradford

PiperJaffray. REALIZE THE POWER OF PARTNERSHIP.

Appendix V

Resumes

Kim Edwards, Senior Vice President **Austin, Texas**

Ms. Edwards has worked in the public finance industry for over 28 years and joined Piper Jaffray in September 2012. Prior to that she established the Texas public finance practice for Fidelity Capital Markets and served as the Executive Director of the Texas Public Finance Authority from 1997 through 2008. In that capacity she was involved in the issuance and administration of over $5 billion of municipal securities, as well as working with TEA to administer the Texas Credit Enhancement Program for charter schools. Prior to TPFA she was the Assistant Executive Director of the Municipal Advisory Council of Texas where she managed a team of municipal credit analysts and implementation of SEC Rule 15 c 2-12, under which the MAC was designated a State Information Depository. Ms. Edwards has served as a financial advisor to state and local governments, as a Vice President for Government Finance Group in Arlington, VA. She also worked for the Government Finance Officers Association in Washington, D.C. Ms. Edwards has served on the executive board of the National Association of Treasurer's State Debt Management Network; **Austin Independent School District Citizens Budget Advisory Committee (2002); Austin Community College, Advisory Committee on Finance and Budget (2004-06); and the Campus Advisory Council, Highland Park Elementary School, Austin, Texas.** She has served on the Board of Directors of the Texas Municipal Advisory Council and founded and served as President of the Texas chapter of Women in Public Finance. She holds a B.A. from Rice University, an MBA from the University of Texas, and a Masters degree from the LBJ School of Public Affairs at UT Austin.

Ms. Edwards is the person who will be directly involved in managing, supporting and coordinating the designated Piper Jaffray team members for the City's financings. In addition, she will have the day-to-day responsibility on any financing for the City. She will dedicate at least 50% of the firm's total effort to any financing that Piper Jaffray is selected to underwrite as either senior or co-manager.

Tim Kelley, Managing Director **San Antonio, Texas**

Tim Kelley joined the Piper Jaffray Public Finance Team as Managing Director of the San Antonio office in 2010 with a focus on providing investment banking services to issuers throughout the State of Texas. Mr. Kelley has over 27 years of experience providing investment banking services to a variety of clients in Texas, including independent school districts, higher education authorities, municipally owned utilities, state authorities, cities, counties, and community college districts. During his career, Mr. Kelley has created complex financing programs for issuers throughout the state. He has a strong understanding of the credit requirements in the municipal marketplace and an expertise in sophisticated debt and cash-flow modeling. Mr. Kelley has developed long-term financing plans for many large issuers using a variety of techniques including fixed-rate bonds, variable rate instruments, and commercial paper programs. He has applied his considerable experience to ad valorem tax supported debt financings, independent school districts, community college districts, utility system financings, airport financings, as well as sales tax and hotel occupancy tax credits. He holds a Bachelor of Business Administration – Finance from the University of Texas at Austin and holds Series 7, 63 and 53 licenses.

Mr. Kelley is the person who will be directly involved in managing, supporting and coordinating the designated Piper Jaffray team members for the City's financings. In addition, he will have the day-to-day responsibility on any financing for the City. He will dedicate at least 25% of the firm's total effort to any financing that Piper Jaffray is selected to underwrite as either senior or co-manager.

Danielle Bradford, Assistant Vice President **Houston, Texas**

Danielle Bradford joined Piper Jaffray's Texas Public Finance Group in 2008. She is responsible for providing analytical and qualitative analysis as well as day-to-day investment banking support to the firm's government institutions, transportation, and higher education facility clientele. She has assisted with over $33 billion of municipal financings for clients in the Southwest Region, including issuers such as the City of Houston, Dallas, Fort Worth, Arlington, and the City of Austin itself.

She graduated with high honors with a Bachelor of Business Administration in Finance and Accounting from the University of Texas at Austin. She has a Series 7 license.

Ms. Bradford will provide the day-to-day analytical and deal support on any financing for the City. She will dedicate 25% of the firm's total effort to any financing assigned to Piper Jaffray.

Stephen Cavalier, Managing Director and Head of Municipal Underwriting **Minneapolis, MN**

Stephen Cavalier is a Managing Director of Municipal Underwriting and Trading. He is currently Head of Municipal Underwriting specializing in national general market new issues. Mr. Cavalier has over 27 years of experience in the municipal markets, and has served as a municipal institutional trader and underwriter throughout his career. He represents underwriting on the firms commitment committee and is responsible for all risk pertaining to New Issue Municipals. Mr. Cavalier has Series 7, 63 and 53 licenses.

Mr. Cavalier will be responsible for the underwriting and sale on any tax-exempt fixed rate financing for the City.

Brent Rivard, Managing Director **Minneapolis, MN**

Brent M. Rivard is a Principal in Fixed Income Services for Municipal Underwriting and Trading. He joined Piper Jaffray in 2000, after attending the University of Minnesota. Mr. Rivard focuses on national taxable and tax-exempt underwriting for both negotiated and competitive issues, including taxable transactions such as Build America Bonds and Qualified School Construction Bonds. He is also responsible for secondary trading of municipals and risk management for all municipal trading and underwriting. Mr. Rivard holds Series 7, 53 and 63 licenses.

Mr. Rivard will be responsible for the underwriting and sale on any taxable fixed rate financing for the City.

Joanna Brody, Managing Director and Head of Short-Term Trading and Sales **New York, NY**

Joanna Brody leads the firm's effort in the underwriting and trading of floating rate securities and oversees the pricing and maintenance of the firm's short-term programs. She has extensive experience working with a variety of issuers and structures with varying credit facilities. Prior to joining Piper Jaffray in 2009, Ms. Brody spent 16 years with UBS managing a $60 billion portfolio of variable rate securities. Recently, Ms. Brody has been the lead underwriter on soft put financings such as those for The Texas Transportation Commission ($300,000,000 SIFMA-Index Soft put), North East ISD ($70,000,000 Term Mode Soft Put), San Antonio Water System ($100,000,000 SIFMA Index Soft Put), and San Antonio's CPS Energy ($50,000,000 Term Mode Soft Put). Ms. Brody holds Series 7, 53 and 63 licenses

Ms. Brody will be responsible for the underwriting and sale on any floating rate financing for the City.

John Coan, Managing Director and Head of Transportation Group **Washington D.C.**

Mr. John Coan (formerly of Banc of America Securities) joined Piper Jaffray in 2009 to head the Firm's National Transportation Group and has the necessary and relevant industry experience that will be of benefit to the City. Mr. Coan offers over 30 years of experience in public finance, with an expertise in the transportation sector, including airports, state departments of transportation (GARVEEs, toll roads, gas tax) and ports and harbors financings. Since 2008, Mr. Coan has participated in approximately $12 billion of transportation-related issues.

Peter Phillippi, Managing Director and Head of Hospitality Group **Phoenix, AZ.**

Peter J. Phillippi is a managing director in the public finance investment banking group at Piper Jaffray and head of the hospitality finance group. He has more than 24 years of investment banking experience that includes hotel, convention and conference center, general state and local government, project revenue and specialty-lease financings with an emphasis on public-private partnerships. Mr. Phillippi's primary focus for the past 15 years has been financing convention center and conference center hotel projects. As the director of the hospitality group, he is responsible for managing the group's efforts in originating taxable and tax-exempt bond and loan issues for hospitality projects. Phillippi has successfully completed more than $18 billion in financings. Phillippi graduated from Arizona State University with degrees in finance and political science.

Appendix VI

Refunding Opportunities

Given the historically low long-term municipal interest rates paired with the recent increase in short-term escrow yields, the current market environment allows the City the opportunity to refund outstanding bonds for debt service savings. We performed a refunding analysis by maturity for each of the City's credits and selected all maturities with over 5% net present value ("NPV") savings and negative arbitrage less than 100% of NPV savings. We also selected maturities within 24 months of the call date that provided positive debt service savings. Our analyses are based on market rates as of 2/22/2016. A summary of the refunding opportunities can be found below and the savings by maturity and detailed backup numbers can be found in the pages that follow.

Summary of Refunding Results				
	GO	WWSS	Electric	Town Lake
Series (or Partial) Included	**2008 C/O, 2008 PIB, 2009 C/O**	**2006A, 2007, 2009, 2009A, 2010A**	**2008A, 2010A**	**2005**
Par Amount of Refunded Bonds ($)	68,760,000	342,550,000	93,695,000	30,510,000
Par Amount of Refunding Bonds ($)	64,650,000	313,840,000	87,970,000	27,970,000
True Interest Cost:	1.99%	2.67%	3.27%	2.41%
Savings ($)	9,559,434	52,004,453	12,607,213	5,890,136
NPV Savings ($)	8,236,844	38,526,795	9,027,340	4,907,825
NPV Savings as a % of Refunded Par	11.98%	11.25%	9.63%	16.09%
Negative Arbitrage	1,662,289	11,781,543	4,724,679	53,747
Negative Arb as % of NPV Savings	20.18%	30.58%	52.34%	0.18%

General Obligation Bonds. Our analysis assumes a settlement date of 5/15/2016 and uniform savings in the aggregate. Alternatively, the City could structure the bonds with uniform savings by series to mitigate the impact of allocating debt service to various City departments and programs.

Water and Wastewater System. The Series 2006A Bonds are callable 11/15/2016. Our analysis assumes a settlement date of 8/15/2016 (90 days before the call date) so that these bonds can be included as a current refunding. We assumed the refunding bonds would not fund a reserve fund.

Electric Utility System. Our analysis assumes a settlement date of 5/15/2016. The refunding results shown illustrate only a tax-exempt refunding. The City's Electric Utility System Series 2007 bonds cannot be advance refunded with tax-exempt bonds, but could be refunded with taxable bonds for savings, market conditions permitting. The outstanding bonds mature on the short end of the yield curve (2018 – 2020) and given the recent increase in short term rates and the relatively short time to the call date (11/15/2017), the bonds do not seem cost effective to refund at this time.

Town Lake. The Town Lake Park Community Events Center Venue Project Refunding Bonds, Series 2005 are currently callable. The Series 2005 bonds require a debt service reserve fund of the lesser of (i) 10% of the principal amount or (ii) the maximum annual debt service ("MADS") requirement of the bonds, and the requirement is satisfied with a surety policy. In refunding all of the outstanding bonds, the City has the opportunity to rewrite the resolution to reduce, or even possibly remove, the reserve fund requirement. Our analysis assumes the new reserve fund requirement to be 50% MADS. We looked at both an uninsured transaction that funded the requirement through bond proceeds and an insured transaction that funded the requirement through a surety policy. Based on our assumptions, the NPV savings difference between the two structures is minimal. The summary table above illustrates an uninsured transaction with the requirement funded through bond proceeds. Given the small differences in savings, we feel that it is a better alternative for the City than having to negotiate with an insurance company and rely on a surety.

City of Austin, Texas
Limited Tax General Obligation Bonds
Savings and Negative Arbitrage by Maturity

Refunded Maturity	Refunded Coupon	Refunded Par ($)	$ NPV Savings	% NPV Savings	Negative Arb ($)	Escrow Efficiency	Neg Arb as % of NPV
Series 2008 Certificates of Obligation; Callable 9/1/2018							
9/1/2019	4.000%	525,000	12,658	2.41%	-	100.0%	0.0%
9/1/2020	4.000%	555,000	28,510	5.14%	1,057	96.4%	3.7%
9/1/2021	4.250%	585,000	47,744	8.16%	2,780	94.5%	5.8%
9/1/2022	4.375%	615,000	63,195	10.28%	5,979	91.4%	9.5%
9/1/2023	4.375%	650,000	75,815	11.66%	9,374	89.0%	12.4%
9/1/2024	4.500%	685,000	92,171	13.46%	12,784	87.8%	13.9%
9/1/2025	4.500%	725,000	105,225	14.51%	16,065	86.8%	15.3%
9/1/2026	4.625%	760,000	124,055	16.32%	19,165	86.6%	15.4%
9/1/2027	4.625%	805,000	116,152	14.43%	24,585	82.5%	21.2%
9/1/2028	4.625%	850,000	114,633	13.49%	28,699	80.0%	25.0%
Series 2008 Public Improvement Bonds; Callable 9/1/2018							
9/1/2019	4.000%	3,960,000	95,475	2.41%	-	100.0%	0.0%
9/1/2020	4.000%	4,175,000	214,463	5.14%	7,948	96.4%	3.7%
9/1/2021	4.250%	4,405,000	359,506	8.16%	20,934	94.5%	5.8%
9/1/2022	5.000%	4,650,000	586,990	12.62%	45,581	92.8%	7.8%
9/1/2023	5.000%	4,905,000	713,818	14.55%	71,331	90.9%	10.0%
9/1/2024	4.500%	3,075,000	413,761	13.46%	57,386	87.8%	13.9%
9/1/2025	4.500%	3,360,000	487,664	14.51%	74,454	86.8%	15.3%
9/1/2026	4.625%	4,325,000	705,973	16.32%	109,064	86.6%	15.4%
9/1/2027	4.750%	10,015,000	1,541,276	15.39%	306,368	83.4%	19.9%
9/1/2028	4.750%	14,035,000	2,039,208	14.53%	474,661	81.1%	23.3%
Series 2009 Certificates of Obligation; Callable 9/1/2019							
9/1/2020	3.375%	340,000	5,757	1.69%	-	100.0%	0.0%
9/1/2021	3.500%	355,000	13,808	3.89%	606	95.8%	4.4%
9/1/2022	3.625%	380,000	19,793	5.21%	3,346	85.5%	16.9%
9/1/2023	3.750%	400,000	25,619	6.40%	6,220	80.5%	24.3%
9/1/2024	3.875%	420,000	31,731	7.55%	9,076	77.8%	28.6%
9/1/2025	4.000%	440,000	38,594	8.77%	11,729	76.7%	30.4%
9/1/2026	4.000%	465,000	43,305	9.31%	14,398	75.0%	33.2%
9/1/2027	4.125%	485,000	37,906	7.82%	18,733	66.9%	49.4%
9/1/2028	4.200%	515,000	36,388	7.07%	22,285	62.0%	61.2%
9/1/2029	4.250%	540,000	33,979	6.29%	25,683	57.0%	75.6%
9/1/2030	4.700%	240,000	21,049	8.77%	12,687	62.4%	60.3%
9/1/2031	4.700%	255,000	19,750	7.74%	14,645	57.4%	74.2%
9/1/2032	4.700%	265,000	17,761	6.70%	16,423	52.0%	92.5%
9/1/2033	4.700%	280,000	16,983	6.07%	18,258	48.2%	107.5%
9/1/2034	4.700%	295,000	17,504	5.93%	19,711	47.0%	112.6%
9/1/2035	4.750%	310,000	19,658	6.34%	21,231	48.1%	108.0%
9/1/2036	4.750%	330,000	20,465	6.20%	23,131	46.9%	113.0%
9/1/2037	4.750%	345,000	14,860	4.31%	26,609	35.8%	179.1%
9/1/2038	4.750%	365,000	16,964	4.65%	28,152	37.6%	166.0%
9/1/2039	4.750%	380,000	18,913	4.98%	29,309	39.2%	155.0%

City of Austin, Texas
Limited Tax General Obligation Bonds
Savings and Negative Arbitrage by Maturity

Refunded Maturity	Refunded Coupon	Refunded Par ($)	$ NPV Savings	% NPV Savings	Negative Arb ($)	Escrow Efficiency	Neg Arb as % of NPV
Series 2010A Public Improvement Bonds; Callable 9/1/2020							
9/1/2021	4.000%	3,665,000	77,589	2.12%	-	100.0%	0.0%
9/1/2022	4.000%	3,885,000	158,372	4.08%	15,643	91.0%	9.9%
9/1/2023	3.000%	4,200,000	102,588	2.44%	52,907	66.0%	51.6%
9/1/2024	3.000%	4,310,000	103,763	2.41%	87,588	54.2%	84.4%
9/1/2025	3.000%	4,715,000	106,488	2.26%	125,934	45.8%	118.3%
9/1/2026	3.000%	4,910,000	99,360	2.02%	158,117	38.6%	159.1%
9/1/2027	3.125%	5,205,000	(12,859)	-0.25%	218,449	-6.3%	-1698.7%
9/1/2028	3.250%	5,590,000	(79,043)	-1.41%	268,001	-41.8%	-339.1%
9/1/2029	3.375%	5,765,000	(133,441)	-2.31%	308,407	-76.3%	-231.1%
9/1/2030	3.500%	20,135,000	(653,759)	-3.25%	1,205,669	-118.5%	-184.4%
Series 2010 Certificates of Obligation; Callable 9/1/2020							
9/1/2021	3.000%	1,100,000	13,142	1.19%	-	100.0%	0.0%
9/1/2022	3.000%	1,155,000	25,916	2.24%	4,547	85.1%	17.5%
9/1/2023	3.000%	1,210,000	29,555	2.44%	15,242	66.0%	51.6%
9/1/2024	3.000%	1,270,000	30,575	2.41%	25,809	54.2%	84.4%
9/1/2025	3.000%	1,335,000	30,151	2.26%	35,657	45.8%	118.3%
9/1/2026	3.125%	1,400,000	37,282	2.66%	45,213	45.2%	121.3%
9/1/2027	3.250%	1,470,000	6,914	0.47%	61,870	10.1%	894.9%
9/1/2028	3.375%	1,545,000	(9,529)	-0.62%	74,282	-14.7%	-779.5%
9/1/2029	3.500%	1,625,000	(23,414)	-1.44%	87,178	-36.7%	-372.3%
9/1/2030	3.500%	1,705,000	(55,359)	-3.25%	102,094	-118.5%	-184.4%

Note: Savings are shown net of a $7.00/bond assumed financing cost.
Maturities included in refunding analysis.

TE Ltd Tax GO Refunding Summary of Results	
Par Amount of Refunded Bonds ($)	68,760,000
Par Amount of Refunding Bonds ($)	64,650,000
True Interest Cost:	1.99%
Savings ($)	9,559,434
NPV Savings ($)	8,236,844
NPV Savings as a % of Refunded Par	11.98%
Negative Arbitrage	1,662,289
Negative Arb as % of NPV Savings	20.18%

City of Austin, Texas
Utility System Revenue Bonds - Water and Wastewater
Savings and Negative Arbitrage by Maturity

Refunded Maturity	Refunded Coupon	Refunded Par ($)	$ NPV Savings	% NPV Savings	Negative Arb ($)	Escrow Efficiency	Neg Arb as % of NPV
Series 2006A; Callable 11/15/2016							
11/15/2025	3.500%	4,965,000	625,556	12.60%	19,302	97.0%	3.1%
11/15/2026	3.500%	5,215,000	660,947	12.67%	21,973	96.8%	3.3%
11/15/2027	3.500%	5,485,000	577,545	10.53%	25,035	95.8%	4.3%
11/15/2028	3.500%	5,765,000	505,454	8.77%	27,757	94.8%	5.5%
11/15/2029	3.500%	6,060,000	436,477	7.20%	30,390	93.5%	7.0%
11/15/2030	3.500%	6,370,000	345,946	5.43%	33,537	91.2%	9.7%
11/15/2031	3.500%	6,700,000	252,301	3.77%	36,782	87.3%	14.6%
11/15/2032	4.250%	7,045,000	784,828	11.14%	46,750	94.4%	6.0%
Series 2007; Callable 11/15/2017							
11/15/2029	5.000%	5,715,000	1,103,519	19.31%	123,080	90.0%	11.2%
11/15/2030	5.000%	6,010,000	1,107,954	18.44%	136,974	89.0%	12.4%
11/15/2031	5.000%	6,315,000	1,113,571	17.63%	151,048	88.1%	13.6%
11/15/2032	5.000%	6,640,000	1,068,047	16.09%	196,066	84.5%	18.4%
11/15/2033	5.000%	6,980,000	1,128,104	16.16%	210,437	84.3%	18.7%
11/15/2034	5.000%	7,340,000	1,189,751	16.21%	225,844	84.0%	19.0%
11/15/2035	5.000%	7,715,000	1,251,987	16.23%	242,168	83.8%	19.3%
11/15/2036	5.000%	8,110,000	1,315,517	16.22%	259,585	83.5%	19.7%
11/15/2037	5.000%	8,530,000	1,152,383	13.51%	304,624	79.1%	26.4%
Series 2009; Callable 11/15/2019							
11/15/2020	5.000%	8,830,000	280,066	3.17%	170	99.9%	0.1%
11/15/2021	5.000%	9,280,000	592,461	6.38%	38,364	93.9%	6.5%
11/15/2022	4.500%	9,730,000	700,146	7.20%	112,121	86.2%	16.0%
11/15/2023	5.000%	10,205,000	1,054,207	10.33%	191,005	84.7%	18.1%
11/15/2024	5.000%	10,730,000	1,270,924	11.84%	265,640	82.7%	20.9%
11/15/2025	5.000%	11,280,000	1,480,905	13.13%	339,417	81.4%	22.9%
11/15/2026	5.000%	11,855,000	1,702,176	14.36%	407,800	80.7%	24.0%
11/15/2027	5.000%	12,465,000	1,629,971	13.08%	486,385	77.0%	29.8%
11/15/2028	5.125%	13,115,000	1,717,305	13.09%	556,082	75.5%	32.4%
11/15/2029	5.125%	13,800,000	1,719,092	12.46%	621,345	73.5%	36.1%
Series 2009A; Callable 11/15/2019							
11/15/2020	5.000%	5,020,000	159,222	3.17%	97	99.9%	0.1%
11/15/2021	4.750%	5,270,000	311,709	5.91%	21,692	93.5%	7.0%
11/15/2022	4.000%	5,505,000	319,832	5.81%	62,879	83.6%	19.7%
11/15/2023	4.125%	5,730,000	409,894	7.15%	105,614	79.5%	25.8%
11/15/2024	4.125%	5,975,000	474,619	7.94%	145,667	76.5%	30.7%
11/15/2025	5.000%	6,255,000	821,193	13.13%	188,214	81.4%	22.9%
11/15/2026	5.000%	6,575,000	944,058	14.36%	226,173	80.7%	24.0%
11/15/2027	5.000%	6,910,000	903,578	13.08%	269,629	77.0%	29.8%
11/15/2028	5.000%	7,265,000	884,614	12.18%	307,369	74.2%	34.7%
11/15/2029	5.000%	7,635,000	874,930	11.46%	343,017	71.8%	39.2%
11/15/2030	5.000%	1,485,000	155,737	10.49%	71,565	68.5%	46.0%
11/15/2031	5.000%	1,555,000	149,245	9.60%	79,495	65.2%	53.3%
11/15/2032	5.000%	1,635,000	135,793	8.31%	107,285	55.9%	79.0%
11/15/2033	5.000%	1,720,000	143,701	8.35%	115,608	55.4%	80.5%
11/15/2034	5.000%	1,805,000	151,257	8.38%	124,199	54.9%	82.1%
11/15/2035	5.000%	11,000,000	922,033	8.38%	774,406	54.4%	84.0%
11/15/2036	5.000%	11,500,000	961,812	8.36%	827,856	53.7%	86.1%
11/15/2037	5.000%	12,000,000	691,894	5.77%	977,472	41.4%	141.3%
11/15/2038	5.000%	12,500,000	776,553	6.21%	1,018,201	43.3%	131.1%
11/15/2039	5.000%	13,000,000	863,730	6.64%	1,058,929	44.9%	122.6%

City of Austin, Texas
Utility System Revenue Bonds - Water and Wastewater
Savings and Negative Arbitrage by Maturity

Refunded Maturity	Refunded Coupon	Refunded Par ($)	$ NPV Savings	% NPV Savings	Negative Arb ($)	Escrow Efficiency	Neg Arb as % of NPV
Series 2010A; Callable 11/15/2020							
11/15/2021	5.000%	1,920,000	58,063	3.02%	-	100.0%	0.0%
11/15/2022	5.000%	2,020,000	110,011	5.45%	15,506	87.6%	14.1%
11/15/2023	5.000%	2,125,000	152,894	7.20%	36,204	80.9%	23.7%
11/15/2024	5.000%	2,230,000	194,222	8.71%	55,738	77.7%	28.7%
11/15/2025	5.000%	2,345,000	234,352	9.99%	75,063	75.7%	32.0%
11/15/2026	5.000%	2,465,000	276,661	11.22%	92,856	74.9%	33.6%
11/15/2027	5.000%	2,590,000	256,017	9.88%	113,266	69.3%	44.2%
11/15/2028	5.000%	2,725,000	243,437	8.93%	130,911	65.0%	53.8%
11/15/2029	5.000%	2,865,000	234,050	8.17%	147,461	61.3%	63.0%
11/15/2030	5.000%	3,010,000	215,396	7.16%	167,781	56.2%	77.9%
11/15/2031	5.000%	3,165,000	197,164	6.23%	188,543	51.1%	95.6%
11/15/2032	5.000%	3,330,000	167,984	5.04%	261,308	39.1%	155.6%
11/15/2033	5.000%	3,500,000	177,881	5.08%	281,915	38.7%	158.5%
11/15/2034	5.000%	3,680,000	187,618	5.10%	304,042	38.2%	162.1%
11/15/2035	5.000%	3,870,000	197,121	5.09%	327,748	37.6%	166.3%
11/15/2036	5.125%	4,070,000	259,846	6.38%	354,038	42.3%	136.2%
11/15/2037	5.125%	4,285,000	165,113	3.85%	425,503	28.0%	257.7%
11/15/2038	5.125%	4,510,000	196,168	4.35%	447,846	30.5%	228.3%
11/15/2039	5.125%	4,745,000	229,152	4.83%	471,182	32.7%	205.6%
11/15/2040	5.125%	4,995,000	264,383	5.29%	496,007	34.8%	187.6%

Note: Savings are shown net of a $7.00/bond assumed financing cost.
Maturities included in refunding analysis.

WWSS Refunding Summary of Results	
Par Amount of Refunded Bonds ($)	342,550,000
Par Amount of Refunding Bonds ($)	313,840,000
True Interest Cost:	2.67%
Savings ($)	52,004,453
NPV Savings ($)	38,526,795
NPV Savings as a % of Refunded Par	11.25%
Negative Arbitrage	11,781,543
Negative Arb as % of NPV Savings	30.58%

City of Austin, Texas
Utility System Revenue Bonds - Electric System
Savings and Negative Arbitrage by Maturity

Refunded Maturity	Refunded Coupon	Refunded Par ($)	$ NPV Savings	% NPV Savings	Negative Arb ($)	Escrow Efficiency	Neg Arb as % of NPV
Series 2008A; Callable 11/15/2018							
11/15/2019	5.500%	4,855,000	166,303	3.43%	12,811	92.8%	7.7%
11/15/2030	5.250%	8,305,000	1,181,235	14.22%	370,667	76.1%	31.4%
11/15/2031	5.250%	8,720,000	1,176,492	13.49%	408,796	74.2%	34.7%
11/15/2032	5.250%	9,155,000	1,165,369	12.73%	449,704	72.2%	38.6%
11/15/2033	5.250%	9,615,000	1,192,435	12.40%	484,264	71.1%	40.6%
11/15/2034	5.250%	10,095,000	1,216,872	12.05%	520,971	70.0%	42.8%
11/15/2035	5.250%	10,600,000	1,238,947	11.69%	560,159	68.9%	45.2%
11/15/2036	5.000%	11,130,000	909,446	8.17%	599,827	60.3%	66.0%
11/15/2037	5.000%	11,685,000	657,708	5.63%	695,725	48.6%	105.8%
11/15/2038	5.000%	12,270,000	695,465	5.67%	730,556	48.8%	105.0%
Series 2010A; 38.8% Advance Refundable; Callable 11/15/2020							
11/15/2021	4.000%	285,000	5,545	1.95%	135	97.6%	2.4%
11/15/2022	5.000%	2,630,000	126,451	4.81%	30,039	80.8%	23.8%
11/15/2023	5.000%	2,760,000	173,718	6.29%	60,078	74.3%	34.6%
11/15/2024	5.000%	2,935,000	221,262	7.54%	89,858	71.1%	40.6%
11/15/2025	4.000%	880,000	38,029	4.32%	33,085	53.5%	87.0%
11/15/2025	5.000%	2,225,000	190,081	8.54%	85,591	69.0%	45.0%
11/15/2026	5.000%	3,265,000	309,712	9.49%	146,546	67.9%	47.3%
11/15/2027	5.000%	3,475,000	278,207	8.01%	179,697	60.8%	64.6%
11/15/2028	5.000%	3,645,000	252,223	6.92%	206,625	55.0%	81.9%
11/15/2029	5.000%	3,860,000	232,437	6.02%	234,463	49.8%	100.9%
11/15/2030	4.375%	695,000	2,605	0.37%	44,684	5.5%	1715.0%
11/15/2030	5.000%	3,375,000	168,429	4.99%	220,115	43.3%	130.7%
11/15/2031	5.000%	465,000	18,828	4.05%	32,195	36.9%	171.0%
11/15/2032	5.000%	485,000	15,004	3.09%	35,518	29.7%	236.7%
11/15/2033	5.000%	510,000	13,102	2.57%	38,479	25.4%	293.7%
11/15/2034	5.000%	535,000	10,895	2.04%	41,547	20.8%	381.4%
11/15/2035	5.000%	560,000	8,385	1.50%	44,722	15.8%	533.3%
11/15/2036	5.000%	590,000	5,617	0.95%	48,415	10.4%	861.9%
11/15/2037	5.000%	620,000	(9,630)	-1.55%	57,101	-20.3%	-593.0%
11/15/2038	5.000%	655,000	(10,244)	-1.56%	60,325	-20.5%	-588.9%
11/15/2039	5.000%	685,000	(10,786)	-1.57%	63,088	-20.6%	-584.9%
11/15/2040	5.000%	720,000	(11,410)	-1.58%	66,311	-20.8%	-581.2%

Note: Savings are shown net of a $7.00/bond assumed financing cost.
Maturities included in refunding analysis.

Electric System Refunding Summary of Results	
Par Amount of Refunded Bonds ($)	93,695,000
Par Amount of Refunding Bonds ($)	87,970,000
True Interest Cost:	3.27%
Savings ($)	12,607,213
NPV Savings ($)	9,027,340
NPV Savings as a % of Refunded Par	9.63%
Negative Arbitrage	4,724,679
Negative Arb as % of NPV Savings	52.34%

City of Austin, Texas
Utility System Revenue Bonds - Electric System
Taxable Refunding Analysis Savings and Negative Arbitrage by Maturity

Refunded Maturity	Refunded Coupon	Refunded Par ($)	$ NPV Savings	% NPV Savings	Negative Arb ($)	Escrow Efficiency	Neg Arb as % of NPV
Series 2007; Non-Advance Refundable; Refunded with Taxable Bonds; Callable 11/15/2017							
11/15/2018	5.000%	8,000,000	157,897	1.97%	72,934	68.4%	46.2%
11/15/2019	5.000%	8,210,000	364,676	4.44%	113,577	76.3%	31.1%
11/15/2020	5.000%	5,800,000	356,657	6.15%	108,752	76.6%	30.5%

Note: Savings are shown net of a $7.00/bond assumed financing cost.

City of Austin, Texas
Town Lake Park Community Events Center Venue Project
Refunding Analysis - Assuming an Uninsured Transaction

Town Lake Refunding Summary of Results	
Par Amount of Refunded Bonds ($)	30,510,000
Par Amount of Refunding Bonds ($)	27,970,000
True Interest Cost:	2.41%
Savings ($)	5,890,136
NPV Savings[1] ($)	4,907,825
NPV Savings as a % of Refunded Par	16.09%

Town Lake Reserve Fund Assumptions	
Funding Requirement Rule	50% Average Annual
Funding Requirement $	1,406,992
DSRF Earnings	1% Annually

Town Lake Refunding Savings Cashflows

Date	Refunded DS	Refunding DS	DSRF Earnings and Release[2]	Refunding Net DS	Savings	Present Value Savings
9/30/2017	3,041,900	2,737,250	14,070	2,723,180	318,720	313,683
9/30/2018	3,038,950	2,730,200	14,070	2,716,130	322,820	311,066
9/30/2019	3,036,250	2,729,225	14,070	2,715,155	321,095	302,823
9/30/2020	3,036,625	2,728,825	14,070	2,714,755	321,870	297,207
9/30/2021	3,029,250	2,722,000	14,070	2,707,930	321,320	290,506
9/30/2022	3,032,250	2,724,450	14,070	2,710,380	321,870	284,858
9/30/2023	3,025,375	2,720,450	14,070	2,706,380	318,995	276,355
9/30/2024	3,023,500	2,718,500	14,070	2,704,430	319,070	270,510
9/30/2025	3,021,250	2,712,625	14,070	2,698,555	322,695	267,741
9/30/2026	3,013,500	2,706,875	14,070	2,692,805	320,695	260,395
9/30/2027	3,010,000	2,705,875	14,070	2,691,805	318,195	252,846
9/30/2028	3,000,500	2,694,500	14,070	2,680,430	320,070	248,910
9/30/2029	2,989,875	2,682,750	14,070	2,668,680	321,195	244,457
9/30/2030	2,982,750	2,675,250	1,414,027	1,261,223	1,721,527	1,282,605
Total	**42,281,975**	**37,988,775**	**1,596,936**	**36,391,839**	**5,890,136**	**4,903,963**

(1) Includes a rounding amount of $3,861.99.
(2) DSRF is calculated as 50% of the Average Annual Debt Service Requirement. The DSRF is assumed to earn 1% interest and is released in 2030. The earnings and release are factored into the savings.

Appendix VII

Audit Report and Interim Financial Report

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year Ended December 31, 2015
Commission File No. 001-31720

PIPER JAFFRAY COMPANIES

(Exact Name of Registrant as specified in its Charter)

DELAWARE	**30-0168701**
(State or Other Jurisdiction of Incorporation or Organization)	*(IRS Employer Identification No.)*
800 Nicollet Mall, Suite 1000 **Minneapolis, Minnesota**	**55402**
(Address of Principal Executive Offices)	*(Zip Code)*

(612) 303-6000
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange On Which Registered
Common Stock, par value $0.01 per share	The New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☑

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☑

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☑ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

The aggregate market value of the 14,474,232 shares of the Registrant's Common Stock, par value $0.01 per share, held by non-affiliates based upon the last sale price, as reported on the New York Stock Exchange, of the Common Stock on June 30, 2015 was approximately $632 million.

As of February 18, 2016, the registrant had 14,926,391 shares of Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Annual Report on Form 10-K incorporates by reference information (to the extent specific sections are referred to herein) from the Registrant's Proxy Statement for its 2016 Annual Meeting of Shareholders to be held on May 4, 2016.

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PART I

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K for the year ended December 31, 2015 (this "Form 10-K") contains forward-looking statements. Statements that are not historical or current facts, including statements about beliefs and expectations, are forward-looking statements. These forward-looking statements include, among other things, statements other than historical information or statements of current conditions and may relate to our future plans and objectives and results, and also may include our belief regarding the effect of various legal proceedings, as set forth under "Legal Proceedings" in Part I, Item 3 of this Form 10-K and in our subsequent reports filed with the Securities and Exchange Commission ("SEC"). Forward-looking statements involve inherent risks and uncertainties, and important factors could cause actual results to differ materially from those anticipated, including those factors discussed below under "Risk Factors" in Item 1A, as well as those factors discussed under "External Factors Impacting Our Business" included in "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Form 10-K and in our subsequent reports filed with the SEC. Our SEC reports are available at our Web site at www.piperjaffray.com and at the SEC's Web site at www.sec.gov. Forward-looking statements speak only as of the date they are made, and we undertake no obligation to update them in light of new information or future events.

ITEM 1. *BUSINESS.*

Overview

Piper Jaffray Companies ("Piper Jaffray") is an investment bank and asset management firm, serving the needs of corporations, private equity groups, public entities, non-profit entities and institutional investors in the U.S. and internationally. Founded in 1895, Piper Jaffray provides a broad set of products and services, including equity and debt capital markets products; public finance services; financial advisory services; equity and fixed income institutional brokerage; equity and fixed income research; and asset management services. Our headquarters are located in Minneapolis, Minnesota and we have offices across the United States and international locations in London, Hong Kong and Zurich. We market our investment banking and institutional securities business under a single name – Piper Jaffray – which gives us a consistent brand across this business. Our traditional asset management business is marketed under Advisory Research, Inc.

Prior to 1998, Piper Jaffray was an independent public company. U.S. Bancorp acquired the Piper Jaffray business in 1998 and operated it through various subsidiaries and divisions. At the end of 2003, U.S. Bancorp facilitated a tax-free distribution of our common stock to all U.S. Bancorp shareholders, causing Piper Jaffray to become an independent public company again.

Our Businesses

We operate through two reportable business segments, Capital Markets and Asset Management. We believe that the mix of activities across our business segments helps to provide diversification in our business model.

Capital Markets

The Capital Markets segment provides investment banking and institutional sales, trading and research services for various equity and fixed income products. This segment also includes the results from our alternative asset management funds and our principal investments.

- *Investment Banking* – For our corporate clients, we help raise capital through equity and debt financings. We also provide advisory services, primarily relating to mergers and acquisitions, equity private placements, debt advisory, and municipal financial advisory services. We operate in the following focus sectors: healthcare; consumer; diversified industrials and services; business services; technology; financial institutions; and agriculture, clean technologies and renewables, primarily focusing on middle-market clients. For our government and non-profit clients, we underwrite debt issuances and provide financial advisory, loan placement and interest rate risk management services. Our public finance investment banking capabilities focus on state and local governments, cultural and social service non-profit entities, and the education, healthcare, hospitality, senior living and transportation sectors.

- *Equity and Fixed Income Institutional Brokerage* – We offer both equity and fixed income advisory and trade execution services for institutional investors and government and non-profit entities. Integral to our capital markets efforts, we have equity sales and trading relationships with institutional investors in the United States and Europe that invest in our core sectors. Our research analysts provide investment ideas and support to our trading clients on approximately 700 companies. Our fixed income sales and trading professionals have expertise in municipal, corporate, mortgage, agency, treasury and structured product securities and cover a range of institutional investors. We engage in trading activities for both customer facilitation and strategic trading purposes. Our strategic trading activities (i.e. proprietary trading) are dedicated solely to investing firm capital, and focus on proprietary investments in municipal bonds, mortgage-backed securities and U.S. government agency securities. The strategic trading activities related to municipal bonds are principally operated in a fund structure vehicle with a limited number of employee investors.

- *Principal Investments* – We engage in merchant banking activities, which involve equity or debt investments in late stage private companies. Additionally, we have investments in private equity funds and other firm investments.

- *Alternative Asset Management Funds* – We have created alternative asset management funds in merchant banking and senior living in order to invest firm capital as well as to manage capital from outside investors. In the second half of 2015, we closed and completed liquidation of a municipal bond fund managed for the benefit of outside investors.

Asset Management

The Asset Management segment includes our traditional asset management business and our investments in registered funds and private funds or partnerships that we manage. Our traditional asset management business offers specialized investment management solutions for institutions, private clients and investment advisors. We manage value-oriented domestic, international and global strategies, as well as MLP and energy infrastructure strategies, through open-end and closed-end funds. We also provide customized solutions to our clients. In many cases, we offer both diversified and more concentrated versions of our products, generally through separately managed accounts.

- *Value Equity* – We take a value-driven approach to managing assets in the domestic and international equity markets. These investment strategies have an investment philosophy that centers on fundamental security selection across industries and regions with a focus on analyzing, among other things, a company's financial position, liquidity and profitability in light of its valuation. By focusing on securities with attractive net asset values, we seek to generate competitive long-term returns while minimizing investment risk.

- *Master Limited Partnerships ("MLPs") and Energy Infrastructure* – We also manage MLPs, energy infrastructure, and related operating entity assets focused on the energy sector. These strategies focus on growth, yet seek to limit exposure to riskier securities by placing greater importance on characteristics which support stable distributions and are representative of higher quality MLPs, including less volatile businesses, strategic assets, cleaner balance sheets and proven management teams. In addition to our MLP-focused funds, we manage other private funds focused on energy sector securities.

As of December 31, 2015, total assets under management ("AUM") were $8.9 billion, of which approximately 56 percent was invested in equities and 44 percent in MLPs. As of the same date, approximately 18 percent of our AUM was invested in international and global investment strategies and 82 percent was invested in domestic investment strategies. Approximately 79 percent of our AUM as of December 31, 2015 was managed on behalf of institutional clients, including foundations, endowments, pension funds and corporations, and through mutual fund sponsors and registered advisors. Approximately 13 percent of our AUM was managed on behalf of individual client relationships, which are principally high net worth individuals, and approximately 8 percent of our AUM was managed through sub-advisory relationships on closed-end funds.

Discontinued Operations

Our discontinued operations include the costs to liquidate our Hong Kong capital markets business, which ceased operations in 2012, and the operating results of Fiduciary Asset Management, LLC ("FAMCO"), an asset management subsidiary we sold in 2013. For further information on our discontinued operations, see Note 5 to our consolidated financial statements included in Part II, Item 8 of this Form 10-K.

Financial Information about Geographic Areas

As of December 31, 2015, the substantial majority of the Company's net revenues and long-lived assets were located in the U.S.

Competition

Our business is subject to intense competition driven by large Wall Street and international firms operating independently or as part of a large commercial banking institution. We also compete with regional broker dealers, boutique and niche-specialty firms, asset management firms and alternative trading systems that effect securities transactions through various electronic venues. Competition is based on a variety of factors, including price, quality of advice and service, reputation, product selection, transaction execution, financial resources and investment performance. Many of our large competitors have greater financial resources than we have and may have more flexibility to offer a broader set of products and services than we can.

In addition, there is significant competition within the securities industry for obtaining and retaining the services of qualified employees. Our business is a human capital business and the performance of our business is dependent upon the skills, expertise and performance of our employees. Therefore, our ability to compete effectively is dependent upon attracting and retaining qualified individuals who are motivated to serve the best interests of our clients, thereby serving the best interests of our company. Attracting and retaining employees depends, among other things, on our company's culture, management, work environment, geographic locations and compensation.

Employees

As of February 18, 2016, we had approximately 1,192 employees, of whom approximately 750 were registered with the Financial Industry Regulatory Authority ("FINRA").

Regulation

As a participant in the financial services industry, our business is regulated by U.S. federal and state regulatory agencies, self-regulatory organizations ("SROs") and securities exchanges, and by foreign governmental agencies, financial regulatory bodies and securities exchanges. We are subject to complex and extensive regulation of most aspects of our business, including the manner in which securities transactions are effected, net capital requirements, recordkeeping and reporting procedures, relationships and conflicts with customers, the handling of cash and margin accounts, conduct, experience and training requirements for certain employees, and the manner in which we prevent and detect money-laundering and bribery activities. The regulatory framework of the financial services industry is designed primarily to safeguard the integrity of the capital markets and to protect customers, not creditors or shareholders.

The laws, rules and regulations comprising this regulatory framework can (and do) change frequently, as can the interpretation and enforcement of existing laws, rules and regulations. Conditions in the global financial markets and economy, including the 2008 financial crisis, caused legislators and regulators to increase the examination, enforcement and rule-making activity directed toward the financial services industry, which we expect to continue in the coming years. This intensified regulatory environment, will likely alter certain business practices and change the competitive landscape of the financial services industry, which may have an adverse effect on our business, financial condition and results of operations.

Our U.S. broker dealer subsidiary (Piper Jaffray & Co.) is registered as a securities broker dealer with the SEC and is a member of various SROs and securities exchanges. In July of 2007, the National Association of Securities Dealers and the member regulation, enforcement and arbitration functions of the New York Stock Exchange ("NYSE") consolidated to form FINRA, which now serves as the primary SRO of Piper Jaffray & Co., although the NYSE continues to have oversight over NYSE-related market activities. FINRA regulates many aspects of our U.S. broker dealer business, including registration, education and conduct of our employees, examinations, rulemaking, enforcement of these rules and the federal securities laws, trade reporting and the administration of dispute resolution between investors and registered firms. We have agreed to abide by the rules of FINRA (as well as those of the NYSE and other SROs), and FINRA has the power to expel, fine and otherwise discipline Piper Jaffray & Co. and its officers, directors and employees. Among the rules that apply to Piper Jaffray & Co. are the uniform net capital rule of the SEC (Rule 15c3-1) and the net capital rule of FINRA. Both rules set a minimum level of net capital a broker dealer must maintain and also require that a portion of the broker dealer's assets be relatively liquid. Under the FINRA rule, FINRA may prohibit a member firm from expanding its business or paying cash dividends if resulting net capital falls below FINRA requirements. In addition, Piper Jaffray & Co. is subject to certain notification requirements related to withdrawals of excess net capital. As a result of these rules, our ability

to make withdrawals of capital from Piper Jaffray & Co. may be limited. In addition, Piper Jaffray & Co. is licensed as a broker dealer in each of the 50 states, requiring us to comply with applicable laws, rules and regulations of each state. Any state may revoke a license to conduct a securities business and fine or otherwise discipline broker dealers and their officers, directors and employees.

We also operate an entity that is authorized, licensed and regulated by the U.K. Financial Conduct Authority and registered under the laws of England and Wales, as well as an entity that is authorized, licensed and regulated by the Hong Kong Securities and Futures Commission and registered under the laws of Hong Kong, China. The U.K. Financial Conduct Authority and the Hong Kong Securities and Futures Commission regulate these entities (in their respective jurisdictions) in areas of capital adequacy, customer protection and business conduct, among others.

Entities in the jurisdictions identified above are also subject to anti-money laundering regulations. Piper Jaffray & Co., our U.S. broker dealer subsidiary, is subject to the USA PATRIOT Act of 2001, which contains anti-money laundering and financial transparency laws and mandates the implementation of various regulations requiring us to implement standards for verifying client identification at account opening, monitoring client transactions and reporting suspicious activity. Our entities in Hong Kong and the United Kingdom are subject to similar anti-money laundering laws and regulations. We are also subject to the U.S. Foreign Corrupt Practices Act as well as other anti-bribery laws in the jurisdictions in which we operate. These laws generally prohibit companies and their intermediaries from engaging in bribery or making other improper payments to foreign officials for the purpose of obtaining or retaining business or gaining an unfair business advantage.

We maintain asset management subsidiaries that are registered as investment advisers with the SEC and subject to regulation and oversight by the SEC. These entities are Advisory Research, Inc. ("ARI"), Piper Jaffray Investment Management LLC ("PJIM"), and PJC Capital Partners LLC. As registered investment advisors, these entities are subject to requirements that relate to, among other things, fiduciary duties to clients, maintaining an effective compliance program, solicitation agreements, conflicts of interest, recordkeeping and reporting requirements, disclosure requirements, limitations on agency cross and principal transactions between advisor and advisory clients, as well as general anti-fraud prohibitions. Certain investment funds that we manage are registered investment companies under the Investment Company Act, as amended. Those funds and entities that serve as the funds' investment advisors are subject to the Investment Company Act and the rules and regulations of the SEC, which regulate the relationship between a registered investment company and its investment advisor and prohibit or severely restrict principal transactions or joint transactions, among other requirements. ARI is also authorized by the Irish Financial Services Regulatory Authority as an investment advisor in Ireland and cleared by the Luxembourg Commission de Surviellance du Secteur Financier as a manager to Luxembourg funds. ARI is the investment advisor for Advisory Research Global Funds PLC, an open-ended investment company with variable capital authorized and regulated by the Central Bank of Ireland pursuant to the European Communities Regulations (Undertakings for Collective Investments in Transferable Securities or UCITS). ARI has established a Tokyo office which is a Representative Office of a Foreign Investment Advisor subject to Japanese laws and regulations. PJIM is registered with the Commodity Futures Trading Commission (“CFTC”) and the National Futures Association (“NFA”) as a commodities pool operator. The registrations with the CFTC and NFA allow PJIM to enter into derivative instruments (e.g., interest rate swaps and credit default swap index contracts) to hedge risks associated with certain security positions of funds managed by PJIM.

Certain of our businesses also are subject to compliance with laws and regulations of U.S. federal and state governments, non-U.S. governments, their respective agencies and/or various self-regulatory organizations or exchanges governing the privacy of client information. Any failure with respect to our practices, procedures and controls in any of these areas could subject us to regulatory consequences, including fines, and potentially other significant liabilities.

Executive Officers

Information regarding our executive officers and their ages as of February 18, 2016, are as follows:

Name	Age	Position(s)
Andrew S. Duff	58	Chairman and Chief Executive Officer
Chad R. Abraham	47	Co-Head of Global Investment Banking and Capital Markets
Christopher D. Crawshaw	49	Head of Asset Management
Christine N. Esckilsen	47	Chief Human Capital Officer
Frank E. Fairman	58	Head of Public Finance
John W. Geelan	40	General Counsel and Secretary
Jeff P. Klinefelter	48	Global Head of Equities
R. Scott LaRue	55	Co-Head of Global Investment Banking and Capital Markets
Debbra L. Schoneman	47	Chief Financial Officer
Thomas G. Smith	59	Chief Strategy Officer
M. Brad Winges	47	Head of Fixed Income Services and Piper Jaffray Firm Investments and Trading

Andrew S. Duff is our chairman and chief executive officer. Mr. Duff became chairman and chief executive officer of Piper Jaffray Companies following completion of our spin-off from U.S. Bancorp on December 31, 2003. He also has served as chairman of our broker dealer subsidiary since 2003, as chief executive officer of our broker dealer subsidiary since 2000, and as president of our broker dealer subsidiary since 1996. He has been with Piper Jaffray since 1980. Prior to the spin-off from U.S. Bancorp, Mr. Duff also was a vice chairman of U.S. Bancorp from 1999 through 2003.

Chad R. Abraham is our co-head of global investment banking and capital markets, a position he has held since October 2010. Prior to his current role, he served as head of equity capital markets since November 2005. Mr. Abraham joined Piper Jaffray in 1991.

Christopher D. Crawshaw is our head of asset management. He has served in this role since January 2014. Mr. Crawshaw joined Piper Jaffray from Advisory Research, Inc., a Chicago-based asset management firm that we acquired in 2010, where he had been a managing director since 2004, having joined the company in 2001. Mr. Crawshaw was named president of Advisory Research in 2012.

Christine N. Esckilsen is our chief human capital officer, a title she has held since January 2016. Ms. Esckilsen has been our global head of human capital and a managing director since 2011. She joined Piper Jaffray in 2002 as an assistant general counsel responsible for employment matters and litigation.

Frank E. Fairman is head of our public finance services business, a position he has held since July 2005. Prior to that, he served as head of the firm's public finance investment banking group from 1991 to 2005, as well as the head of the firm's municipal derivative business from 2002 to 2005. He has been with Piper Jaffray since 1983.

John W. Geelan is our general counsel and secretary. He served as assistant general counsel and assistant secretary from November 2007 until becoming general counsel in January 2013. Mr. Geelan joined Piper Jaffray in 2005.

Jeff P. Klinefelter is the global head of our equities business, a position he has held since July 2012. From May 2010 until July 2012, he served as head of equity research. Mr. Klinefelter joined Piper Jaffray in 1997 as a research analyst.

R. Scott LaRue is our co-head of global investment banking and capital markets, a position he has held since October 2010. He had previously served as global co-head of consumer investment banking since February 2010, after having served as co-head of consumer investment banking since August 2004. He has been with Piper Jaffray since 2003.

Debbra L. Schoneman is our chief financial officer. Ms. Schoneman joined Piper Jaffray in 1990 and has held her current position since May 2008. She previously served as treasurer from August 2006 until May 2008. Prior to that, she served as finance director of our corporate and institutional services business from July 2002 until July 2004 when the role was expanded to include our public finance services division.

Thomas G. Smith is our chief strategy officer, a title he has held since January 2016 which encompasses his roles as our head of strategy, corporate development, and investor relations. He joined Piper Jaffray in 1998 as a managing director in our technology investment banking group. He became head of corporate development in 2006 and head of investor relations in 2012.

M. Brad Winges is head of fixed income services, a position he has held since January 2009, and became head of Piper Jaffray firm investments and trading in February 2014. Mr. Winges joined Piper Jaffray in 1991 and served as head of public finance services sales and trading from June 2005 until obtaining his current position. Prior to that, he served as head of municipal sales and trading from June 2003 until June 2005.

Additional Information

Our principal executive offices are located at 800 Nicollet Mall, Suite 1000, Minneapolis, Minnesota 55402, and our general telephone number is (612) 303-6000. We maintain an Internet Web site at http://www.piperjaffray.com. The information contained on and connected to our Web site is not incorporated into this report. We make available free of charge on or through our Web site our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and all other reports we file with the SEC, as soon as reasonably practicable after we electronically file these reports with, or furnish them to, the SEC. “Piper Jaffray,” the “Company,” “registrant,” “we,” “us” and “our” refer to Piper Jaffray Companies and our subsidiaries. The Piper Jaffray logo and the other trademarks, tradenames and service marks of Piper Jaffray mentioned in this report, including Piper Jaffray®, are the property of Piper Jaffray.

ITEM 1A. ***RISK FACTORS.***

Developments in market and economic conditions have in the past adversely affected, and may in the future adversely affect, our business and profitability and cause volatility in our results of operations.

Economic and market conditions have had, and will continue to have, a direct and material impact on our results of operations and financial condition because performance in the financial services industry is heavily influenced by the overall strength of economic conditions and financial market activity. For example:

- Our equities investment banking revenue, in the form of underwriting, placement and financial advisory fees, is directly related to macroeconomic conditions and corresponding financial market activity. When the outlook for macroeconomic conditions is uncertain or negative, financial market activity generally tends to be decreased, which can reduce our equities investment banking revenues. As an example, a significant component of our investment banking revenues are derived from initial public offerings of middle-market companies in growth sectors, and activity in this area is highly correlated to the macroeconomic environment and market conditions. Beginning in the third quarter of 2015, volatility in equity markets began increasing leading up to the Federal Reserve's decision to raise the federal funds rate in December. This volatility has continued into the first quarter of 2016 as the markets weigh falling commodity prices, depressed energy markets, a slowdown in global economic growth, including in China and other developing markets, and weakening growth in the U.S. In addition, U.S. financial markets remain vulnerable to the potential risks posed by exogenous shocks, which could include, among other things, further conflict in the Middle East and in Eastern Europe, political and financial uncertainty in the European Union and further government debt crises, and a more severe and prolonged downturn in China's economy. If these factors were to worsen or if an exogenous shock were to materialize, it could lead to further or more severe equity market declines and volatility, which would likely have a significant negative impact on our results of operations.

- Interest rates have a significant impact on our business, particularly our fixed income institutional business. This includes the direction and rate of change in rates, as well as uncertainy around both of these. Volatility generally increased in 2015, reflecting the uncertainty and volatility around the Federal Reserve's decision to raise the federal funds rate for the first time in nearly a decade, slowing economic growth in China, and the potential for a global economic slowdown. Yields are expected to be impacted in 2016 by perceptions around the strength of the U.S. economy and the ability of the Federal Reserve to gradually raise the federal funds rate through the year. As to the impact to our business, a large percentage of our securities inventory - both that held for facilitating client activity as well as our own proprietary trading - consist of fixed income securities, and a rapid increase in interest rates would decrease the value of these positions, possibly significantly. Further, our interest rate hedging strategies may not mitigate this volatility as we generally do not hedge all of our interest rate risk and volatility may reduce the correlation (i.e., effectiveness) between certain hedging vehicles and the securities inventory we are attempting to hedge. In addition, interest rate increases in 2016, both gradual and more severe, may negatively impact the volume of debt

refinancing issuances underwritten by our public finance investment banking business, as well as our managed funds focused on master limited partnerships ("MLPs"), which may underperform in a rising interest rate environment.

- An unsustainable U.S. economic recovery, or a significant worsening of global economic conditions, would likely result in a decline in the financial markets, reducing asset valuations and adversely impacting our asset management business. A reduction in asset values would negatively impact this business by reducing the value of assets under management, and as a result, the revenues generated from this business.

It is difficult to predict the market conditions for 2016, which are dependent in large part upon the pace of global and U.S. economic growth. Our smaller scale compared to many of our competitors and the cyclical nature of the economy and this industry leads to volatility in our financial results, including our operating margins, compensation ratios and revenue and expense levels. Our financial performance may be limited by the fixed nature of certain expenses, the impact from unanticipated losses or expenses during the year, and the inability to scale back costs in a timeframe to match decreases in revenue-related changes in market and economic conditions. As a result, our financial results may vary significantly from quarter-to-quarter and year-to-year.

Developments in specific business sectors of the U.S. and global economy, as well as areas of the markets in which we conduct our business, have in the past adversely affected, and may in the future adversely affect, our business and profitability.

Our results for a particular period may be disproportionately impacted by declines in specific sectors of the U.S. or global economy, or for certain products within the financial services industry, due to our business mix and focus areas. For example:

- Our equities investment banking business focuses on specific sectors, specifically healthcare, consumer, diversified industrials and services, business services, technology, financial institutions, and agriculture, clean technologies and renewables. Volatility, uncertainty, or slowdowns in these sectors, particularly healthcare, may adversely affect our business, sometimes disproportionately, and may cause volatility in the net revenues we receive from our capital markets and corporate advisory activities. In recent years, the healthcare sector has been a significant contributor to our overall results, and negative developments in this sector would materially and disproportionately impact us, even if general economic conditions were strong. Further, energy markets are currently suffering from a prolonged depression in oil and natural gas prices, and uncertainty regarding the outlook for future oil prices is dampening the prospects of many energy companies and reducing capital markets and corporate advisory activities in the sector. We recently announced the acquisition of Simmons & Company International, an energy-based investment banking firm, and the transaction is expected to close in the first quarter of 2016. Upon close, the energy sector will become one of our most significant sectors of coverage for our equity investment banking business. Disproportionately negative market conditions in the energy sector will slow and hinder our ability to realize the benefits from the acquisition. Lastly, we may not participate or may participate to a lesser degree than other firms in sectors that experience significant activity, such as real estate, and our operating results may not correlate with the results of other firms which participate in these sectors.

- Our fixed income institutional business derives its revenue from sales and trading activity in the municipal market and from products within the taxable market, including structured mortgages, hybrid preferreds and government agency products. Our operating results for our fixed income institutional business may not correlate with the results of other firms or the fixed income market generally because we do not participate in significant segments of the fixed income markets such as credit default swaps, corporate high-yield bonds, currencies and commodities.

- Our public finance investment banking business depends heavily upon conditions in the municipal market. Our public finance business focuses on investment banking activity in sectors that include state and local government, education, senior living, healthcare, transportation, and hospitality sectors, with an emphasis on transactions with a par value of $500 million or less. Challenging market conditions for these sectors that are disproportionately worse than those impacting the broader economy or municipal markets generally may adversely impact our business. More broadly, our fixed income institutional business and our public finance business are tied to the municipal market and the enactment, or the threat of enactment, of any legislation that would alter the financing alternatives available to municipalities through the elimination or reduction of tax-exempt bonds.

- A significant portion of our asset management revenues are derived from actively managed equity products, and this type of investment product has experienced asset outflows in recent years, including in 2015. In addition, U.S. equity markets were largely flat or slightly down in 2015, and the beginning of 2016 saw further declines and increased volatility. Uncertainty relating to global and U.S. economic growth and equity valuations, the continued shift into lower-cost passively-managed funds, and other negative events impacting investor confidence could cause the negative trend for actively-managed equity products to continue. Outflows for this investment product negatively affect results of operations for this business, as revenues are closely tied to assets under management.

- Management and performance fees we earn on assets invested by institutions and individuals in our managed funds focused on MLPs and other investments related to the energy infrastructure sector are a meaningful contributor to our asset management revenues. Return on investment in the energy infrastructure sector is dependent to a meaningful degree on the prices of energy commodities such as natural gas, natural gas liquids, crude oil, refined petroleum products or coal. Persistently depressed prices for any of these products, such as those experienced in 2015, will likely lead to a further deterioration of market conditions for companies in the energy infrastructure sector and poorer returns by our funds, and, consequently, a reduction in the management and performance fees we receive.

Our stock price may fluctuate as a result of several factors, including but not limited to, changes in our revenues, operating results, tangible book value and return on equity.

We have experienced, and expect to experience in the future, fluctuations in the market price of our common stock due to factors that relate to the nature of our business, including but not limited to changes in our revenues, operating results, tangible book value, and return on equity. Our business, by its nature, does not produce steady and predictable earnings on a quarterly basis, which causes fluctuations in our stock price that may be significant. Other factors that have affected, and may further affect, our stock price include changes in or news related to economic or market events or conditions, changes in market conditions in the financial services industry, including developments in regulation affecting our business, failure to meet the expectations of market analysts, changes in recommendations or outlooks by market analysts, and aggressive short selling similar to that experienced in the financial industry in 2008.

We may make strategic acquisitions and minority investments, engage in joint ventures or divest or exit existing businesses, which could cause us to incur unforeseen expenses and have disruptive effects on our business and may not yield the benefits we expect.

We may grow in part through corporate development activities that may include acquisitions, joint ventures and minority investment stakes. For example, we expanded our existing asset management business in March 2010 with the acquisition of ARI, a Chicago-based asset management firm, and we added to our public finance and fixed income sales and trading and corporate advisory businesses with our acquisitions of Seattle-Northwest Securities Corporation and Edgeview Partners, L.P. in July 2013. In 2015, we expanded our equities investment banking business into the financial institutions and energy sectors, respectively, through our completed acquisition of River Branch Holdings LLC and our announced acquisition of Simmons & Company International, which is expected to close in the first quarter of 2016. We also added scale to our fixed income institutional sales and trading business through our acquisition of BMO Capital Markets GKST Inc. There are a number of risks associated with corporate development activities. Costs or difficulties relating to a transaction, including integration of products, employees, technology systems, accounting systems and management controls, may be difficult to predict accurately and be greater than expected causing our estimates to differ from actual results. Importantly, we may be unable to retain key personnel after the transaction, and the transaction may impair relationships with customers and business partners. We may incur unforeseen liabilities of an acquired company that could impose significant and unanticipated legal costs on us. Also, our share price could decline after we announce or complete a transaction if investors view the transaction as too costly or unlikely to improve our competitive position. Longer-term, these activities may require increased costs in the form of management personnel, financial and management systems and controls and facilities, which, in the absence of continued revenue growth, would cause our operating margins to decline. More generally, any difficulties that we experience could disrupt our ongoing business, increase our expenses and adversely affect our operating results and financial condition. We also may be unable to achieve anticipated benefits and synergies from the transaction as fully as expected or within the expected time frame. Divestitures or elimination of existing businesses or products could have similar effects. For example, we shut down our Hong Kong capital markets business in 2012, and realized a pre-tax loss on the investment in our Hong Kong subsidiaries.

Our proprietary trading and principal investments expose us to risk of loss.

We engage in a variety of activities in which we commit or invest our own capital, including proprietary trading and principal investing. Our proprietary trading activities (which we also refer to as "strategic trading" in this report) related to municipal bonds and mortgage-backed securities have been a meaningful contributor to our overall financial results. Fixed income proprietary trading activities comprise a meaningful percentage of our Level III assets within our securities inventory. Level III assets have little or no pricing observability, and may be less liquid than other securities that we hold in our securities inventory. In addition to proprietary trading, we engage in principal investing, having established alternative asset management funds for merchant banking (focused on investments in the equity and debt instruments of private companies) and senior living construction projects. We have invested firm capital in these funds alongside capital raised from outside investors, and intend to continue to develop

these alternative asset management strategies. Additionally, we make principal investments in funds managed by ARI, our asset management subsidiary, which are generally invested in publicly traded equities.

Our results from these activities may vary significantly from quarter to quarter. We may incur significant losses from our proprietary trading activities and principal investments due to fixed income or equity market fluctuations and volatility from quarter to quarter. For example, in 2015, our principal investments in ARI funds focused on MLPs and other investments related to the energy sector, and, as a result, suffered significant declines related to the ongoing downturn in that sector. In addition, we may engage in hedging transactions that if not successful, could result in losses. With respect to principal investing, there often is not an established liquid trading market for these investments or our investments may be otherwise subject to restrictions on sale or hedging, and our ability to withdraw our capital from these investments may be limited, increasing our risk of losses. Also, our merchant banking activity involves investments in late stage private companies, and we may be unable to realize our investment objectives by sale or other disposition at attractive prices.

Damage to our reputation could damage our business.

Maintaining our reputation is critical to attracting and maintaining clients, customers, investors, and employees. If we fail to deal with, or appear to fail to deal with, issues that may give rise to reputational risk, such failure or appearance of failure could have a material adverse effect on our business and stock price. These issues include, but are not limited to, any of the risks discussed in this Item 1A, appropriately dealing with potential conflicts of interest, legal and regulatory requirements, ethical issues, money laundering, cybersecurity, and the proper identification of the strategic, market, credit, liquidity, human capital, and operational risks inherent in our business and products.

Financing and advisory services engagements are transactional in nature and do not generally provide for subsequent engagements.

Even though we work to represent our clients at every stage of their lifecycle, we are typically retained on a short-term, engagement-by-engagement basis in connection with specific capital markets or mergers and acquisitions transactions. As a consequence, the timing of when fees are earned, and, therefore, our financial results from capital markets and corporate advisory activities may experience volatility quarter to quarter based on equity market conditions as well as the macroeconomic business cycle more broadly. In particular, our revenues related to acquisition and disposition transactions tend to be highly volatile and unpredictable (or “lumpy”) from quarter to quarter due to the one-time nature of the transaction and the size of the fee. As a result, high levels of revenue in one quarter will not necessarily be predictive of continued high levels of revenue in any subsequent period. If we are unable to generate a substantial number of new engagements and generate fees from the successful completion of those transactions, our business and results of operations will likely be adversely affected.

The volume of anticipated investment banking transactions may differ from actual results.

The completion of anticipated investment banking transactions in our pipeline is uncertain and partially beyond our control, and our investment banking revenue is typically earned only upon the successful completion of a transaction. In most cases, we receive little or no payment for investment banking engagements that do not result in the successful completion of a transaction. For example, a client's acquisition transaction may be delayed or terminated because of a failure to agree upon final terms with the counterparty, failure to obtain necessary regulatory consents or board or stockholder approvals, failure to secure necessary financing, adverse market conditions or unexpected financial or other problems in the client's or counterparty's business. If parties fail to complete a transaction on which we are advising or an offering in which we are participating, we earn little or no revenue from the transaction and may have incurred significant expenses (for example, travel and legal expenses) associated with the transaction. Accordingly, our business is highly dependent on market conditions as well as the decisions and actions of our clients and interested third parties, and the number of engagements we have at any given time (and any characterization or description of our deal pipelines) is subject to change and may not necessarily result in future revenues.

Asset management revenue may vary based on investment performance and market and economic factors.

We have grown our asset management business in recent years, including with the acquisition of ARI in 2010, which has increased the risks associated with this business relative to our overall operations. Assets under management are a significant driver of this business, as revenues are primarily derived from management fees paid on the assets under management. Our ability to maintain or increase assets under management is subject to a number of factors, including investors' perception of our past performance, market or economic conditions, competition from other fund managers and our ability to negotiate terms with major investors.

Investment performance is one of the most important factors in retaining existing clients and competing for new asset management business. Poor investment performance and other competitive factors could reduce our revenues and impair our growth in many ways: existing clients may withdraw funds from our asset management business in favor of better performing products or a different investment style or focus; our capital investments in our investment funds or the seed capital we have committed to new asset management products may diminish in value or may be lost; and our key employees in the business may depart, whether to join a competitor or otherwise.

To the extent our investment performance is perceived to be poor in either relative or absolute terms, our asset management revenues will likely be reduced and our ability to attract new funds will likely be impaired. Even when market conditions are generally favorable, our investment performance may be adversely affected by our investment style and the particular investments that we make. Further, as the size and number of investment funds, including exchange-traded funds, hedge funds and private equity funds increases, it is possible that it will become increasingly difficult for us to attract new assets under management or price competition may mean that we are unable to maintain our current fee structures.

Our ability to attract, develop and retain highly skilled and productive employees is critical to the success of our business.

Historically, the market for qualified employees within the financial services industry has been marked by intense competition, and the performance of our business may suffer to the extent we are unable to attract and retain employees effectively, particularly given the relatively small size of our company and our employee base compared to some of our competitors and the geographic locations in which we operate. The primary sources of revenue in each of our business lines are commissions and fees earned on advisory and underwriting transactions and customer accounts managed by our employees, who have historically been recruited by other firms and in certain cases are able to take their client relationships with them when they change firms. Some specialized areas of our business are operated by a relatively small number of employees, the loss of any of whom could jeopardize the continuation of that business following the employee's departure.

Further, recruiting and retention success often depends on the ability to deliver competitive compensation, and we may be at a disadvantage to some competitors given our size and financial resources. Our inability or unwillingness to meet compensation needs or demands may result in the loss of some of our professionals or the inability to recruit additional professionals at compensation levels that are within our target range for compensation and benefits expense. Our ability to retain and recruit also may be hindered if we limit our aggregate annual compensation and benefits expense as a percentage of annual net revenues.

An inability to readily divest trading positions may result in financial losses to our business.

Timely divestiture of our trading positions, including equity, fixed income and other securities positions, can be impaired by decreased trading volume, increased price volatility, rapid changes in interest rates, concentrated trading positions, limitations on the ability to divest positions in highly specialized or structured transactions and changes in industry and government regulations. This is true both for customer transactions that we facilitate as well as proprietary trading positions that we maintain. While we hold a security, we are vulnerable to valuation fluctuations and may experience financial losses to the extent the value of the security decreases and we are unable to timely divest or hedge our trading position in that security. The value may decline as a result of many factors, including issuer-specific, market or geopolitical events. In addition, in times of market uncertainty, the inability to transfer inventory positions may have an impact on our liquidity as funding sources generally decline and we are unable to pledge the underlying security as collateral. Our liquidity may also be impacted if we choose to facilitate liquidity for specific products and voluntarily increase our inventory positions in order to do so, exposing ourselves to greater market risk and potential financial losses from the reduction in value of illiquid positions.

In addition, reliance on revenues from hedge funds and hedge fund advisors, which are less regulated than many investment company and advisor clients, may expose us to greater risk of financial loss from unsettled trades than is the case with other types of institutional investors. Concentration of risk may result in losses to us even when economic and market conditions are generally favorable for others in our industry.

Our businesses, profitability and liquidity may be adversely affected by deterioration in the credit quality of, or defaults by, third parties who owe us money, securities or other assets.

The nature of our businesses exposes us to the risk that third parties who owe us money, securities or other assets will not perform their obligations. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. Deterioration in the credit quality of securities or obligations we hold could result in losses and adversely affect our ability to rehypothecate or otherwise use those securities or obligations for liquidity purposes. A significant downgrade in the credit ratings of our counterparties could also have a negative impact on our results. Default rates, downgrades and disputes with

counterparties as to the valuation of collateral tend to increase in times of market stress and illiquidity. Although we review credit exposures to specific clients and counterparties and to specific industries that we believe may present credit concerns, default risk may arise from events or circumstances that are difficult to detect or foresee. Also, concerns about, or a default by, one institution generally leads to losses, significant liquidity problems, or defaults by other institutions, which in turn adversely affects our business.

Particular activities or products within our business expose us to increased credit risk, including inventory positions, interest rate swap contracts with customer credit exposure, counterparty risk with two major financial institutions related to customer interest rate swap contracts without customer credit exposure, investment banking and advisory fee receivables, customer margin accounts, and trading counterparty activities related to settlement and similar activities. With respect to interest rate swap contracts with customer credit exposure, we have retained the credit exposure with five public finance counterparties totaling $24.4 million at December 31, 2015 as part of our matched-book interest rate swap program. In the event of a termination of the contract, the counterparty would owe us the applicable amount of the credit exposure. If our counterparty is unable to make its payment to us, we would still be obligated to pay our hedging counterparty, resulting in credit losses. Non-performance by our counterparties, clients and others, including with respect to our inventory positions, interest rate swap contracts with customer credit exposures and our merchant banking debt investments could result in losses, potentially material, and thus have a significant adverse effect on our business and results of operations.

An inability to access capital readily or on terms favorable to us could impair our ability to fund operations and could jeopardize our financial condition and results of operations.

Liquidity, or ready access to funds, is essential to our business. Several large financial institutions failed or merged with others during the credit crisis following significant declines in asset values in securities held by these institutions, and, during 2011, a financial institution failed due to liquidity issues related to the European sovereign debt crisis. To fund our business, we rely on commercial paper and bank financing as well as other funding sources such as the repurchase markets. Our bank financing includes uncommitted credit lines, which could become unavailable to us on relatively short notice. In an effort to mitigate this funding risk, we renewed a $250 million committed credit facility for the seventh consecutive year in 2015. We also have $175 million of unsecured notes. The notes consist of two classes, with $125 million maturing in October 2018 and $50 million maturing in May 2017. In order to further diversify our short-term funding needs, we also continue to maintain three commercial paper programs in the amounts of $300 million, $150 million, and $125 million.

Our access to funding sources, particularly uncommitted funding sources, could be hindered by many factors, and many of these factors we cannot control, such as economic downturns, the disruption of financial markets, the failure or consolidation of other financial institutions, negative news about the financial industry generally or us specifically. We could experience disruptions with our credit facilities in the future, including the loss of liquidity sources and/or increased borrowing costs, if lenders or investors develop a negative perception of our short- or long-term financial prospects, which could result from decreased business activity. Our liquidity also could be impacted by the activities resulting in concentration of risk, including proprietary activities from long-term investments and/or investments in specific markets or products without liquidity. Our access to funds may be impaired if regulatory authorities take significant action against us, or if we discover that one of our employees has engaged in serious unauthorized or illegal activity.

In the future, we may need to incur debt or issue equity in order to fund our working capital requirements, as well as to execute our growth initiatives that may include acquisitions and other investments. Similarly, our access to funding sources may be contingent upon terms and conditions that may limit or restrict our business activities and growth initiatives. For example, the unsecured notes discussed above include covenants that, among other things, limit our leverage ratio and require maintenance of certain levels of tangible net worth, regulatory net capital, and operating cash flow to fixed charges.

Lastly, we currently do not have a credit rating, which could adversely affect our liquidity and competitive position by increasing our borrowing costs and limiting access to sources of liquidity that require a credit rating as a condition to providing funds.

Concentration of risk increases the potential for significant losses.

Concentration of risk increases the potential for significant losses in our sales and trading, proprietary trading, merchant banking and underwriting businesses. We have committed capital to these businesses, and we may take substantial positions in particular types of securities and/or issuers. This concentration of risk may cause us to suffer losses even when economic and market conditions are generally favorable for our competitors. Further, disruptions in the credit markets can make it difficult to hedge exposures effectively and economically.

Our information and technology systems, including outsourced systems, are critical components of our operations, and failure of those systems or other aspects of our operations infrastructure may disrupt our business, cause financial loss and constrain our growth.

We typically transact thousands of securities trades on a daily basis across multiple markets. Our data and transaction processing, custody, financial, accounting and other technology and operating systems are essential to this task. A system malfunction (due to hardware failure, capacity overload, security incident, data corruption, etc.) or mistake made relating to the processing of transactions could result in financial loss, liability to clients, regulatory intervention, reputational damage and constraints on our ability to grow. We outsource a substantial portion of our critical data processing activities, including trade processing and back office data processing. For example, we have entered into contracts with Broadridge Financial Solutions, Inc. ("Broadridge"), pursuant to which Broadridge handles our trade and back office processing, and Unisys Corporation ("Unisys"), pursuant to which Unisys supports our data center and helpdesk needs. We also contract with third parties for market data services, which constantly broadcast news, quotes, analytics and other relevant information to our employees. We contract with other vendors to produce and mail our customer statements and to provide other services. In the event that any of these service providers fails to adequately perform such services or the relationship between that service provider and us is terminated, we may experience a significant disruption in our operations, including our ability to timely and accurately process transactions or maintain complete and accurate records of those transactions.

Adapting or developing our technology systems to meet new regulatory requirements, client needs, geographic expansion and industry demands also is critical for our business. Introduction of new technologies present new challenges on a regular basis. We have an ongoing need to upgrade and improve our various technology systems, including our data and transaction processing, financial, accounting, risk management, compliance, and trading systems. This need could present operational issues or require significant capital spending. It also may require us to make additional investments in technology systems and may require us to reevaluate the current value and/or expected useful lives of our technology systems, which could negatively impact our results of operations.

Our clients routinely provide us with sensitive and confidential information. Secure processing, storage and transmission of confidential and other information in our internal and outsourced computer systems and networks is critically important to our business. We take protective measures and endeavor to modify them as circumstances warrant. However, our computer systems, software and networks, and those of our clients, vendors, service providers, counterparties and other third parties, may be vulnerable to unauthorized access, cyberattacks, security breaches, computer viruses or other malicious code, inadvertent, erroneous or intercepted transmission of information (including by e-mail), and other events that could have an information security impact. We work with our clients, vendors, service providers, counterparties and other third parties to develop secure transmission capabilities and protect against these events, but we do not have, and may be unable to put in place, secure capabilities with all of these third parties and we may not be able to ensure that these third parties have appropriate controls in place to protect the confidentiality of the information. If one or more of such events occur, this potentially could jeopardize our or our clients' or counterparties' confidential and other information processed and stored in, and transmitted through, our computer systems and networks, or those of third parties, or otherwise cause interruptions or malfunctions in our, our clients', our counterparties' or third parties' operations. We may be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities or other exposures, and we may be subject to reputational harm as well as litigation and financial losses that are either not insured against or not fully covered through any insurance maintained by us.

A disruption in the infrastructure that supports our business due to fire, natural disaster, health emergency (for example, a disease pandemic), power or communication failure, act of terrorism or war may affect our ability to service and interact with our clients. If we are not able to implement contingency plans effectively, any such disruption could harm our results of operations.

Legislative and regulatory proposals could significantly curtail the revenue from certain products that we currently provide.

Proposed changes in laws or regulations relating to our business could decrease, perhaps significantly, the revenue that we receive from certain products or services that we provide. For example, federal law currently allows investors in debt issuances by government and non-profit entities to exclude the bond interest for federal income tax purposes, resulting in lower interest expense for the issuer as compared to a taxable financing. In recent years, federal lawmakers have presented various proposals to limit or eliminate the tax-exempt status of this bond interest. Our public finance investment banking business receives significant revenues as a result of underwriting activity in connection with debt issuances by government and non-profit clients, primarily on a tax-exempt basis. Also, a significant percentage of our securities inventory — both positions held for client activity and our own proprietary trading positions — consist of municipal securities. Any reduction or elimination of tax-exempt bond interest could

negatively impact the value of the municipal securities we hold in our securities inventory as well as our public finance investment banking business more generally, which would negatively impact the results of operations for these businesses.

Our exposure to legal liability is significant, and could lead to substantial damages.

We face significant legal risks in our businesses. These risks include potential liability under securities laws and regulations in connection with our capital markets, asset management and other businesses. The volume and amount of damages claimed in litigation, arbitrations, regulatory enforcement actions and other adversarial proceedings against financial services firms have increased in recent years. Our experience has been that adversarial proceedings against financial services firms typically increase during and following a market downturn. We also are subject to claims from disputes with our employees and our former employees under various circumstances. Risks associated with legal liability often are difficult to assess or quantify and their existence and magnitude can remain unknown for significant periods of time, making the amount of legal reserves related to these legal liabilities difficult to determine and subject to future revision. Legal or regulatory matters involving our directors, officers or employees in their individual capacities also may create exposure for us because we may be obligated or may choose to indemnify the affected individuals against liabilities and expenses they incur in connection with such matters to the extent permitted under applicable law. In addition, like other financial services companies, we may face the possibility of employee fraud or misconduct. The precautions we take to prevent and detect this activity may not be effective in all cases and there can be no assurance that we will be able to deter or prevent fraud or misconduct. Exposures from and expenses incurred related to any of the foregoing actions or proceedings could have a negative impact on our results of operations and financial condition. In addition, future results of operations could be adversely affected if reserves relating to these legal liabilities are required to be increased or legal proceedings are resolved in excess of established reserves.

Our inability to identify and address actual, potential, or perceived conflicts of interest may negatively impact our reputation and have a material adverse effect on our business.

We regularly address actual, potential or perceived conflicts of interest in our business, including situations where our services to a particular client or our own investments or other interests conflict, or are perceived to conflict, with the interests of another client. Appropriately identifying and dealing with conflicts of interest is complex and difficult, and we face the risk that our current policies, controls and procedures do not timely identify or appropriately manage such conflicts of interest. It is possible that actual, potential or perceived conflicts could give rise to client dissatisfaction, litigation or regulatory enforcement actions. Our reputation could be damaged if we fail, or appear to fail, to deal appropriately with potential or actual conflicts of interest. Client dissatisfaction, litigation, or regulatory enforcement actions arising from a failure to adequately deal with conflicts of interest, and the reputational harm suffered as a consequence, could have a material adverse effect on our business.

Our business is subject to extensive regulation in the jurisdictions in which we operate, and a significant regulatory action against our company may have a material adverse financial effect or cause significant reputational harm to our company.

As a participant in the financial services industry, we are subject to complex and extensive regulation of many aspects of our business by U.S. federal and state regulatory agencies, self-regulatory organizations (including securities exchanges) and by foreign governmental agencies, regulatory bodies and securities exchanges. Specifically, our operating subsidiaries include broker dealer and related securities entities organized in the United States, the United Kingdom, and Hong Kong, China. Each of these entities is registered or licensed with the applicable local securities regulator and is subject to all of the applicable rules and regulations promulgated by those authorities. In addition, our asset management subsidiaries, ARI, PJIM, and PJC Capital Partners LLC are registered as investment advisers with the SEC and subject to the regulation and oversight by the SEC.

Generally, the requirements imposed by our regulators are designed to ensure the integrity of the financial markets and to protect customers and other third parties who deal with us. These requirements are not designed to protect our shareholders. Consequently, broker dealer regulations often serve to limit our activities, through net capital, customer protection and market conduct requirements and restrictions on the businesses in which we may operate or invest. We also must comply with asset management regulations, including requirements related to fiduciary duties to clients, recordkeeping and reporting and customer disclosures. Compliance with many of these regulations entails a number of risks, particularly in areas where applicable regulations may be newer or unclear. In addition, regulatory authorities in all jurisdictions in which we conduct business may intervene in our business and we and our employees could be fined or otherwise disciplined for violations or prohibited from engaging in some of our business activities.

Our business also subjects us to the complex income tax laws of the jurisdictions in which we have business operations, and these tax laws may be subject to different interpretations by the taxpayer and the relevant governmental taxing authorities. We must make judgments and interpretations about the application of these inherently complex tax laws when determining the provision for income taxes. We are subject to contingent tax risk that could adversely affect our results of operations, to the extent that our interpretations of tax laws are disputed upon examination or audit, and are settled in amounts in excess of established reserves for such contingencies.

The effort to combat money laundering also has become a high priority in governmental policy with respect to financial institutions. The obligation of financial institutions, including ourselves, to identify their customers, watch for and report suspicious transactions, respond to requests for information by regulatory authorities and law enforcement agencies, and share information with other financial institutions, has required the implementation and maintenance of internal practices, procedures and controls which have increased, and may continue to increase, our costs. Any failure with respect to our programs in this area could subject us to serious regulatory consequences, including substantial fines, and potentially other liabilities. In addition, our international operations require compliance with anti-bribery laws, including the Foreign Corrupt Practices Act and the U.K. Bribery Act 2010. These laws generally prohibit companies and their intermediaries from engaging in bribery or making other improper payments to foreign officials for the purpose of obtaining or retaining business or gaining an unfair business advantage. While our employees and agents are required to comply with these laws, we cannot ensure that our internal control policies and procedures will always protect us from intentional, reckless or negligent acts committed by our employees or agents, which acts could subject our company to fines or other regulatory consequences.

Risk management processes may not fully mitigate exposure to the various risks that we face, including market risk, liquidity risk and credit risk.

We refine our risk management techniques, strategies and assessment methods on an ongoing basis. However, risk management techniques and strategies, both ours and those available to the market generally, may not be fully effective in mitigating our risk exposure in all economic market environments or against all types of risk. For example, we may fail to identify or anticipate particular risks that our systems are capable of identifying, or the systems that we use, and that are used within the industry generally, may not be capable of identifying certain risk, or every economic and financial outcome, or the specifics and timing of such outcomes. In addition, our risk management techniques and strategies seek to balance our ability to profit from our market-making and investing positions with our exposure to potential losses. Some of our strategies for managing risk are based upon our use of observed historical market behavior. We apply statistical and other tools to these observations to quantify our risk exposure. Any failures in our risk management techniques and strategies to accurately quantify our risk exposure could limit our ability to manage risks. In addition, any risk management failures could cause our losses to be significantly greater than the historical measures indicate. Further, our quantified modeling does not take all risks into account. Our more qualitative approach to managing those risks could prove insufficient, exposing us to material unanticipated losses.

Use of derivative instruments as part of our financial risk management techniques may not effectively hedge the risks associated with activities in certain of our businesses.

We use interest rate swaps, interest rate locks, credit default swap index contracts and option contracts as a means to manage risk in certain inventory positions and to facilitate customer transactions. With respect to risk management, we enter into derivative contracts to hedge interest rate and market value risks associated with our security positions, including fixed income inventory positions we hold both for facilitating client activity as well as for our own proprietary trading operations. The instruments use interest rates based upon the Municipal Market Data (“MMD”), LIBOR or SIFMA index. We also enter into credit default swap index contracts to hedge risks associated with our taxable fixed income securities, and option contracts to hedge market value risk associated with convertible securities and mortgage-backed securities. Generally, we do not hedge all of our interest rate risk. In addition, these hedging strategies may not work in all market environments and as a result may not be effective in mitigating interest rate and market value risk, especially when market volatility reduces the correlation between a hedging vehicle and the securities inventory being hedged.

There are risks inherent in our use of these products, including counterparty exposure and basis risk. Counterparty exposure refers to the risk that the amount of collateral in our possession on any given day may not be sufficient to fully cover the current value of the swaps if a counterparty were to suddenly default. Basis risk refers to risks associated with swaps where changes in the value of the swaps may not exactly mirror changes in the value of the cash flows they are hedging. We may incur losses from our exposure to derivative interest rate products and the increased use of these products in the future.

The use of estimates and valuations in measuring fair value involve significant estimation and judgment by management.

We make various estimates that affect reported amounts and disclosures. Broadly, those estimates are used in measuring fair value of certain financial instruments, investments in private companies, accounting for goodwill and intangible assets, establishing provisions for potential losses that may arise from litigation, and regulatory proceedings and tax examinations. Estimates are based on available information and judgment. Therefore, actual results could differ from our estimates and that difference could have a material effect on our consolidated financial statements.

Financial instruments and other inventory positions owned, and financial instruments and other inventory positions sold but not yet purchased, are recorded at fair value, and unrealized gains and losses related to these financial instruments are reflected on our consolidated statements of operations. The fair value of a financial instrument is the amount at which the instrument could be exchanged in a transaction between market participants at the measurement date. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models are applied. These valuation techniques involve management estimation and judgment, the degree of which is dependent on the price transparency for the instruments or market and the instruments' complexity. Difficult market environments, such as those experienced in 2008, may cause financial instruments to become substantially more illiquid and difficult to value, increasing the use of valuation models. Our future results of operations and financial condition may be adversely affected by the valuation adjustments that we apply to these financial instruments.

Investments in private companies are valued based on an assessment of each underlying security, considering rounds of financing, third party transactions and market-based information, including comparable company transactions, trading multiples (e.g., multiples of revenue and earnings before interest, taxes, depreciation and amortization ("EBITDA")) and changes in market outlook, among other factors. These valuation techniques require significant management estimation and judgment.

The financial services industry and the markets in which we operate are subject to systemic risk that could adversely affect our business and results.

Participants in the financial services industry and markets increasingly are closely interrelated as a result of credit, trading, clearing, technology and other relationships between them. A significant adverse development with one participant (such as a bankruptcy or default) may spread to others and lead to significant concentrated or market-wide problems (such as defaults, liquidity problems or losses) for other participants, including us. This systemic risk was evident during 2008 following the demise of Bear Stearns and Lehman Brothers, and the resulting events (sometimes described as “contagion”) had a negative impact on the remaining industry participants, including us. Further, the control and risk management infrastructure of the markets in which we operate often is outpaced by financial innovation and growth in new types of securities, transactions and markets. Systemic risk is inherently difficult to assess and quantify, and its form and magnitude can remain unknown for significant periods of time.

Regulatory capital requirements may limit our ability to expand or maintain our present levels of business or impair our ability to meet our financial obligations.

We are subject to the SEC's uniform net capital rule (Rule 15c3-1) and the net capital rule of FINRA, which may limit our ability to make withdrawals of capital from Piper Jaffray & Co., our U.S. broker dealer subsidiary. The uniform net capital rule sets the minimum level of net capital a broker dealer must maintain and also requires that a portion of its assets be relatively liquid. FINRA may prohibit a member firm from expanding its business or paying cash dividends if resulting net capital falls below its requirements. Underwriting commitments require a charge against net capital and, accordingly, our ability to make underwriting commitments may be limited by the requirement that we must at all times be in compliance with the applicable net capital regulations.

As Piper Jaffray Companies is a holding company, it depends on dividends, distributions and other payments from our subsidiaries to fund its obligations. The regulatory restrictions described above may impede access to funds our holding company needs to make payments on any such obligations.

We may not be able to compete successfully with other companies in the financial services industry who often have significantly greater resources than we do.

The financial services industry remains extremely competitive, and our revenues and profitability will suffer if we are unable to compete effectively. We compete generally on the basis of such factors as quality of advice and service, reputation, price, product selection, transaction execution and financial resources. Pricing and other competitive pressures in investment banking, including trends toward multiple book runners, co-managers, and multiple financial advisors handling transactions, have continued and could

adversely affect our revenues. The trend toward multiple book runners has also been accompanied by an increasing disparity in the relative economics between or among book runners, with the senior book runner(s) receiving a large percentage of the economics.

We remain at a competitive disadvantage given our relatively small size compared to some of our competitors. Large financial services firms have a larger capital base, greater access to capital and greater resources than we have, affording them greater capacity for risk and potential for innovation, an extended geographic reach and flexibility to offer a broader set of products. For example, these firms have used their resources and larger capital base to take advantage of growth in international markets and to support their investment banking business by offering credit products to corporate clients, which is a significant competitive advantage. With respect to our fixed income institutional and public finance investment banking businesses, it is more difficult for us to diversify and differentiate our product set, and our fixed income business mix currently is concentrated in the municipal market and to a lesser extent corporate credits and structured mortgage products, potentially with less opportunity for growth than other firms which have grown their fixed income businesses by investing in, developing and offering non-traditional products (e.g., credit default swaps, interest rate products and currencies and commodities).

The business operations that we conduct outside of the United States subject us to unique risks.

To the extent we conduct business outside the United States, for example in Asia and Europe, we are subject to risks including, without limitation, the risk that we will be unable to provide effective operational support to these business activities, the risk of non-compliance with foreign laws and regulations, and the general economic and political conditions in countries where we conduct business, which may differ significantly from those in the United States. With respect to our Asia-based capital markets activity, we facilitated underwritten capital-raising transactions for Asia-based issuers, which may have exposed us to greater underwriting risk in our capital markets business as compared to the U.S., as noted above.

Provisions in our certificate of incorporation and bylaws and of Delaware law may prevent or delay an acquisition of our company, which could decrease the market value of our common stock.

Our certificate of incorporation and bylaws and Delaware law contain provisions that are intended to deter abusive takeover tactics by making them unacceptably expensive to the raider and to encourage prospective acquirors to negotiate with our board of directors rather than to attempt a hostile takeover. These provisions include limitations on our shareholders' ability to act by written consent and to call special meetings. Delaware law also imposes some restrictions on mergers and other business combinations between us and any holder of 15 percent or more of our outstanding common stock. We believe these provisions protect our shareholders from coercive or otherwise unfair takeover tactics by requiring potential acquirors to negotiate with our board of directors and by providing our board of directors with more time to assess any acquisition proposal, and are not intended to make our company immune from takeovers. However, these provisions apply even if the offer may be considered beneficial by some shareholders and could delay or prevent an acquisition that our board of directors determines is not in the best interests of our company and our shareholders.

ITEM 1B. *UNRESOLVED STAFF COMMENTS.*

None.

ITEM 2. *PROPERTIES.*

As of February 18, 2016, we conducted our operations through 54 principal offices in 29 states, and the District of Columbia, and in London, Hong Kong, Tokyo and Zurich. All of our offices are leased. Our principal executive office is located at 800 Nicollet Mall, Suite 1000, Minneapolis, Minnesota 55402 and, as of February 18, 2016, comprises approximately 124,000 square feet of space under a lease which expires November 30, 2025, with an early termination option effective January 31, 2022.

ITEM 3. *LEGAL PROCEEDINGS.*

Due to the nature of our business, we are involved in a variety of legal proceedings (including, but not limited to, those described below). These proceedings include litigation, arbitration and regulatory proceedings, which may arise from, among other things, underwriting or other transactional activity, client account activity, employment matters, regulatory examinations of our businesses and investigations of securities industry practices by governmental agencies and self-regulatory organizations. The securities industry is highly regulated, and the regulatory scrutiny applied to securities firms is intense, resulting in a significant number of regulatory investigations and enforcement actions and uncertainty regarding the likely outcome of these matters.

Litigation-related expenses include amounts we reserve and/or pay out as legal and regulatory settlements, awards or judgments, and fines. Parties who initiate litigation and arbitration proceedings against us may seek substantial or indeterminate damages, and regulatory investigations can result in substantial fines being imposed on us. We reserve for contingencies related to legal proceedings at the time and to the extent we determine the amount to be probable and reasonably estimable. However, it is inherently difficult to predict accurately the timing and outcome of legal proceedings, including the amounts of any settlements, judgments or fines. We assess each proceeding based on its particular facts, our outside advisors' and our past experience with similar matters, and expectations regarding the current legal and regulatory environment and other external developments that might affect the outcome of a particular proceeding or type of proceeding. Subject to the foregoing and except for the legal proceeding described below, we believe, based on our current knowledge, after appropriate consultation with outside legal counsel and taking into account our established reserves, that pending legal actions, investigations and regulatory proceedings, will be resolved with no material adverse effect on our consolidated financial condition, results of operations or cash flows. However, there can be no assurance that our assessments will reflect the ultimate outcome of pending proceedings, and the outcome of any particular matter may be material to our operating results for any particular period, depending, in part, on the operating results for that period and the amount of established reserves. We generally have denied, or believe that we have meritorious defenses and will deny, liability in all significant cases currently pending against us, and we intend to vigorously defend such actions.

Municipal Derivatives Litigation

Several class action complaints were brought on behalf of a purported class of state, local and municipal government entities in connection with the bidding or sale of municipal investment contracts and municipal derivative products directly from one of the defendants or through a broker, from January 1, 1992, to the present. The complaints, which have been consolidated into a single nationwide class action entitled *In re Municipal Derivatives Antitrust Litigation*, MDL No. 1950 (Master Docket No. 08-2516), allege antitrust violations and are pending in the U.S. District Court for the Southern District of New York under the multi-district litigation rules. The consolidated complaint seeks unspecified treble damages under Section 1 of the Sherman Act. Several California municipalities also brought separate class action complaints in California federal court, and approximately eighteen California municipalities and two New York municipalities filed individual lawsuits that are not as part of class actions, all of which have since been transferred to the Southern District of New York and consolidated for pretrial purposes. All three sets of complaints assert similar claims under federal (and for the California and New York plaintiffs, state) antitrust claims. The plaintiffs in the consolidated class action and Piper Jaffray entered into a settlement agreement for *In re Municipal Derivatives Antitrust Litigation* on February 22, 2016. The settlement is subject to court approval after notice to the class. If approved, Piper Jaffray will be required to pay $9.8 million to settle the MDL class action. Litigation in the separate California and New York cases is ongoing.

ITEM 4. *MINE SAFETY DISCLOSURES.*

Not applicable.

PART II

ITEM 5. *MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED SHAREHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.*

Our common stock is listed on the New York Stock Exchange under the symbol "PJC." The following table contains historical quarterly price information for the years ended December 31, 2015 and 2014. On February 18, 2016, the last reported sale price of our common stock was $41.87.

	2015 Fiscal Year		2014 Fiscal Year	
	High	Low	High	Low
First Quarter	**$ 58.24**	**$ 51.05**	$ 45.80	$ 37.13
Second Quarter	**55.39**	**43.45**	51.77	40.30
Third Quarter	**46.24**	**36.17**	56.30	50.54
Fourth Quarter	**42.81**	**34.40**	59.35	46.15

Shareholders

We had 15,462 shareholders of record and approximately 27,193 beneficial owners of our common stock as of February 18, 2016.

Dividends

We do not currently pay cash dividends on our common stock. Our board of directors is free to change our dividend policy at any time. Restrictions on our U.S. broker dealer subsidiary's ability to pay dividends are described in Note 25 to the consolidated financial statements included in Part II, Item 8 of this Form 10-K.

The table below sets forth the information with respect to purchases made by or on behalf of Piper Jaffray Companies or any "affiliated purchaser" (as defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934), of our common stock during the quarter ended December 31, 2015.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares Yet to be Purchased Under the Plans or Programs (1)
Month #1 (October 1, 2015 to October 31, 2015)	—	$ —	—	$ 158 million
Month #2 (November 1, 2015 to November 30, 2015)	209,672 (2)	$ 38.68	200,960	$ 150 million
Month #3 (December 1, 2015 to December 31, 2015)	455,100 (3)	$ 40.81	453,554	$ 131 million
Total	664,772	$ 40.14	654,514	$ 131 million

(1) Effective October 1, 2014, our board of directors authorized the repurchase of up to $100.0 million of common stock through September 30, 2016, and we repurchased the full amount of this authorization in 2015. Additionally, effective August 14, 2015, our board of directors authorized the repurchase of up to an additional $150.0 million of common stock through September 30, 2017.

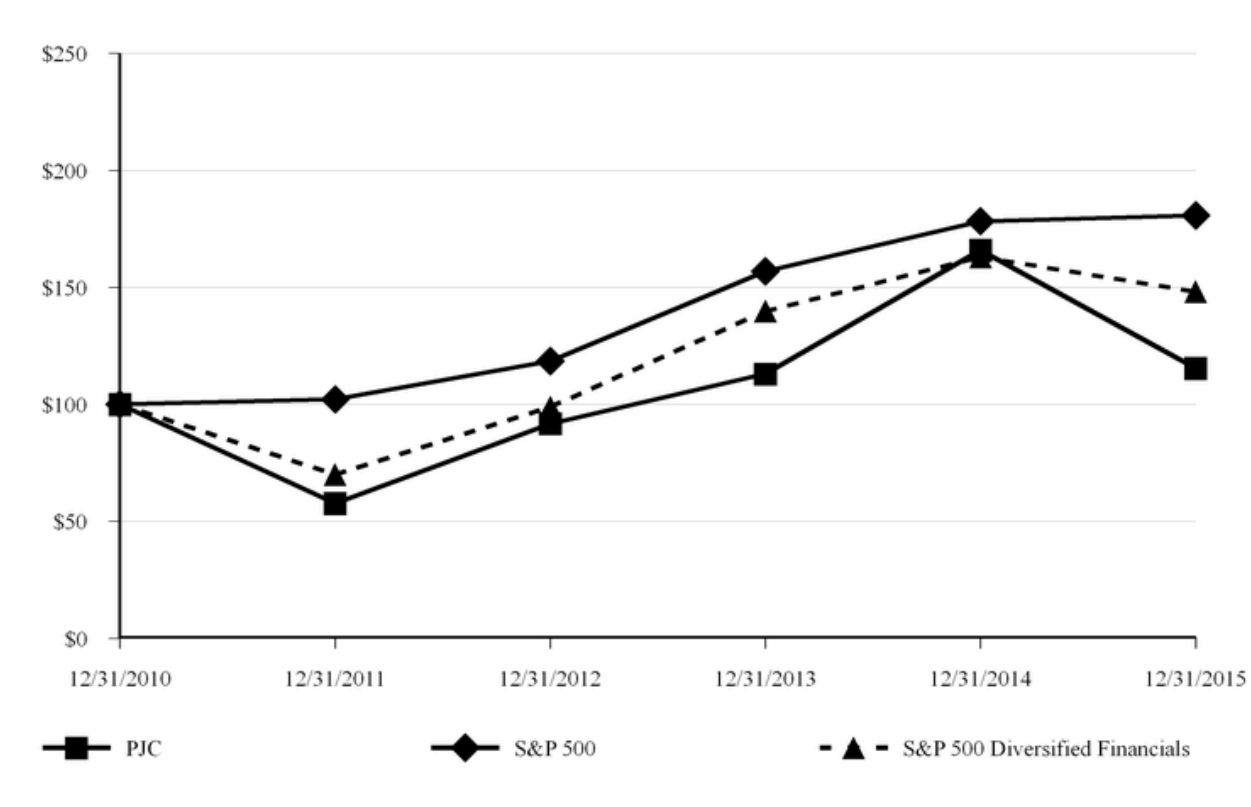
(2) Consists of 200,960 shares of common stock repurchased on the open market pursuant to a 10b5-1 plan established with an independent agent at an average price of $38.79 per share, and 8,712 shares of common stock withheld from recipients of restricted stock to pay taxes upon the vesting of the restricted stock at an average price per share of $36.19.

(3) Consists of 453,554 shares of common stock repurchased on the open market pursuant to a 10b5-1 plan established with an independent agent at an average price of $40.82 per share, and 1,546 shares of common stock withheld from recipients of restricted stock to pay taxes upon the vesting of the restricted stock at an average price per share of $40.50.

Stock Performance Graph

The following graph compares the performance of an investment in our common stock from December 31, 2010 through December 31, 2015, with the S&P 500 Index and the S&P 500 Diversified Financials Index. The graph assumes $100 was invested on December 31, 2010, in each of our common stock, the S&P 500 Index and the S&P 500 Diversified Financials Index and that all dividends were reinvested on the date of payment without payment of any commissions. The performance shown in the graph represents past performance and should not be considered an indication of future performance.

FIVE YEAR TOTAL RETURN FOR PIPER JAFFRAY COMPANIES COMMON STOCK, THE S&P 500 INDEX AND THE S&P DIVERSIFIED FINANCIALS INDEX



Company/Index	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
Piper Jaffray Companies	100	57.70	91.77	112.97	165.92	115.40
S&P 500 Index	100	102.11	118.45	156.82	178.29	180.75
S&P 500 Diversified Financials	100	69.97	98.89	139.82	162.98	148.15

ITEM 6. ***SELECTED FINANCIAL DATA.***

The following table presents our selected consolidated financial data in accordance with U.S. generally accepted accounting principles for the periods and dates indicated. The information set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and notes thereto.

	For the year ended December 31,				
(Dollars and shares in thousands, except per share data)	**2015**	**2014**	**2013**	**2012**	**2011**
Revenues:					
Investment banking	$ 414,118	$ 369,811	$ 248,563	$ 232,958	$ 202,513
Institutional brokerage	154,889	156,809	146,648	166,642	135,358
Asset management	75,017	85,062	83,045	65,699	63,307
Interest	41,557	48,716	50,409	37,845	43,447
Investment income	10,736	12,813	21,566	4,903	8,178
Total revenues	696,317	673,211	550,231	508,047	452,803
Interest expense	23,399	25,073	25,036	19,095	20,720
Net revenues	672,918	648,138	525,195	488,952	432,083
Non-interest expenses:					
Compensation and benefits	421,733	394,510	322,464	296,882	265,015
Restructuring and integration costs	10,652	—	4,689	3,642	—
Goodwill impairment	—	—	—	—	120,298
Other	154,110	143,317	122,429	119,417	126,959
Total non-interest expenses	586,495	537,827	449,582	419,941	512,272
Income/(loss) from continuing operations before income tax expense	86,423	110,311	75,613	69,011	(80,189)
Income tax expense	27,941	35,986	20,390	19,470	9,120
Net income/(loss) from continuing operations	58,482	74,325	55,223	49,541	(89,309)
Discontinued operations:					
Loss from discontinued operations, net of tax	—	—	(4,739)	(5,807)	(11,248)
Net income/(loss)	58,482	74,325	50,484	43,734	(100,557)
Net income applicable to noncontrolling interests	6,407	11,153	5,394	2,466	1,463
Net income/(loss) applicable to Piper Jaffray Companies	$ 52,075	$ 63,172	$ 45,090	$ 41,268	$ (102,020)
Net income/(loss) applicable to Piper Jaffray Companies' common shareholders	$ 48,060	$ 58,141	$ 40,596	$ 35,335	$ (102,020) (1)

Continued on next page

(Dollars and shares in thousands, except per share data)	For the year ended December 31, 2015	2014	2013	2012	2011
Amounts applicable to Piper Jaffray Companies					
Net income/(loss) from continuing operations	$ 52,075	$ 63,172	$ 49,829	$ 47,075	$ (90,772)
Net loss from discontinued operations	—	—	(4,739)	(5,807)	(11,248)
Net income/(loss) applicable to Piper Jaffray Companies	$ 52,075	$ 63,172	$ 45,090	$ 41,268	$ (102,020)
Earnings/(loss) per basic common share					
Income/(loss) from continuing operations	$ 3.34	$ 3.88	$ 2.98	$ 2.58	$ (5.79)
Loss from discontinued operations	—	—	(0.28)	(0.32)	(0.72)
Earnings/(loss) per basic common share	$ 3.34	$ 3.88	$ 2.70	$ 2.26	$ (6.51)
Earnings/(loss) per diluted common share					
Income/(loss) from continuing operations	$ 3.34	$ 3.87	$ 2.98	$ 2.58	$ (5.79)
Loss from discontinued operations	—	—	(0.28)	(0.32)	(0.72)
Earnings/(loss) per diluted common share	$ 3.34	$ 3.87	$ 2.70	$ 2.26	$ (6.51) (2)
Weighted average number of common shares					
Basic	14,368	14,971	15,046	15,615	15,672
Diluted	14,389	15,025	15,061	15,616	15,672 (2)
Other data					
Total assets	$ 2,138,518	$ 2,623,917	$ 2,318,157	$ 2,087,733	$ 1,655,721
Long-term debt	$ 175,000	$ 125,000	$ 125,000	$ 125,000	$ 115,000
Total common shareholders' equity	$ 783,659	$ 819,912	$ 734,676	$ 733,292	$ 718,391
Total shareholders' equity	$ 832,820	$ 969,460	$ 882,072	$ 790,175	$ 750,600
Total employees (3)	1,152	1,026	1,026	907	919

(1) No allocation of income was made due to loss position.

(2) Earnings per diluted common share is calculated using the basic weighted average number of common shares outstanding for periods in which a loss is incurred.

(3) Number of employees reflect continuing operations.

ITEM 7. ***MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.***

The following information should be read in conjunction with the accompanying audited consolidated financial statements and related notes and exhibits included elsewhere in this report. Certain statements in this report may be considered forward-looking. Statements that are not historical or current facts, including statements about beliefs and expectations, are forward-looking statements. These forward-looking statements include, among other things, statements other than historical information or statements of current condition and may relate to our future plans and objectives and results, and also may include our belief regarding the effect of various legal proceedings, as set forth under "Legal Proceedings" in Part I, Item 3 of our Annual Report on Form 10-K for the year ended December 31, 2015 and in our subsequent reports filed with the SEC. Forward-looking statements involve inherent risks and uncertainties, and important factors could cause actual results to differ materially from those anticipated, including those factors discussed below under "External Factors Impacting Our Business" as well as the factors identified under "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2015, as updated in our subsequent reports filed with the SEC. These reports are available at our Web site at www.piperjaffray.com and at the SEC Web site at www.sec.gov. Forward-looking statements speak only as of the date they are made, and we undertake no obligation to update them in light of new information or future events.

Explanation of Non-GAAP Financial Measures

We have included financial measures that are not prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). These non-GAAP financial measures include adjustments to exclude (1) revenues and expenses related to noncontrolling interests, (2) amortization of intangible assets related to acquisitions, (3) compensation from acquisition-related agreements and (4) restructuring and acquisition integration costs. These adjustments affect the following financial measures: net revenues, compensation expenses, non-compensation expenses, net income applicable to Piper Jaffray Companies, earnings per diluted common share, return on average common shareholders' equity, segment net revenues, segment operating expenses, segment pre-tax operating income and segment pre-tax operating margin. Management believes that presenting these results and measures on an adjusted basis in conjunction with U.S. GAAP measures provides the most meaningful basis for comparison of its operating results across periods.

Executive Overview

Our operations are principally engaged in providing investment banking, institutional brokerage, asset management and related financial services to corporations, private equity groups, public entities, non-profit entities and institutional investors in the United States and Europe. We operate through two reportable business segments:

Capital Markets – The Capital Markets segment provides institutional sales, trading and research services and investment banking services. Institutional sales, trading and research services focus on the trading of equity and fixed income products with institutions, government and non-profit entities. Revenues are generated through commissions and sales credits earned on equity and fixed income institutional sales activities, net interest revenues on trading securities held in inventory, and profits and losses from trading these securities. Investment banking services include management of and participation in underwritings, merger and acquisition services and public finance activities. Revenues are generated through the receipt of advisory and financing fees. Also, we generate revenue through strategic trading and investing activities, which focus on investments in municipal bonds, mortgage-backed securities and U.S. government agency securities. We have created alternative asset management funds in merchant banking that involve equity or debt investments in late stage private companies; and senior living, which provides financing to U.S. senior living facilities, in order to invest firm capital and to manage capital from outside investors. We receive management and performance fees for managing these funds.

During 2015, we accelerated our growth strategy, primarily by expanding into new sectors within equity investment banking and the expansion of our fixed income middle market sales platform. The following is a summary of our most significant activity for the year.

- On September 30, 2015, we acquired the assets of River Branch Holdings LLC ("River Branch"), an equity investment banking boutique focused on the financial institutions sector. The acquisition further strengthens our mergers and acquisitions leadership in the middle markets and adds investment banking resources dedicated to banks, thrifts, and depository institutions, building upon the organic expansion of our financial institutions group.

- On October 9, 2015, we completed the acquisition of BMO Capital Markets GKST Inc. ("BMO GKST"), a municipal bond sales, trading and origination business of BMO Financial Corp. This acquisition expands our fixed income institutional sales, trading and underwriting platforms. Additionally, it strengthens our strategic analytic and advisory capabilities, and supports our growing financial institutions group with their coverage of bank clients.

- As part of our strategy to expand our investment banking business into the energy sector, on November 16, 2015, we entered into a definitive agreement to purchase 100 percent of the common stock of Simmons & Company International ("Simmons"), including its subsidiaries. Simmons is an employee-owned investment bank and broker dealer focused on the energy industry. The transaction is expected to close in the first quarter of 2016, subject to regulatory approvals and customary closing conditions.

- For more information on our acquisitions, see Note 4 of our consolidated financial statements. We incurred $10.7 million of restructuring, integration and transactions costs in the year ended December 31, 2015 principally related to the River Branch and BMO GKST acquisitions.

Asset Management – The Asset Management segment provides traditional asset management services by taking a value-driven approach to managing assets in domestic and international equity markets. Additionally, the asset management segment manages investments in master limited partnerships ("MLPs") focused on the energy sector for institutions and individuals. Revenues are generated in the form of management and performance fees. Revenues are also generated through investments in the partnerships and funds that we manage.

Discontinued Operations – Our discontinued operations include the costs to liquidate our Hong Kong capital markets business, which ceased operations in 2012, and the operating results of Fiduciary Asset Management, LLC ("FAMCO"), an asset management subsidiary we sold in 2013. See Note 5 to our consolidated financial statements for further discussion of our discontinued operations.

Results for the year ended December 31, 2015

Net income applicable to Piper Jaffray Companies in 2015 was $52.1 million, or $3.34 per diluted common share, compared with $63.2 million, or $3.87 per diluted common share, in 2014. In 2015, we generated a return on average common shareholders' equity on a GAAP basis of 6.4 percent, compared with 8.1 percent for 2014. Net revenues from continuing operations for the year ended December 31, 2015 were $672.9 million, up 3.8 percent from $648.1 million in the year-ago period, due to higher investment banking revenues driven by strong advisory services and debt financing revenues, partially offset by lower asset management revenues. For the year ended December 31, 2015, non-compensation expenses were $164.8 million, up from $143.3 million in 2014. The increase was due to restructuring and integration costs of $10.7 million related to severance benefits and integration costs incurred primarily in conjunction with our acquisitions of River Branch and BMO GKST, and a $9.8 million charge related to settlement of a multi-district class action antitrust litigation related to municipal derivatives. This litigation originated in 2006 and is described in greater detail in "Legal Proceedings" in Part I, Item 3 of our Annual Report on Form 10-K for the year ended December 31, 2015.

For the year ended December 31, 2015, adjusted net income applicable to Piper Jaffray Companies was $65.9 million(1), or $4.22(1) per diluted common share, compared with $72.1 million(1), or $4.42(1) per diluted common share, for the prior-year period. In 2015, we generated an adjusted return on average common shareholders' equity of 8.1 percent(2), compared with 9.2 percent(2) for 2014. Adjusted net revenues for the year ended December 31, 2015 were $663.1 million(1), an increase of 4.8 percent from $632.4 million(1) reported in the year-ago period. For the year ended December 31, 2015, adjusted non-compensation expenses were $143.0 million(1), up 10.5 percent compared to $129.5 million(1) for the year ended December 31, 2014.

(1) Reconciliation of U.S. GAAP to adjusted non-GAAP financial information

	Year Ended December 31,	
(Amounts in thousands, except per share data)	**2015**	**2014**
Net revenues:		
Net revenues – U.S. GAAP basis	**$ 672,918**	$ 648,138
Adjustments:		
Revenue related to noncontrolling interests	**(9,810)**	(15,699)
Adjusted net revenues	**$ 663,108**	$ 632,439
Non-compensation expenses:		
Non-compensation expenses – U.S. GAAP basis	**$ 164,762**	$ 143,317
Adjustments:		
Non-compensation expenses related to noncontrolling interests	**(3,403)**	(4,546)
Restructuring and integration costs	**(10,652)**	—
Amortization of intangible assets related to acquisitions	**(7,662)**	(9,272)
Adjusted non-compensation expenses	**$ 143,045**	$ 129,499
Net income applicable to Piper Jaffray Companies:		
Net income applicable to Piper Jaffray Companies – U.S. GAAP basis	**$ 52,075**	$ 63,172
Adjustments:		
Compensation from acquisition-related agreements	**2,586**	3,195
Restructuring and integration costs	**6,508**	—
Amortization of intangible assets related to acquisitions	**4,681**	5,747
Adjusted net income applicable to Piper Jaffray Companies	**$ 65,850**	$ 72,114
Earnings per diluted common share:		
Earnings per diluted common share – U.S. GAAP basis	**$ 3.34**	$ 3.87
Adjustments:		
Compensation from acquisition-related agreements	**0.17**	0.20
Restructuring and integration costs	**0.42**	—
Amortization of intangible assets related to acquisitions	**0.30**	0.35
Adjusted earnings per diluted common share	**$ 4.22**	$ 4.42

(2) Adjusted return on average common shareholders' equity is computed by dividing adjusted net income applicable to Piper Jaffray Companies for the last 12 months by average monthly common shareholders' equity. For a detailed explanation of the components of adjusted net income, see "Reconciliation of U.S. GAAP to adjusted non-GAAP financial information" in footnote (1).

Market Data

The following table provides a summary of relevant market data over the past three years.

Year Ended December 31,	2015	2014	2013	2015 v2014	2014 v2013
Dow Jones Industrials Average *(a)*	**17,425**	17,823	16,577	(2.2)%	7.5 %
NASDAQ *(a)*	**5,007**	4,736	4,177	5.7 %	13.4 %
NYSE Average Daily Number of Shares Traded					
(millions of shares)	**1,187**	1,039	1,034	14.2 %	0.5 %
NASDAQ Average Daily Number of Shares Traded					
(millions of shares)	**1,895**	1,955	1,762	(3.1)%	11.0 %
Mergers and Acquisitions					
(number of transactions in U.S.) *(b)*	**10,319**	10,263	9,146	0.5 %	12.2 %
Public Equity Offerings					
(number of transactions in U.S.) *(c) (e)*	**909**	1,107	1,125	(17.9)%	(1.6)%
Initial Public Offerings					
(number of transactions in U.S.) *(c)*	**171**	282	221	(39.4)%	27.6 %
Municipal Negotiated Issuances					
(number of transactions in U.S.) *(d)*	**8,764**	7,261	7,628	20.7 %	(4.8)%
Municipal Negotiated Issuances					
(value of transactions in billions in U.S.) *(d)*	**$ 315.9**	$ 266.1	$ 263.8	18.7 %	0.9 %
10-Year Treasuries Average Rate	**2.14%**	2.21%	2.35%	(3.2)%	(6.0)%
3-Month Treasuries Average Rate	**0.05%**	0.03%	0.06%	66.7 %	(50.0)%

(a) Data provided is at period end.

(b) Source: Securities Data Corporation.

(c) Source: Dealogic (offerings with reported market value greater than $20 million).

(d) Source: Thomson Reuters.

(e) Number of transactions includes convertible offerings.

External Factors Impacting Our Business

Performance in the financial services industry in which we operate is highly correlated to the overall strength of economic conditions and financial market activity. Overall market conditions are a product of many factors, which are beyond our control and mostly unpredictable. These factors may affect the financial decisions made by investors, including their level of participation in the financial markets. In turn, these decisions may affect our business results. With respect to financial market activity, our profitability is sensitive to a variety of factors, including the demand for investment banking services as reflected by the number and size of equity and debt financings and merger and acquisition transactions, the volatility of the equity and fixed income markets, changes in interest rates (especially rapid and extreme changes) and credit spreads, overall market liquidity, the level and shape of various yield curves, the volume and value of trading in securities, overall equity valuations, and the demand for asset management services.

Factors that differentiate our business within the financial services industry may also affect our financial results. For example, our capital markets business focuses on a middle-market clientele in specific industry sectors. If the business environment for our focus sectors is impacted disproportionately as compared to the economy as a whole, our business and results of operations will be negatively impacted. In addition, our business could be affected differently than overall market trends. Given the variability of the capital markets and securities businesses, our earnings may fluctuate significantly from period to period, and results for any individual period should not be considered indicative of future results.

Outlook for 2016

We continue to encounter mixed signals relative to the strength of the recovery for the U.S. economy. In 2016, we believe the U.S. economy will continue its sluggish growth pattern. Risks to continued growth include ongoing or accelerating weakness in major economies internationally, falling oil prices, or significant geopolitical events (including terrorism) or conflicts, which could adversely impact the rate of growth in the U.S. and continue to inject volatility into the U.S. equity and debt markets. The 2016 presidential election could also influence the volatility or direction of markets based on investors' assessment of the outcome and the overall political outlook in the United States.

The Federal Reserve increased short-term interest rates for the first time in almost ten years at the end of 2015, however the beginning of 2016 has seen lower interest rates among most fixed income securities as volatility in global markets has created uncertainty in the marketplace. If lower interest rates persist through 2016 it is generally favorable for our municipal debt underwriting business as refunding activity increases, however lower interest rates will likely reduce activity in our fixed income institutional brokerage business. Given the impact of new regulations and capital requirements on major market participants, we may experience periods when volatility is exacerbated by the withdrawal of liquidity historically provided by these participants. We generally anticipate maintaining a conservative bias in managing our inventories and hedging strategies to mitigate market volatility and our exposure to interest rates.

As to our businesses tied to the equity markets, we expect that market conditions will likely remain volatile given the mixed outlook for the U.S. economy coupled with global economic and geopolitical risks. While higher volatility typically benefits our equity sales and trading business, a period of sustained market volatility or prolonged market correction may be disruptive to our capital raising activities.

Asset management revenues will continue to be dependent upon valuations and our investment performance, which can impact the amount of client inflows and outflows of assets under management. Our exposure to energy through a dedicated energy fund, our MLP strategies and energy holdings in our domestic strategies, adversely impacted our assets under management in the second half of 2015. Sharp fluctuations in the price of oil may continue to increase the volatility of energy-related equity holdings in 2016.

Results of Operations

To provide comparative information of our operating results for the periods presented, a discussion of adjusted segment results follows the discussion of our total consolidated U.S. GAAP results. Our adjusted segment results exclude certain revenue and expenses required under U.S. GAAP. See the sections titled "Explanation of Non-GAAP Financial Measures" and "Segment Performance from Continuing Operations" in Management's Discussion and Analysis of Financial Condition and Results of Operations for additional discussion and reconciliations.

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Financial Summary

The following table provides a summary of the results of our operations on a U.S. GAAP basis and the results of our operations as a percentage of net revenues for the periods indicated.

	Year Ended December 31,					As a Percentage of Net Revenues for the Year Ended December 31,		
(Dollars in thousands)	2015	2014	2013	2015 v2014	2014 v2013	2015	2014	2013
Revenues:								
Investment banking	**$ 414,118**	$ 369,811	$ 248,563	12.0 %	48.8 %	**61.5%**	57.1%	47.3 %
Institutional brokerage	**154,889**	156,809	146,648	(1.2)	6.9	**23.0**	24.2	27.9
Asset management	**75,017**	85,062	83,045	(11.8)	2.4	**11.1**	13.1	15.8
Interest	**41,557**	48,716	50,409	(14.7)	(3.4)	**6.2**	7.5	9.6
Investment income	**10,736**	12,813	21,566	(16.2)	(40.6)	**1.6**	2.0	4.1
Total revenues	**696,317**	673,211	550,231	3.4	22.4	**103.5**	103.9	104.8
Interest expense	**23,399**	25,073	25,036	(6.7)	0.1	**3.5**	3.9	4.8
Net revenues	**672,918**	648,138	525,195	3.8	23.4	**100.0**	100.0	100.0
Non-interest expenses:								
Compensation and benefits	**421,733**	394,510	322,464	6.9	22.3	**62.7**	60.9	61.4
Outside services	**36,218**	37,055	32,982	(2.3)	12.3	**5.4**	5.7	6.3
Occupancy and equipment	**28,301**	28,231	25,493	0.2	10.7	**4.2**	4.4	4.9
Communications	**23,762**	22,732	21,431	4.5	6.1	**3.5**	3.5	4.1
Marketing and business development	**29,990**	27,260	21,603	10.0	26.2	**4.5**	4.2	4.1
Trade execution and clearance	**7,794**	7,621	8,270	2.3	(7.8)	**1.2**	1.2	1.6
Restructuring and integration costs	**10,652**	—	4,689	N/M	N/M	**1.6**	—	0.9
Intangible asset amortization expense	**7,662**	9,272	7,993	(17.4)	16.0	**1.1**	1.4	1.5
Other operating expenses	**20,383**	11,146	4,657	82.9	139.3	**3.0**	1.7	0.9
Total non-interest expenses	**586,495**	537,827	449,582	9.0	19.6	**87.2**	83.0	85.6
Income from continuing operations before income tax expense	**86,423**	110,311	75,613	(21.7)	45.9	**12.8**	17.0	14.4
Income tax expense	**27,941**	35,986	20,390	(22.4)	76.5	**4.2**	5.6	3.9
Income from continuing operations	**58,482**	74,325	55,223	(21.3)	34.6	**8.7**	11.5	10.5
Discontinued operations:								
Loss from discontinued operations, net of tax	**—**	—	(4,739)	—	N/M	**—**	—	(0.9)
Net income	**58,482**	74,325	50,484	(21.3)	47.2	**8.7**	11.5	9.6
Net income applicable to noncontrolling interests	**6,407**	11,153	5,394	(42.6)	106.8	**1.0**	1.7	1.0
Net income applicable to Piper Jaffray Companies	**$ 52,075**	$ 63,172	$ 45,090	(17.6)%	40.1 %	**7.7%**	9.7%	8.6 %

N/M — Not meaningful

For the year ended December 31, 2015, we recorded net income applicable to Piper Jaffray Companies of $52.1 million. Net revenues from continuing operations for the year ended December 31, 2015 were $672.9 million, a 3.8 percent increase compared to $648.1 million in the year-ago period. In 2015, investment banking revenues increased 12.0 percent to $414.1 million, compared with $369.8 million in 2014, driven by strong advisory services and debt financing revenues as we were able to continue to capitalize on the investments we have made to strengthen these businesses. For the year ended December 31, 2015, institutional brokerage revenues were $154.9 million, compared with $156.8 million in 2014. Asset management fees were $75.0 million in 2015, compared with $85.1 million in 2014, due to lower management fees from our value equity product offerings resulting from decreased assets under management. For the year ended December 31, 2015, net interest income decreased to $18.2 million, compared with $23.6 million in 2014. The decrease primarily resulted from lower average inventory balances in municipal and treasury securities driven by the closure and liquidation of our municipal bond fund with outside investors in the second half of 2015, as well as lower interest income attributable to a merchant banking debt investment that was repaid in the second quarter of 2014. These decreases were partially offset by increased interest expense at the end of the year due to a higher amount of outstanding principal on our senior notes. In 2015, investment income was $10.7 million, compared with $12.8 million in 2014, as we recorded gains associated with our investment and the noncontrolling interests in the merchant banking fund that we manage, which were partially offset by losses on our investments of firm capital in our MLP strategies. Non-interest expenses from continuing operations were $586.5 million for the year ended December 31, 2015, an increase of 9.0 percent compared to $537.8 million in the prior year, resulting from higher compensation expenses due to increased revenues and expansion of our financial institutions group, as well as higher non-compensation expenses due to a $9.8 million legal settlement charge and restructuring and integration costs primarily associated with the acquisitions of River Branch and BMO GKST.

For the year ended December 31, 2014, we recorded net income applicable to Piper Jaffray Companies of $63.2 million. Net revenues from continuing operations for the year ended December 31, 2014 were $648.1 million, a 23.4 percent increase compared to $525.2 million in 2013. In 2014, investment banking revenues increased 48.8 percent to $369.8 million, compared with $248.6 million in 2013, driven by robust advisory services revenues as we were able to capitalize on favorable market conditions and the investments we have made to strengthen our mergers and acquisitions resources in the middle market. For the year ended December 31, 2014, institutional brokerage revenues were $156.8 million, compared with $146.6 million in 2013, due to higher fixed income institutional brokerage revenues, partially offset by lower equity institutional brokerage revenues. Asset management fees were $85.1 million in 2014, compared with $83.0 million in 2013. For the year ended December 31, 2014, net interest income decreased to $23.6 million, compared with $25.4 million in 2013. In 2014, investment income was $12.8 million, compared with $21.6 million in the prior-year period as we recorded lower investment gains associated with our merchant banking and firm investments, partially offset by higher gains associated with our investment and the noncontrolling interests in the municipal bond fund that we managed for the benefit of outside investors. Non-interest expenses from continuing operations were $537.8 million for the year ended December 31, 2014, an increase of 19.6 percent compared to $449.6 million in 2013, primarily resulting from higher compensation expenses due to increased revenues and improved operating performance and higher non-compensation expenses due to increased business activity and incremental costs associated with the acquisitions of Seattle-Northwest Securities Corporation ("Seattle-Northwest") and Edgeview Partners, L.P. ("Edgeview").

Consolidated Non-Interest Expenses from Continuing Operations

Compensation and Benefits – Compensation and benefits expenses, which are the largest component of our expenses, include salaries, incentive compensation, benefits, stock-based compensation, employment taxes, income associated with the forfeiture of stock-based compensation and other employee costs. A portion of compensation expense is comprised of variable incentive arrangements, including discretionary incentive compensation, the amount of which fluctuates in proportion to the level of business activity, increasing with higher revenues and operating profits. Other compensation costs, primarily base salaries and benefits, are more fixed in nature. The timing of incentive compensation payments, which generally occur in February, has a greater impact on our cash position and liquidity than is reflected on our consolidated statements of operations.

For the year ended December 31, 2015, compensation and benefits expenses increased 6.9 percent to $421.7 million from $394.5 million in 2014 due primarily to improved financial results. Compensation and benefits expenses as a percentage of net revenues was 62.7 percent in 2015, compared with 60.9 percent in 2014. The higher compensation expense ratio was attributable to incremental compensation related to the expansion of our financial institutions group as well as a change in our mix of revenues.

For the year ended December 31, 2014, compensation and benefits expenses increased 22.3 percent to $394.5 million from $322.5 million in 2013, due to improved financial results. Compensation and benefits expenses as a percentage of net revenues was 60.9 percent in 2014, compared with 61.4 percent in 2013. The lower compensation expense ratio was due to an increased revenue base.

Outside Services – Outside services expenses include securities processing expenses, outsourced technology functions, outside legal fees, fund expenses associated with our consolidated alternative asset management funds and other professional fees. Outside services expenses decreased 2.3 percent to $36.2 million in 2015, compared with $37.1 million in the corresponding period of 2014. Excluding the portion of expenses from non-controlled equity interests in our consolidated alternative asset management funds, outside services expenses decreased 1.7 percent.

Outside services expenses increased 12.3 percent to $37.1 million in 2014, compared with $33.0 million in 2013. Excluding the portion of expenses from non-controlled equity interests in our consolidated alternative asset management funds, outside services expenses increased 9.3 percent due primarily to higher legal and other professional fees.

Occupancy and Equipment – For the year ended December 31, 2015, occupancy and equipment expenses were $28.3 million, essentially flat compared with 2014.

For the year ended December 31, 2014, occupancy and equipment expenses increased 10.7 percent to $28.2 million, compared with $25.5 million in the corresponding period of 2013. The increase was primarily the result of incremental occupancy expenses from our acquisitions of Seattle-Northwest and Edgeview completed during the third quarter of 2013, and incremental one-time occupancy costs related to our office space in New York City.

Communications – Communication expenses include costs for telecommunication and data communication, primarily consisting of expenses for obtaining third party market data information. For the year ended December 31, 2015, communication expenses increased 4.5 percent to $23.8 million, compared with $22.7 million for the year ended December 31, 2014. The increase resulted from higher market data service expenses due to the additional headcount associated with our financial institutions group expansion and our acquisitions of River Branch and BMO GKST.

For the year ended December 31, 2014, communication expenses increased 6.1 percent to $22.7 million, compared with $21.4 million for the year ended December 31, 2013. The increase resulted from higher market data service expenses.

Marketing and Business Development – Marketing and business development expenses include travel and entertainment costs, advertising and third party marketing fees. In 2015, marketing and business development expenses increased 10.0 percent to $30.0 million, compared with $27.3 million in the year ended December 31, 2014, due to higher travel expenses from increased business activity and acquisition-related travel.

In 2014, marketing and business development expenses increased 26.2 percent to $27.3 million, compared with $21.6 million in the year ended December 31, 2013, due to higher third party marketing fees associated with our asset management business, as well as higher travel expenses from increased business activity.

Trade Execution and Clearance – For the year ended December 31, 2015, trade execution and clearance expenses were $7.8 million, compared with $7.6 million million in the year ended December 31, 2014.

For the year ended December 31, 2014, trade execution and clearance expenses were $7.6 million, compared with $8.3 million in the year ended December 31, 2013, due to lower trading execution expenses.

Restructuring and Integration Costs – During the year ended December 31, 2015, we recorded restructuring and integration costs of $10.7 million primarily consisting of severance benefits and transaction costs related to the acquisitions of River Branch and BMO GKST. For the year ended December 31, 2013, we recorded restructuring and integration costs of $4.7 million, primarily related to the acquisitions of Seattle-Northwest and Edgeview. We expect to incur additional restructuring and integration costs in 2016, primarily related to the acquisition of Simmons, which is expected to close in the first quarter of 2016.

Intangible Asset Amortization Expense – Intangible asset amortization expense includes the amortization of definite-lived intangible assets consisting of customer relationships and non-competition agreements. For the year ended December 31, 2015, intangible asset amortization expense was $7.7 million, compared with $9.3 million in the corresponding period of 2014. In the fourth quarter of 2015, we recorded incremental intangible asset amortization expense related to identifiable intangible assets associated with the acquisitions of River Branch and BMO GKST. In 2016, we anticipate incurring a full year of intangible asset amortization expense related to River Branch and BMO GKST and additional intangible asset amortization expense related to the acquisition of Simmons.

For the year ended December 31, 2014, intangible asset amortization expense was $9.3 million, compared with $8.0 million in the corresponding period of 2013. The increase reflects a full year of intangible asset amortization expense related to the 2013 acquisitions of Seattle-Northwest and Edgeview.

Other Operating Expenses – Other operating expenses include insurance costs, license and registration fees, expenses related to our charitable giving program and litigation-related expenses, which consist of the amounts we reserve and/or pay out related to legal and regulatory matters. Other operating expenses increased to $20.4 million in 2015, compared with $11.1 million in 2014. In 2015, we recorded a $9.8 million charge related to settlement of a legal matter.

Other operating expenses increased to $11.1 million in 2014, compared with $4.7 million in 2013. In 2013, we received insurance proceeds for the reimbursement of prior legal settlements. Additionally, in 2014, we incurred higher expenses related to our charitable giving program, driven by our increased profitability.

Income Taxes – For the year ended December 31, 2015, our provision for income taxes was $27.9 million equating to an effective tax rate, excluding noncontrolling interests, of 34.9 percent.

For the year ended December 31, 2014, our provision for income taxes was $36.0 million, equating to an effective tax rate, excluding noncontrolling interests, of 36.3 percent.

For the year ended December 31, 2013, our provision for income taxes was $20.4 million equating to an effective tax rate, excluding noncontrolling interests, of 29.0 percent. In 2013, we recorded a tax benefit for the full reversal of our U.K subsidiary's deferred tax asset valuation allowance of $4.0 million as we achieved three years of profitability and forecasted future taxable profits.

Segment Performance from Continuing Operations

We measure financial performance by business segment. Our two reportable segments are Capital Markets and Asset Management. We determined these segments based upon the nature of the financial products and services provided to customers and our management organization. Segment pre-tax operating income and segment pre-tax operating margin are used to evaluate and measure segment performance by our chief operating decision maker in deciding how to allocate resources and in assessing performance in relation to our competitors. Revenues and expenses directly associated with each respective segment are included in determining segment operating results. Revenues and expenses that are not directly attributable to a particular segment are allocated based upon our allocation methodologies, generally based on each segment's respective net revenues, use of shared resources, headcount or other relevant measures.

Throughout this section, we have presented segment results on both a U.S. GAAP and non-GAAP basis. Management believes that presenting adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin in conjunction with the U.S. GAAP measures provides a more meaningful basis for comparison of its operating results and underlying trends between periods.

Adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin exclude (1) revenues and expenses related to noncontrolling interests, (2) amortization of intangible assets related to acquisitions, (3) compensation from acquisition-related agreements and (4) restructuring and acquisition integration costs. For U.S. GAAP purposes, these items are included in each of their respective line items on the consolidated statements of operations.

Adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin present the segments' results of operations excluding the impact resulting from the consolidation of noncontrolling interests in alternative asset management funds and private equity investment vehicles. Consolidation of these funds results in the inclusion of the proportionate share of the income or loss attributable to the equity interests in consolidated funds that are not attributable, either directly or indirectly, to us (i.e. noncontrolling interests). This proportionate share is reflected in net income/(loss) applicable to noncontrolling interests in the accompanying consolidated statements of operations, and has no effect on the overall financial performance of the segments, as ultimately, this income or loss is not income or loss for the segments themselves. Included in adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin is the actual proportionate share of the income or loss attributable to us as an investor in such funds.

Adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin also exclude amortization of intangible assets and compensation from acquisition-related agreements. These amounts are excluded on a non-GAAP basis as they represent expenses specifically related to acquisitions that will eventually be fully amortized and therefore not part of our on-going operations. The restructuring and integration costs excluded from adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin represent charges that resulted from severance benefits, vacating redundant office space and contract termination costs. Restructuring and integration costs are excluded from our non-GAAP financial measures as they generally relate to an acquisition or a specific event and excluding these amounts provides a better understanding of our core non-compensation expenses. Management believes that presenting adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin excluding the acquisition-related amounts and restructuring and integration costs provides clarity on the financial results generated by the core operating components of our business.

Capital Markets

The following table sets forth the Capital Markets adjusted segment financial results from continuing operations and adjustments necessary to reconcile to our consolidated U.S. GAAP pre-tax operating income and pre-tax operating margin for the periods presented:

	Year Ended December 31,							
	2015				2014			
		Adjustments (1)				Adjustments (1)		
(Dollars in thousands)	Total Adjusted	Noncontrolling Interests	Other Adjustments	U.S. GAAP	Total Adjusted	Noncontrolling Interests	Other Adjustments	U.S. GAAP
Investment banking								
Financing								
Equities	$ 114,468	$ —	$ —	$ 114,468	$ 109,706	$ —	$ —	$ 109,706
Debt	91,195	—	—	91,195	63,005	—	—	63,005
Advisory services	209,163	—	—	209,163	197,880	—	—	197,880
Total investment banking	414,826	—	—	414,826	370,591	—	—	370,591
Institutional sales and trading								
Equities	78,584	—	—	78,584	82,211	—	—	82,211
Fixed income	93,489	816	—	94,305	92,200	—	—	92,200
Total institutional sales and trading	172,073	816	—	172,889	174,411	—	—	174,411
Total management and performance fees	4,642	—	—	4,642	5,398	—	—	5,398
Investment income	15,474	8,994	—	24,468	8,347	15,699	—	24,046
Long-term financing expenses	(7,494)	—	—	(7,494)	(6,655)	—	—	(6,655)
Net revenues	599,521	9,810	—	609,331	552,092	15,699	—	567,791
Operating expenses	511,241	3,403	16,293	530,937	467,198	4,546	6,917	478,661
Segment pre-tax operating income	$ 88,280	$ 6,407	$ (16,293)	$ 78,394	$ 84,894	$ 11,153	$ (6,917)	$ 89,130
Segment pre-tax operating margin	14.7%			12.9%	15.4%			15.7%

(1) The following is a summary of the adjustments needed to reconcile our consolidated U.S. GAAP segment pre-tax operating income and segment pre-tax operating margin to the adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin:

Noncontrolling interests – The impacts of consolidating noncontrolling interests in our alternative asset management funds and private equity investment vehicles are not included in adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin.

Other Adjustments – The following table sets forth the items not included in adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin for the periods presented:

	Year Ended December 31,	
(Dollars in thousands)	*2015*	*2014*
Compensation from acquisition-related agreements	*$ 4,019*	*$ 3,945*
Restructuring and integration costs	*10,652*	*—*
Amortization of intangible assets related to acquisitions	*1,622*	*2,972*
	$ 16,293	*$ 6,917*

Capital Markets adjusted net revenues increased 8.6 percent to $599.5 million for the year ended December 31, 2015, compared with $552.1 million in the prior-year period.

Investment banking revenues comprise all of the revenues generated through equity and debt financing and advisory services activities, which include mergers and acquisitions, equity private placements, debt advisory, and municipal financial advisory transactions. To assess the profitability of investment banking, we aggregate investment banking fees with the net interest income or expense associated with these activities.

In 2015, investment banking revenues increased 11.9 percent to $414.8 million compared with $370.6 million in the corresponding period of the prior year, due primarily to strong debt financing and advisory services revenues. For the year ended December 31, 2015, equity financing revenues were $114.5 million, up 4.3 percent compared with $109.7 million in the prior-year period, as a result of more completed transactions and slightly higher revenue per transaction. We were book runner on 70 percent of our transactions in 2015 compared to 52 percent in the prior year. During 2015, we completed 95 equity financings, raising $17.4 billion for our clients, compared with 90 equity financings, raising $20.5 billion for our clients in the year-ago period. Debt financing revenues for the year ended December 31, 2015 were $91.2 million, an increase of 44.7 percent compared with $63.0 million in the year-ago period, due to higher public finance revenues resulting from market-wide increases in the volume of municipal issuances in 2015, as well as market share gains attributable to our geographic and sector expansion and product diversification. In 2015, our par value from negotiated debt issuances increased 49.8 percent, compared to 18.7 percent for the industry. During 2015, we completed 707 negotiated municipal issues with a total par value of $14.3 billion, compared with 485 negotiated municipal issues with a total par value of $9.5 billion during the prior-year period. For the year ended December 31, 2015, advisory services revenues increased to $209.2 million, compared with $197.9 million in 2014, due to increased mergers and acquisitions services revenues from higher revenue per transaction. Our strategic focus to grow our mergers and acquisitions resources in the middle market and continued leadership in the healthcare sector has resulted in market share gains and increased revenues. We completed 82 transactions with an aggregate enterprise value of $23.0 billion in 2015, compared with 91 transactions with an aggregate enterprise value of $14.7 billion in 2014.

Institutional sales and trading revenues comprise all of the revenues generated through trading activities, which consist of facilitating customer trades, executing competitive municipal underwritings and our strategic trading activities in municipal bonds, mortgage-backed securities and U.S. government agency securities. To assess the profitability of institutional brokerage activities, we aggregate institutional brokerage revenues with the net interest income or expense associated with financing, economically hedging and holding long or short inventory positions. Our results may vary from quarter to quarter as a result of changes in trading margins, trading gains and losses, net interest spreads, trading volumes and the timing of transactions based on market opportunities.

For the year ended December 31, 2015, adjusted institutional brokerage revenues decreased slightly to $172.1 million, compared with $174.4 million in the prior-year period, due to lower equity institutional brokerage revenues, partially offset by higher adjusted fixed income institutional brokerage revenues. Equity institutional brokerage revenues were $78.6 million in 2015, down 4.4 percent compared with $82.2 million in 2014. The decrease was primarily due to lower client trading volumes, offset in part by contributions from our financial institutions group expansion. For the year ended December 31, 2015, adjusted fixed income institutional brokerage revenues were $93.5 million, up slightly compared with $92.2 million in the prior-year period, as a decline in strategic trading revenues was more than offset by solid performance in our customer flow business and incremental revenues associated with our acquisition of BMO GKST.

Management and performance fees include the fees generated from our municipal bond, merchant banking and senior living funds with outside investors. For the year ended December 31, 2015, management and performance fees were $4.6 million, down 14.0 percent compared with $5.4 million in the prior-year period, due to decreased performance fees from our municipal bond fund, partially offset by higher performance fees from our merchant banking fund. In the third quarter of 2015, we closed the municipal bond fund and completed its liquidation in October 2015.

Adjusted investment income includes realized and unrealized gains and losses on our investments in the merchant banking fund and the municipal bond fund that we manage for third party investors, and other firm investments. For the year ended December 31, 2015, adjusted investment income was $15.5 million, compared to $8.3 million in 2014. In 2015, we recorded higher gains on our merchant banking activities, which were partially offset by lower gains on the municipal bond fund with outside investors that we liquidated in the fourth quarter of 2015.

Long-term financing expenses primarily represent interest paid on our senior notes. For the year ended December 31, 2015, long-term financing expenses increased to $7.5 million, compared to $6.7 million in the prior-year period, as we increased the amount of outstanding principal on our senior notes in the fourth quarter of 2015 from $125 million to $175 million.

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Capital Markets adjusted segment pre-tax operating margin for the year ended December 31, 2015 decreased to 14.7 percent, compared with 15.4 percent for 2014. The decrease in adjusted pre-tax operating margin was due to higher non-compensation expenses resulting from a legal settlement as well as additional expenses associated with our recent acquisitions and our financial institutions group expansion.

	Year Ended December 31,							
	2014				2013			
		Adjustments (1)				Adjustments (1)		
(Dollars in thousands)	Total Adjusted	Noncontrolling Interests	Other Adjustments	U.S. GAAP	Total Adjusted	Noncontrolling Interests	Other Adjustments	U.S. GAAP
Investment banking								
Financing								
Equities	$ 109,706	$ —	$ —	$ 109,706	$ 94,472	$ —	$ —	$ 94,472
Debt	63,005	—	—	63,005	71,164	—	—	71,164
Advisory services	197,880	—	—	197,880	83,292	—	—	83,292
Total investment banking	370,591	—	—	370,591	248,928	—	—	248,928
Institutional sales and trading								
Equities	82,211	—	—	82,211	91,169	—	—	91,169
Fixed income	92,200	—	—	92,200	76,275	—	—	76,275
Total institutional sales and trading	174,411	—	—	174,411	167,444	—	—	167,444
Total management and performance fees	5,398	—	—	5,398	3,891	—	—	3,891
Investment income	8,347	15,699	—	24,046	21,610	8,794	—	30,404
Long-term financing expenses	(6,655)	—	—	(6,655)	(7,420)	—	—	(7,420)
Net revenues	552,092	15,699	—	567,791	434,453	8,794	—	443,247
Operating expenses	467,198	4,546	6,917	478,661	382,157	3,400	7,674	393,231
Segment pre-tax operating income	$ 84,894	$ 11,153	$ (6,917)	$ 89,130	$ 52,296	$ 5,394	$ (7,674)	$ 50,016
Segment pre-tax operating margin	15.4%			15.7%	12.0%			11.3%

(1) Other Adjustments – The following table sets forth the items not included in adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin for the periods presented:

	Year Ended December 31,	
(Dollars in thousands)	*2014*	*2013*
Compensation from acquisition-related agreements	*$ 3,945*	*$ 1,620*
Restructuring and integration costs	*—*	*4,705*
Amortization of intangible assets related to acquisitions	*2,972*	*1,349*
	$ 6,917	*$ 7,674*

Capital Markets adjusted net revenues increased 27.1 percent to $552.1 million for the year ended December 31, 2014, compared with $434.5 million for the year ended December 31, 2013.

In 2014, investment banking revenues increased 48.9 percent to $370.6 million compared with $248.9 million in the prior year, due to higher equity financing and advisory services revenues. For the year ended December 31, 2014, equity financing revenues were $109.7 million, up 16.1 percent compared with $94.5 million in the prior-year period, as favorable equity markets, particularly in the first half of 2014, led to an increase in capital raising in our focus sectors, especially healthcare, our strongest sector, resulting in more completed transactions and higher revenue per transaction. During 2014, we completed 90 equity financings, raising $20.5 billion for our clients, compared with 82 equity financings, raising $19.3 billion for our clients in 2013. Debt financing revenues for the year ended December 31, 2014 were $63.0 million, down 11.5 percent compared with $71.2 million in the prior year, due to lower public finance revenues resulting from fewer completed transactions as our volume of new market issuances declined, and reduced underwriting spreads. During 2014, we completed 485 negotiated municipal issues with a total par value of $9.5 billion, compared with 522 negotiated municipal issues with a total par value of $9.7 billion during 2013. For the year ended December 31, 2014, advisory services revenues increased to $197.9 million, compared with $83.3 million in 2013, due to higher U.S. merger and acquisitions revenue from more completed transactions and higher revenue per transaction. Low volatility, attractive valuation levels and readily available credit created a robust mergers and acquisitions environment in 2014. Our strategic focus to strengthen our mergers and acquisitions resources in the middle market enabled us to capitalize on this environment. We completed 91 transactions with an aggregate enterprise value of $14.7 billion during 2014, compared with 46 transactions with an aggregate enterprise value of $5.3 billion in 2013.

In 2014, institutional brokerage revenues increased to $174.4 million, compared with $167.4 million in 2013, due to higher fixed income institutional brokerage revenues, partially offset by lower equity institutional brokerage revenues. Equity institutional brokerage revenues were $82.2 million in 2014, down 9.8 percent compared with $91.2 million in 2013, due to lower revenues from block trades and losses from our equity strategic trading activities compared to trading gains in the prior-year period. For the year ended December 31, 2014, fixed income institutional brokerage revenues were $92.2 million, up 20.9 percent compared with $76.3 million in the prior-year period. Higher trading gains and investments made in our middle markets team generated incremental revenue to offset the impact of client trading volumes remaining relatively flat. In the second quarter of 2013, we recorded trading losses on inventory positions due to a volatile trading environment caused by a rapid rise in interest rates and widening of credit spreads during that period.

For the year ended December 31, 2014, management and performance fees were $5.4 million, compared with $3.9 million in 2013, due to increased performance fees from our municipal bond fund with outside investors.

For the year ended December 31, 2014, adjusted investment income was $8.3 million, compared to $21.6 million in 2013. In 2013, we recorded larger gains on our merchant banking activities. Merchant banking investments made before 2010 are accounted for on a cost basis, which can result, and in 2013 did result, in significant realized gains in the period of a liquidity event for these investments. Note 12 of our consolidated financial statements highlights the difference between the fair value of investments and the cost basis for these investments.

For the year ended December 31, 2014, long-term financing expenses decreased to $6.7 million, compared to $7.4 million in the prior-year period.

Capital Markets adjusted segment pre-tax operating margin for 2014 increased to 15.4 percent, compared with 12.0 percent for 2013, due to operating leverage gained from increased revenues.

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Asset Management

The following table sets forth the Asset Management segment financial results from continuing operations and adjustments necessary to reconcile to our consolidated U.S. GAAP pre-tax operating income and pre-tax operating margin for the periods presented:

	Year Ended December 31,							
	2015				2014			
		Adjustments (1)				Adjustments (1)		
(Dollars in thousands)	Total Adjusted	Noncontrolling Interests	Other Adjustments	U.S. GAAP	Total Adjusted	Noncontrolling Interests	Other Adjustments	U.S. GAAP
Management fees								
Value equity	$ 38,249	$ —	$ —	$ 38,249	$ 47,987	$ —	$ —	$ 47,987
MLP	31,918	—	—	31,918	30,785	—	—	30,785
Total management fees	70,167	—	—	70,167	78,772	—	—	78,772
Performance fees								
Value equity	208			208	684	—	—	684
MLP	—			—	208	—	—	208
Total performance fees	208	—	—	208	892	—	—	892
Total management and performance fees	70,375	—	—	70,375	79,664	—	—	79,664
Investment income/(loss)	(6,788)	—	—	(6,788)	683	—	—	683
Total net revenues	63,587	—	—	63,587	80,347	—	—	80,347
Operating expenses	49,304	—	6,254	55,558	51,582	—	7,584	59,166
Segment pre-tax operating income	$ 14,283	$ —	$ (6,254)	$ 8,029	$ 28,765	$ —	$ (7,584)	$ 21,181
Segment pre-tax operating margin	22.5%			12.6%	35.8%			26.4%
Adjusted segment pre-tax operating margin excluding investment income/(loss) (2)	29.9%				35.3%			

(1) Other Adjustments – The following table sets forth the items not included in adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin for the periods presented:

	Year Ended December 31,	
(Dollars in thousands)	*2015*	*2014*
Compensation from acquisition-related agreements	*$ 214*	*$ 1,284*
Amortization of intangible assets related to acquisitions	*6,040*	*6,300*
	$ 6,254	*$ 7,584*

(2) Management believes that presenting adjusted segment pre-tax operating margin excluding investment income/(loss) provides the most meaningful basis for comparison of Asset Management operating results across periods.

Management and performance fee revenues comprise the revenues generated through management and investment advisory services performed for separately managed accounts, registered funds and partnerships. Investment performance and client asset inflows and outflows have a direct effect on management and performance fee revenues. Management fees are generally based on the level of assets under management ("AUM") measured monthly or quarterly, and an increase or reduction in AUM, due to market price fluctuations or net client asset flows, will result in a corresponding increase or decrease in management fees. Fees vary with the type of assets managed and the vehicle in which they are managed. Performance fees are earned when the investment return on AUM exceeds certain benchmark targets or other performance targets over a specified measurement period. The level of performance fees earned can vary significantly from period to period and these fees may not necessarily be correlated to changes in total AUM. The majority of performance fees, if earned, are generally recorded in the fourth quarter of the applicable year or upon withdrawal of client assets. At December 31, 2015, approximately nine percent of our AUM was eligible to earn performance fees.

For the year ended December 31, 2015, management fees were $70.2 million, a decrease of 10.9 percent, compared with $78.8 million in the prior-year period, due to decreased management fees from our value equity strategies. In 2015, management fees related to our value equity strategies were $38.2 million, down 20.3 percent compared to 2014, due to lower average AUM from net client outflows and market depreciation, as well as a lower average effective yield. The average effective revenue yield for our value equity strategies was 69 basis points for the year ended December 31, 2015, compared to 78 basis points for the year ended December 31, 2014. The decline in the average effective revenue yield was driven by large new investments from institutional investors, which have a lower fee structure. Management fees from our MLP strategies increased 3.7 percent in 2015 to $31.9 million, compared with $30.8 million in 2014, due to higher average effective revenue yields, partially offset by lower AUM, driven by sharp declines in MLP valuations. The average effective revenue yield for our MLP strategies was 61 basis points for the year ended December 31, 2015, compared to 54 basis points for the corresponding period in the prior year. The increase in the average effective revenue yield was due to more assets from individual investors in open-ended mutual funds, which earned higher fees. Our MLP strategies are energy-oriented and valuations declined significantly in the second half of 2015 and continue to decline, which meaningfully reduces our MLP AUM. Absent significant market appreciation or significant inflows, management fees from our MLP strategies will likely decline in 2016 given current conditions in the energy markets.

For the year ended December 31, 2015, performance fees were $0.2 million, compared to $0.9 million in the prior-year period. The performance fees recorded in 2015 and 2014 primarily resulted from certain funds exceeding their performance targets over a specified measurement period or at the time of client asset withdrawals.

Investment income/(loss) includes gains and losses from our investments in registered funds and private funds or partnerships that we manage. In 2015, we recorded an investment loss of $6.8 million driven by unrealized losses in MLP investments, compared with income of $0.7 million for the year ended December 31, 2014.

Adjusted segment pre-tax operating margin for the year ended December 31, 2015 was 22.5 percent, compared to 35.8 percent for the year ended December 31, 2014. Excluding investment income/(loss) on firm capital invested in our strategies, adjusted operating margin declined from 35.3 percent in 2014 to 29.9 percent in 2015, due to lower management fees.

	Year Ended December 31,							
	2014				2013			
		Adjustments (1)				Adjustments (1)		
(Dollars in thousands)	Total Adjusted	Noncontrolling Interests	Other Adjustments	U.S. GAAP	Total Adjusted	Noncontrolling Interests	Other Adjustments	U.S. GAAP
Management fees								
Value equity	$ 47,987	$ —	$ —	$ 47,987	$ 50,066	$ —	$ —	$ 50,066
MLP	30,785	—	—	30,785	21,248	—	—	21,248
Total management fees	78,772	—	—	78,772	71,314	—	—	71,314
Performance fees								
Value equity	684	—	—	684	7,620	—	—	7,620
MLP	208	—	—	208	220	—	—	220
Total performance fees	892	—	—	892	7,840	—	—	7,840
Total management and performance fees	79,664	—	—	79,664	79,154	—	—	79,154
Investment income	683	—	—	683	2,794	—	—	2,794
Total net revenues	80,347	—	—	80,347	81,948	—	—	81,948
Operating expenses	51,582	—	7,584	59,166	48,439	—	7,912	56,351
Segment pre-tax operating income	$ 28,765	$ —	$ (7,584)	$ 21,181	$ 33,509	$ —	$ (7,912)	$ 25,597
Segment pre-tax operating margin	35.8%			26.4%	40.9%			31.2%
Adjusted segment pre-tax operating margin excluding investment income (2)	35.3%				38.8%			

(1) Other Adjustments – The following table sets forth the items not included in adjusted segment pre-tax operating income and adjusted segment pre-tax operating margin for the periods presented:

	Year Ended December 31,	
(Dollars in thousands)	*2014*	*2013*
Compensation from acquisition-related agreements	*$ 1,284*	*$ 1,284*
Restructuring and integration costs	*—*	*(16)*
Amortization of intangible assets related to acquisitions	*6,300*	*6,644*
	$ 7,584	*$ 7,912*

(2) Management believes that presenting adjusted segment pre-tax operating margin excluding investment income provides the most meaningful basis for comparison of Asset Management operating results across periods.

For the year ended December 31, 2014, management fees were $78.8 million, an increase of 10.5 percent, compared with $71.3 million in 2013, due to increased management fees from our MLP product offerings, partially offset by decreased management fees from our value equity strategies. In 2014, management fees related to our value equity strategies were $48.0 million, down 4.2 percent compared to 2013, due to lower average AUM. The average effective revenue yield for our value equity strategies was 78 basis points in 2014, compared to 79 basis points in the prior year. Management fees from our our MLP strategies increased 44.9 percent in 2014 to $30.8 million, compared with $21.2 million in 2013, due to increased average AUM from net client inflows and net market appreciation, as well as higher average effective revenue yield. Our average effective revenue yield for our MLP strategies was 54 basis points in 2014, compared to 50 basis points in 2013. The increase in the average effective revenue yield was due to more assets from individual investors in open-ended funds, which earned higher fees.

For the year ended December 31, 2014, performance fees were $0.9 million, compared to $7.8 million in 2013. The performance fees recorded in 2014 were the result of certain funds exceeding their performance targets at the time of client asset withdrawals. The performance fees recorded in 2013 resulted from certain funds exceeding their performance targets over a specified measurement period.

For the year ended December 31, 2014, investment income was $0.7 million compared with $2.8 million for 2013.

Adjusted segment pre-tax operating margin for 2014 was 35.8 percent, compared to 40.9 percent for 2013. Excluding investment income, adjusted segment pre-tax operating margin for the year ended December 31, 2014 was 35.3 percent, compared to 38.8 percent for the year ended December 31, 2013. The decrease resulted from higher non-compensation expenses, particularly attributable to third party marketing fees.

The following table summarizes the changes in our AUM for the periods presented:

	Twelve Months Ended December 31,		
(Dollars in millions)	**2015**	**2014**	**2013**
Value Equity			
Beginning of period	**$ 5,758**	**$ 6,683**	**$ 5,865**
Net outflows	(572)	(979)	(756)
Net market appreciation/(depreciation)	(232)	54	1,574
End of period	**$ 4,954**	**$ 5,758**	**$ 6,683**
MLP			
Beginning of period	**$ 5,711**	**$ 4,549**	**$ 3,186**
Net inflows	434	719	498
Net market appreciation/(depreciation)	(2,221)	443	865
End of period	**$ 3,924**	**$ 5,711**	**$ 4,549**
Total			
Beginning of period	**$ 11,469**	**$ 11,232**	**$ 9,051**
Net outflows	(138)	(260)	(258)
Net market appreciation/(depreciation)	(2,453)	497	2,439
End of period	**$ 8,878**	**$ 11,469**	**$ 11,232**

For the year ended December 31, 2015, total AUM decreased to $8.9 billion driven by net market depreciation in our MLP product offerings. Value equity AUM was $5.0 billion at December 31, 2015, compared to $5.8 billion at December 31, 2014 due to net client outflows and net market depreciation during the period. In 2015, our performance in our small/mid-cap value strategy lagged its relative benchmark which contributed to client outflows, as did the continued movement to passive funds over actively-managed funds. These outflows were offset by client inflows related to our international and energy strategies. MLP AUM decreased $1.8 billion to $3.9 billion at December 31, 2015 as net market depreciation of $2.2 billion was partially offset by net client inflows of $0.4 billion.

Total AUM increased to $11.5 billion in 2014 as market appreciation and net client inflows in our MLP product offerings were partially offset by net client outflows in our value equity strategies. Value equity AUM was $5.8 billion at December 31, 2014, compared to $6.7 billion at December 31, 2013 due to net client outflows during the period. In 2014, performance in our core domestic strategies lagged their relative benchmarks which hindered our ability to attract significant net new value equity AUM. MLP AUM increased $1.2 billion to $5.7 billion in 2014 as we experienced net client inflows of $0.7 billion and net market appreciation of $0.4 billion.

Discontinued Operations

Discontinued operations include the costs to liquidate our Hong Kong capital markets business, which ceased operations in 2012, and the operating results of FAMCO, an asset management subsidiary we sold in 2013. For the year ended December 31, 2013, we recorded a loss from discontinued operations, net of tax, of $4.7 million.

The results of discontinued operations for the Hong Kong capital markets business were as follows:

(Dollars in thousands)	Year Ended December 31, 2013
Other expenses	$ 1,197
Loss from discontinued operations before income tax benefit	(1,197)
Income tax benefit	(415)
Loss from discontinued operations, net of tax	$ (782)

The $1.2 million of other expenses recorded in 2013 consisted of costs to dissolve our Hong Kong subsidiaries.

The results of discontinued operations for FAMCO were as follows:

(Dollars in thousands)	Year Ended December 31, 2013
Net revenues	$ 1,650
Operating expenses	5,057
Loss from discontinued operations before income tax benefit	(3,407)
Income tax benefit	(1,326)
Loss from discontinued operations	(2,081)
Loss on sale, net of tax	(1,876)
Loss from discontinued operations, net of tax	$ (3,957)

The loss from discontinued operations for the year ended December 31, 2013 primarily related to an indemnification obligation related to the sale of FAMCO.

See Note 5 to our consolidated financial statements for further discussion of our discontinued operations.

Recent Accounting Pronouncements

Recent accounting pronouncements are set forth in Note 3 to our consolidated financial statements included in Part II, Item 8 of this Form 10-K, and are incorporated herein by reference.

Critical Accounting Policies

Our accounting and reporting policies comply with GAAP and conform to practices within the securities industry. The preparation of financial statements in compliance with GAAP and industry practices requires us to make estimates and assumptions that could materially affect amounts reported in our consolidated financial statements. Critical accounting policies are those policies that we believe to be the most important to the portrayal of our financial condition and results of operations and that require us to make estimates that are difficult, subjective or complex. Most accounting policies are not considered by us to be critical accounting policies. Several factors are considered in determining whether or not a policy is critical, including whether the estimates are significant to the consolidated financial statements taken as a whole, the nature of the estimates, the ability to readily validate the estimates with other information (e.g. third party or independent sources), the sensitivity of the estimates to changes in economic conditions and whether alternative accounting methods may be used under GAAP.

For a full description of our significant accounting policies, see Note 2 to our consolidated financial statements included in Part II, Item 8 of this Form 10-K. We believe that of our significant accounting policies, the following are our critical accounting policies.

Valuation of Financial Instruments

Financial instruments and other inventory positions owned, financial instruments and other inventory positions sold, but not yet purchased, and certain of our investments recorded in investments on our consolidated statements of financial condition consist of financial instruments recorded at fair value, either as required by accounting guidance or through the fair value election. Unrealized gains and losses related to these financial instruments are reflected on our consolidated statements of operations.

The fair value of a financial instrument is the amount at which the instrument could be exchanged in an orderly transaction between market participants at the measurement date (the exit price). Based on the nature of our business and our role as a "dealer" in the securities industry or our role as a manager of alternative asset management funds, the fair values of our financial instruments are determined internally. See Note 2 and Note 7 to our consolidated financial statements for additional information on the valuation of our financial instruments and our fair value processes, including specific control processes to determine the reasonableness of the fair value of our financial instruments.

Financial Accounting Standards Board ("FASB") Accounting Standards Codification Topic 820, "Fair Value Measurement," establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level I measurements) and the lowest priority to inputs with little or no pricing observability (Level III measurements). Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. See Note 7 to our consolidated financial statements for additional discussion of our assets and liabilities in the fair value hierarchy.

Goodwill and Intangible Assets

We record all assets and liabilities acquired in purchase acquisitions, including goodwill and other intangible assets, at fair value. Determining the fair value of assets and liabilities acquired requires certain management estimates. At December 31, 2015, we had goodwill of $218.0 million. The goodwill balance consists of $21.1 million recorded within our capital markets segment, of which $6.1 million is attributable to our recent River Branch and BMO GKST acquisitions. The remaining $196.8 million relates to our asset management segment. At December 31, 2015, we had intangible assets of $30.5 million, of which $8.3 million relates to our capital markets segment and $22.3 million relates to our asset management segment.

We are required to perform impairment tests of our goodwill and indefinite-life intangible assets annually and on an interim basis when circumstances exist that could indicate possible impairment. We have elected to test for goodwill impairment in the fourth quarter of each calendar year. We have the option to first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after making an assessment, we determine it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the two-step impairment test is unnecessary. However, if we conclude otherwise, then we are required to perform the two-step impairment test, which requires management to make judgments in determining what assumptions to use in the calculation. See Note 14 to our consolidated financial statements for additional information on our goodwill impairment testing.

We elected to perform a qualitative assessment to test the goodwill in our capital markets reporting unit for impairment. The following relevant events and circumstances were evaluated in concluding that it was not more likely than not that this goodwill was impaired: macroeconomic conditions, industry and market considerations and the overall financial performance of the capital markets reporting unit.

The initial recognition of goodwill and other intangible assets and the subsequent quantitative impairment analysis requires management to make subjective judgments concerning estimates of how the acquired assets or businesses will perform in the future using valuation methods including discounted cash flow analysis. Our estimated cash flows typically extend for five years and, by their nature, are difficult to determine over an extended time period. Events and factors that may significantly affect the estimates include, among others, competitive forces and changes in revenue growth trends, cost structures, technology, discount rates and market conditions. To assess the reasonableness of cash flow estimates and validate assumptions used in our estimates, we review historical performance of the underlying assets or similar assets. In assessing the fair value of our reporting units, the volatile nature of the securities markets and our industry requires us to consider the business and market cycle and assess the stage of the cycle in estimating the timing and extent of future cash flows. In addition to discounted cash flows, we consider our market capitalization, public company comparables and multiples of recent mergers and acquisitions of similar businesses in our subsequent impairment analysis. Valuation multiples may be based on revenues, earnings before interest, taxes, depreciation and amortization (EBITDA), price-to-earnings or cash flows of comparable public companies and business segments. These multiples may be adjusted to consider competitive differences including size, operating leverage and other factors.

We completed our annual goodwill impairment analysis as of October 31, 2015, and concluded there was no goodwill impairment.

We also evaluated the intangible assets (indefinite and definite-lived) and concluded there was no impairment in 2015.

Compensation Plans

Stock-Based Compensation Plans

As part of our compensation to employees and directors, we use stock-based compensation, consisting of restricted stock, restricted stock units and stock options. We account for equity awards in accordance with FASB Accounting Standards Codification Topic 718, "Compensation–Stock Compensation," ("ASC 718"), which requires all share-based payments to employees, including grants of employee stock options, to be recognized on the consolidated statements of operations at grant date fair value. Compensation expense related to share-based awards which require future service are amortized over the service period of the award, net of estimated forfeitures. Share-based awards that do not require future service are recognized in the year in which the awards are deemed to be earned.

See Note 22 to our consolidated financial statements for additional information about our stock-based compensation plans.

Income Taxes

We file a consolidated U.S. federal income tax return, which includes all of our qualifying subsidiaries. We also are subject to income tax in various states and municipalities and those foreign jurisdictions in which we operate. Amounts provided for income taxes are based on income reported for financial statement purposes and do not necessarily represent amounts currently payable. Deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and for tax loss carry-forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Deferred income taxes are provided for temporary differences in reporting certain items, principally restricted compensation (i.e., restricted stock, restricted stock units, options, restricted mutual fund shares (MFRS awards), and deferred compensation). The realization of deferred tax assets is assessed and a valuation allowance is recognized to the extent that it is more likely than not that any portion of the deferred tax asset will not be realized. We believe that our future taxable profits will be sufficient to recognize our deferred tax assets. However, if our projections of future taxable profits do not materialize, we may conclude that a valuation allowance is necessary, which would impact our results of operations in that period. In the fourth quarter of 2013, we reversed the full amount of our U.K. subsidiary's deferred tax asset valuation allowance based upon achieving three years of profitability and projected future earnings. This resulted in a $4.0 million tax benefit to our results of operations.

We record deferred tax benefits for future tax deductions expected upon the vesting of stock-based compensation. If deductions reported on our tax return for stock-based compensation (i.e., the value of the stock-based compensation at the time of vesting) exceed the cumulative cost of those instruments recognized for financial reporting (i.e., the grant date fair value of the compensation computed in accordance with ASC 718), we record the excess tax benefit as additional paid-in capital. Conversely, if deductions reported on our tax return for stock-based compensation are less than the cumulative cost of those instruments recognized for financial reporting, we offset the deficiency first to any previously recognized excess tax benefits recorded as additional paid-in capital and any remaining deficiency is recorded as income tax expense. As of December 31, 2015, we had $7.0 million of excess tax benefits recorded as additional paid-in capital. In the first quarter of 2016, approximately 11,000 options expired and 437,000 shares vested at share prices less than the grant date fair value, resulting in a $0.9 million reduction of excess tax benefits within additional paid-in capital in the first quarter of 2016.

We establish reserves for uncertain income tax positions in accordance with FASB Accounting Standards Codification Topic 740, "Income Taxes," when it is not more likely than not that a certain position or component of a position will be ultimately upheld by the relevant taxing authorities. Significant judgment is required in evaluating uncertain tax positions. Our tax provision and related accruals include the impact of estimates for uncertain tax positions and changes to the reserves that are considered appropriate. To the extent the probable tax outcome of these matters changes, such change in estimate will impact the income tax provision in the period of change and, in turn, our results of operations.

Liquidity, Funding and Capital Resources

Liquidity is of critical importance to us given the nature of our business. Insufficient liquidity resulting from adverse circumstances contributes to, and may be the cause of, financial institution failure. Accordingly, we regularly monitor our liquidity position and maintain a liquidity strategy designed to enable our business to continue to operate even under adverse circumstances, although there can be no assurance that our strategy will be successful under all circumstances.

The majority of our tangible assets consist of assets readily convertible into cash. Financial instruments and other inventory positions owned are stated at fair value and are generally readily marketable in most market conditions. Receivables and payables with brokers, dealers and clearing organizations usually settle within a few days. As part of our liquidity strategy, we emphasize diversification of funding sources to the extent possible while considering tenor and cost. Our assets are financed by our cash flows from operations, equity capital, and our funding arrangements. The fluctuations in cash flows from financing activities are directly related to daily operating activities from our various businesses. One of our most important risk management disciplines is our ability to manage the size and composition of our balance sheet. While our asset base changes due to client activity, market fluctuations and business opportunities, the size and composition of our balance sheet reflect our overall risk tolerance, our ability to access stable funding sources and the amount of equity capital we hold.

Certain market conditions can impact the liquidity of our inventory positions, requiring us to hold larger inventory positions for longer than expected or requiring us to take other actions that may adversely impact our results.

A significant component of our employees' compensation is paid in annual discretionary incentive compensation. The timing of these incentive compensation payments, which generally are made in February, has a significant impact on our cash position and liquidity.

We currently do not pay cash dividends on our common stock.

Effective October 1, 2014, our board of directors authorized the repurchase of up to $100.0 million in common shares through September 30, 2016. Additionally, effective August 14, 2015, our board of directors authorized the repurchase of up to an additional $150.0 million in common shares through September 30, 2017. During 2015, we repurchased 2,459,400 shares for an aggregate purchase price of $118.5 million related to these authorizations. At December 31, 2015, we had $131.5 million remaining under these authorizations.

We also purchase shares of common stock from restricted stock award recipients upon the award vesting as recipients sell shares to meet their employment tax obligations. During 2015, we purchased 281,180 shares or $14.5 million of our common shares for this purpose.

Cash Flows

Cash and cash equivalents at December 31, 2015 were $189.9 million, an increase of $174.0 million from December 31, 2014. Operating activities provided $379.5 million of cash primarily due to cash generated from earnings as well as a reduction in operating assets, particularly related to the liquidation of our municipal bond fund with outside investors, convertible securities inventory, and reverse repurchase agreements, which are principally used to make delivery on securities sold short. Investing activities in 2015 used $16.2 million of cash primarily related to the acquisitions of River Branch and BMO GKST, and the purchase of fixed assets. In 2015, financing activities used $189.0 million of cash as we repurchased $133.0 million of common stock, and experienced a $106.8 million decrease in noncontrolling interests resulting from the liquidation of our municipal bond fund with outside investors. In October 2015, we entered into a Second Amended and Restated Note Purchase Agreement under which we issued unsecured fixed rate senior notes that provided $125.0 million in financing, $75.0 million of which was used to repay our Class B variable rate senior notes that were due in November 2015.

Cash and cash equivalents decreased $107.8 million to $15.9 million at December 31, 2014 from December 31, 2013. Operating activities used $50.1 million of cash primarily due to an increase in operating assets, particularly related to our inventory and reverse repurchase agreements, which are principally used to make delivery on securities sold short. Partially offsetting these increases in operating assets were cash received from earnings and increased compensation related accruals. Investing activities in 2014 used $5.4 million of cash primarily related to the purchase of fixed assets. Cash of $52.0 million was used in financing activities as we reduced amounts due under our short-term financing related to commercial paper and our prime broker arrangement, offset in part by increases in repurchase agreements. Additionally, we experienced a $9.0 million decrease in noncontrolling interests due to net fund capital withdrawals and used $10.9 million of cash to repurchase common stock from employees selling shares to meet their tax obligations related to award vestings.

Cash and cash equivalents increased $18.3 million to $123.7 million at December 31, 2013 from December 31, 2012. Operating activities provided $42.2 million primarily due to cash received from earnings and the increase in compensation related accruals. These increases were offset in part by cash used to fund reverse repurchase agreements as we increased hedging of our inventories, deployment of capital into other firm investments and an increase in fees receivable. Investing activities in 2013 used $30.0 million of cash, the majority of which related to our acquisitions of Seattle-Northwest and Edgeview. Cash of $5.8 million was provided through financing activities as increases in noncontrolling interest were offset in part by a net decrease in repurchase agreements and short-term financing that were used to fund inventory and $71.5 million used to repurchase common stock.

Leverage

The following table presents total assets, adjusted assets, total shareholders' equity and tangible shareholders' equity with the resulting leverage ratios as of:

(Dollars in thousands)	December 31, 2015	December 31, 2014
Total assets	**$ 2,138,518**	$ 2,623,917
Deduct: Goodwill and intangible assets	**(248,506)**	(242,536)
Deduct: Assets from noncontrolling interests	**(88,590)**	(308,910)
Adjusted assets	**$ 1,801,422**	$ 2,072,471
Total shareholders' equity	**$ 832,820**	$ 969,460
Deduct: Goodwill and intangible assets	**(248,506)**	(242,536)
Deduct: Noncontrolling interests	**(49,161)**	(149,548)
Tangible common shareholders' equity	**$ 535,153**	$ 577,376
Leverage ratio (1)	**2.6**	2.7
Adjusted leverage ratio (2)	**3.4**	3.6

(1) Leverage ratio equals total assets divided by total shareholders' equity.

(2) Adjusted leverage ratio equals adjusted assets divided by tangible common shareholders' equity.

Adjusted assets and tangible common shareholders' equity are non-GAAP financial measures. Goodwill and intangible assets are subtracted from total assets and total shareholders' equity in determining adjusted assets and tangible common shareholders' equity, respectively, as we believe that goodwill and intangible assets do not constitute operating assets which can be deployed in a liquid manner. Amounts attributed to noncontrolling interests are subtracted from total assets and total shareholders' equity in determining adjusted assets and tangible common shareholders' equity, respectively, as they represent assets and equity interests in consolidated entities that are not attributable, either directly or indirectly, to Piper Jaffray Companies. We view the resulting measure of adjusted leverage, also a non-GAAP financial measure, as a more relevant measure of financial risk when comparing financial services companies.

Funding and Capital Resources

The primary goal of our funding activities is to ensure adequate funding over a wide range of market conditions. Given the mix of our business activities, funding requirements are fulfilled through a diversified range of short-term and long-term financing. We attempt to ensure that the tenor of our borrowing liabilities equals or exceeds the expected holding period of the assets being financed. Our ability to support increases in total assets is largely a function of our ability to obtain funding from external sources. Access to these external sources, as well as the cost of that financing, is dependent upon various factors, including market conditions, the general availability of credit and credit ratings. We currently do not have a credit rating, which could adversely affect our liquidity and competitive position by increasing our financing costs and limiting access to sources of liquidity that require a credit rating as a condition to providing the funds.

Short-term financing

Our day-to-day funding and liquidity is obtained primarily through the use of commercial paper issuance, repurchase agreements, prime broker agreement, and bank lines of credit, and is typically collateralized by our securities inventory. These funding sources are critical to our ability to finance and hold inventory, which is a necessary part of our institutional brokerage business. The majority of our inventory is liquid and is therefore funded by overnight or short-term facilities. Certain of these short-term facilities (i.e., committed line and commercial paper) have been established to mitigate changes in the liquidity of our inventory based on changing market conditions. In the case of our committed line, it is available to us regardless of changes in market liquidity conditions through the end of its term, although there may be limitations on the type of securities available to pledge. Our commercial paper program helps mitigate changes in market liquidity conditions given it is not an overnight facility, but provides funding with a term of 27 to 270 days. Our funding sources are also dependent on the types of inventory that our counterparties are willing to accept as collateral and the number of counterparties available. Funding is generally obtained at rates based upon the federal funds rate and/or the London Interbank Offer Rate.

Commercial Paper Program – Our U.S. broker dealer subsidiary, Piper Jaffray & Co., issues secured commercial paper to fund a portion of its securities inventory. This commercial paper is issued under three separate programs, CP Series A, CP Series II A and CP Series III A, and is secured by different inventory classes, which is reflected in the interest rate paid on the respective program. The programs can issue with maturities of 27 to 270 days. CP Series III A includes a covenant that requires Piper Jaffray & Co. to maintain excess net capital of $120 million. The following table provides information about our commercial paper programs at December 31, 2015:

(Dollars in millions)	**CP Series A**	**CP Series II A**	**CP Series III A**
Maximum amount that may be issued	$ 300.0	$ 150.0	$ 125.0
Amount outstanding	154.5	29.9	92.5
Weighted average maturity, in days	65	55	21
Weighted average maturity at issuance, in days	126	99	33

Prime Broker Arrangement – Our municipal securities strategic trading activities are principally operated in a fund structure vehicle. We also previously managed a municipal bond fund with third party investors, which was liquidated in the second half of 2015. We have established an arrangement to obtain overnight financing by a single prime broker related to our strategic trading activities in municipal securities and the alternative asset management fund that we previously managed with outside investors. Financing under this arrangement is secured by certain securities, primarily municipal securities, and collateral limitations could reduce the amount of funding available under this arrangement. Our prime broker financing activities are recorded net of receivables from trading activity. This funding is at the discretion of the prime broker and could be denied subject to a notice period. At December 31, 2015, we had $169.3 million of financing outstanding under this prime broker arrangement.

Committed Lines – Our committed line is a one-year $250 million revolving secured credit facility. We use this credit facility in the ordinary course of business to fund a portion of our daily operations, and the amount borrowed under the facility varies daily based on our funding needs. Advances under this facility are secured by certain marketable securities. The facility includes a covenant that requires Piper Jaffray & Co. to maintain minimum net capital of $120 million, and the unpaid principal amount of all advances under the facility will be due on December 17, 2016. This credit facility has been in place since 2008 and we renewed the facility for another one-year term in the fourth quarter of 2015. At December 31, 2015, we had no advances against this line of credit.

Uncommitted Lines – We use uncommitted lines in the ordinary course of business to fund a portion of our daily operations, and the amount borrowed under our uncommitted lines varies daily based on our funding needs. Our uncommitted secured lines total $185 million with two banks and are dependent on having appropriate collateral, as determined by the bank agreement, to secure an advance under the line. Collateral limitations could reduce the amount of funding available under these secured lines. We also have an uncommitted unsecured facility with one of these banks. All of these uncommitted lines are discretionary and are not a commitment by the bank to provide an advance under the line. More specifically, these lines are subject to approval by the respective bank each time an advance is requested and advances may be denied, which may be particularly true during times of market stress or market perceptions of our exposures. We manage our relationships with the banks that provide these uncommitted facilities in order to have appropriate levels of funding for our business. At December 31, 2015, we had no advances against these lines of credit.

The following tables present the average balances outstanding for our various short-term funding sources by quarter for 2015 and 2014, respectively.

	Average Balance for the Three Months Ended			
(Dollars in millions)	**Dec. 31, 2015**	**Sept. 30, 2015**	**June 30, 2015**	**Mar. 31, 2015**
Funding source:				
Repurchase agreements	**$ 25.5**	$ 32.1	$ 76.9	$ 66.4
Commercial paper	**277.5**	276.8	256.3	245.1
Prime broker arrangement	**109.4**	139.8	242.8	167.1
Short-term bank loans	**0.3**	0.2	11.9	28.4
Total	**$ 412.7**	$ 448.9	$ 587.9	$ 507.0

	Average Balance for the Three Months Ended			
(Dollars in millions)	**Dec. 31, 2014**	**Sept. 30, 2014**	**June 30, 2014**	**Mar. 31, 2014**
Funding source:				
Repurchase agreements	$ 54.2	$ 10.5	$ 49.8	$ 38.3
Commercial paper	244.0	262.5	276.2	280.5
Prime broker arrangement	46.4	64.8	159.9	216.1
Short-term bank loans	19.9	6.4	18.9	28.9
Total	$ 364.5	$ 344.2	$ 504.8	$ 563.8

The average funding in the fourth quarter of 2015 decreased to $412.7 million, compared with $448.9 million during the third quarter of 2015, due to a reduction in average inventory balances and an increase of $50 million in long-term financing as a result of the new fixed rate Class C Notes issued during the quarter. The increase in average funding compared to the fourth quarter of 2014 was due to cash being used for share repurchases in 2015, which resulted in an increased need for funding when compared to the year-ago period.

The following table presents the maximum daily funding amount by quarter for 2015 and 2014, respectively.

(Dollars in millions)	**2015**	**2014**
First Quarter	$ 949.8	$ 897.2
Second Quarter	$ 876.0	$ 766.7
Third Quarter	$ 666.1	$ 543.0
Fourth Quarter	$ 531.7	$ 644.1

Senior Notes

We have entered into variable and fixed rate senior notes with certain entities advised by Pacific Investment Management Company ("PIMCO"). The following table presents the outstanding balance by note class at December 31, 2015 and 2014, respectively.

	Outstanding Balance	
(Dollars in thousands)	**December 31, 2015**	**December 31, 2014**
Class A Notes	**$ 50,000**	$ 50,000
Class B Notes	**—**	75,000
Class C Notes	**125,000**	—
Total senior notes	**$ 175,000**	$ 125,000

On October 8, 2015, we entered into a second amended and restated note purchase agreement ("Second Amended and Restated Note Purchase Agreement") under which we issued $125 million of fixed rate Class C Notes. The Class C Notes bear interest at an annual fixed rate of 5.06 percent, payable semi-annually and mature on October 9, 2018. The $50 million of variable rate Class A Notes issued in 2014 bear interest at a rate equal to three-month LIBOR plus 3.00 percent, adjusted and payable quarterly and mature on May 31, 2017. The variable rate Class B Notes with a principal amount of $75 million issued in 2012 were repaid in full on November 30, 2015, from the proceeds of the Class C Notes. The unpaid principal amounts of the senior notes are due in full on the respective maturity dates and may not be prepaid.

The Second Amended and Restated Note Purchase Agreement includes customary events of default and covenants that, among other things, require us to maintain a minimum consolidated tangible net worth and minimum regulatory net capital, limit our leverage ratio and require maintenance of a minimum ratio of operating cash flow to fixed charges. With respect to the net capital covenant, our U.S. broker dealer subsidiary is required to maintain minimum net capital of $120 million. At December 31, 2015, we were in compliance with all covenants.

Contractual Obligations

In the normal course of business, we enter into various contractual obligations that may require future cash payments. The following table summarizes the contractual amounts at December 31, 2015, in total and by remaining maturity. Excluded from the table are a number of obligations recorded on the consolidated statements of financial condition that generally are short-term in nature, including secured financing transactions, trading liabilities, short-term borrowings and other payables and accrued liabilities. The amounts presented in the table below may not necessarily reflect our actual future cash funding requirements, because the actual timing of the future payments made may vary from the stated contractual obligation.

(Dollars in millions)	**2016**	**2017 - 2018**	**2019 - 2020**	**2021 and thereafter**	**Total**
Operating lease obligations	$ 12.9	$ 19.9	$ 17.6	$ 17.9	$ 68.3
Purchase commitments	19.1	17.5	0.9	—	37.5
Investment commitments (1)	—	—	—	—	32.8
Loan commitments (2)	—	—	—	—	—
Senior notes	—	175.0	—	—	175.0

(1) The investment commitments have no specified call dates. The timing of capital calls is based on market conditions and investment opportunities. Investment commitments consist of $22.3 million to an affiliated merchant banking fund, and $10.0 million to an affiliated fund, which provides financing to senior living facilities.

(2) We may commit to bridge loan financing for our clients. We are unable to estimate the timing on the funding of these commitments and had no commitments outstanding at December 31, 2015.

Purchase commitments include agreements to purchase goods or services that are enforceable and legally binding and that specify all significant terms, including fixed or minimum quantities to be purchased, fixed, minimum or variable price provisions, and the approximate timing of the transaction. Purchase commitments with variable pricing provisions are included in the table based on the minimum contractual amounts. Certain purchase commitments contain termination or renewal provisions. The table reflects the minimum contractual amounts likely to be paid under these agreements assuming the contracts are not terminated.

Capital Requirements

As a registered broker dealer and member firm of FINRA, our U.S. broker dealer subsidiary is subject to the uniform net capital rule of the SEC and the net capital rule of FINRA. We have elected to use the alternative method permitted by the uniform net capital rule, which requires that we maintain minimum net capital of the greater of $1.0 million or 2 percent of aggregate debit balances arising from customer transactions, as this is defined in the rule. FINRA may prohibit a member firm from expanding its business or paying dividends if resulting net capital would be less than 5 percent of aggregate debit balances. Advances to affiliates, repayment of subordinated liabilities, dividend payments and other equity withdrawals are subject to certain approvals, notifications and other provisions of the uniform net capital rules. We expect that these provisions will not impact our ability to meet current and future obligations. At December 31, 2015, our net capital under the SEC's uniform net capital rule was $187.9 million, and exceeded the minimum net capital required under the SEC rule by $186.9 million.

Although we operate with a level of net capital substantially greater than the minimum thresholds established by FINRA and the SEC, a substantial reduction of our capital would curtail many of our Capital Markets revenue producing activities.

At December 31, 2015, Piper Jaffray Ltd., our broker dealer subsidiary registered in the United Kingdom, was subject to, and was in compliance with, the capital requirements of the Prudential Regulation Authority and the Financial Conduct Authority pursuant to the Financial Services Act of 2012.

Piper Jaffray Hong Kong Limited is licensed by the Hong Kong Securities and Futures Commission, which is subject to the liquid capital requirements of the Securities and Futures (Financial Resources) Rule promulgated under the Securities and Futures Ordinance. At December 31, 2015, Piper Jaffray Hong Kong Limited was in compliance with the liquid capital requirements of the Hong Kong Securities and Futures Commission.

Off-Balance Sheet Arrangements

In the ordinary course of business we enter into various types of off-balance sheet arrangements. The following table summarizes our off-balance sheet arrangements for the periods presented:

	Expiration Per Period at December 31,						Total Contractual Amount	
(Dollars in thousands)	2016	2017	2018	2019 - 2020	2021 - 2022	Later	December 31, 2015	December 31, 2014
Customer matched-book derivative contracts (1) (2)	$ 62,846	$ 40,950	$ —	$ 72,596	$ 68,760	$ 4,147,288	**$ 4,392,440**	$ 4,860,302
Trading securities derivative contracts (2)	260,850	—	—	—	—	29,750	**290,600**	297,250
Credit default swap index contracts (2)	—	—	—	67,000	—	27,270	**94,270**	267,796
Futures and equity option derivative contracts (2)	1,344,586	1,000,451	—	—	—	—	**2,345,037**	19,380
Private equity investment commitments (3)	—	—	—	—	—	—	**32,819**	37,264

(1) Consists of interest rate swaps. We have minimal market risk related to these matched-book derivative contracts; however, we do have counterparty risk with two major financial institutions, which is mitigated by collateral deposits. In addition, we have a limited number of counterparties (contractual amount of $186.4 million at December 31, 2015) who are not required to post collateral. The uncollateralized amounts, representing the fair value of the derivative contracts, expose us to the credit risk of these counterparties. At December 31, 2015, we had $24.4 million of credit exposure with these counterparties, including $16.9 million of credit exposure with one counterparty.

(2) We believe the fair value of these derivative contracts is a more relevant measure of the obligations because we believe the notional or contract amount overstates the expected payout. At December 31, 2015 and December 31, 2014, the net fair value of these derivative contracts approximated $31.8 million and $37.0 million, respectively.

(3) The investment commitments have no specified call dates. The timing of capital calls is based on market conditions and investment opportunities.

Derivatives

Derivatives' notional or contract amounts are not reflected as assets or liabilities on our consolidated statements of financial condition. Rather, the fair value of the derivative transactions are reported on the consolidated statements of financial condition as assets or liabilities in financial instruments and other inventory positions owned and financial instruments and other inventory positions sold, but not yet purchased, as applicable. For a complete discussion of our activities related to derivative products, see Note 6, "Financial Instruments and Other Inventory Positions Owned and Financial Instruments and Other Inventory Positions Sold, but Not Yet Purchased," in the notes to our consolidated financial statements.

Loan Commitments

We may commit to bridge loan financing for our clients. We had no loan commitments outstanding at December 31, 2015.

Investment Commitments

Our private equity and principal investments, including those made as part of our merchant banking activities, are made through investments in various limited partnerships or limited liability companies that provide financing or make investments in private equity funds. We commit capital or act as the managing partner of these entities. For a complete discussion of our activities related to these types of entities, see Note 8, "Variable Interest Entities," in the notes to our consolidated financial statements.

We have committed capital to certain entities and these commitments generally have no specified call dates. We had $32.8 million of commitments outstanding at December 31, 2015, of which $22.3 million relate to an affiliated merchant banking fund, and $10.0 million relate to an affiliated fund, which provides financing for senior living facilities.

Risk Management

Risk is an inherent part of our business. The principal risks we face in operating our business include: strategic risk, market risk, liquidity risk, credit risk, operational risk, human capital risk, and legal, regulatory and compliance risks. The extent to which we properly identify and effectively manage each of these risks is critical to our financial condition and profitability. We have a formal risk management process to identify, assess and monitor each risk and mitigating controls in accordance with defined policies and procedures. The risk management functions are independent of our business lines. Our management takes an active role in the risk management process, and the results are reported to senior management and the Board of Directors.

The audit committee of the Board of Directors oversees the risk management process as well as policies that have been developed by management to monitor and control our primary financial risk exposures. Our Chief Executive Officer and Chief Financial Officer meet with the audit committee on a quarterly basis to discuss our market, credit and liquidity risks and other risk-related topics.

We use internal committees to assist in governing risk and ensure that our business activities are properly assessed, monitored and managed. Our financial risk committee oversees risk management practices, including defining acceptable risk tolerances and approving risk management policies. Membership is comprised of our Chief Executive Officer, Chief Financial Officer, General Counsel, Treasurer, Head of Market and Credit Risk, Head of Public Finance, Head of Fixed Income Services and Firm Investments and Trading, and Head of Equities. Designated members of this committee also convene an executive risk committee which meets on a regular basis to monitor and discuss our primary financial risk exposures. We also have committees which manage risks related to our asset management strategies and principal investments. Membership is comprised of various levels of senior management. Other committees that help evaluate and monitor risk include underwriting, leadership team and operating committees. These committees help manage risk by ensuring that business activities are properly managed and within a defined scope of activity. Our valuation committee, comprised of members of senior management and risk management, provide oversight and overall responsibility for the internal control processes and procedures related to fair value measurements. Additionally, our operational risk committees address and monitor risk related to information systems and security, legal, regulatory and compliance matters, and third parties such as vendors and service providers.

With respect to market risk and credit risk, the cornerstone of our risk management process is daily communication among traders, trading department management and senior management concerning our inventory positions, including those associated with our strategic trading activities, and overall risk profile. Our risk management functions supplement this communication process by providing their independent perspectives on our market and credit risk profile on a daily basis. The broader objectives of our risk management functions are to understand the risk profile of each trading area, to consolidate risk monitoring company-wide, to assist in implementing effective hedging strategies, to articulate large trading or position risks to senior management, and to ensure accurate fair values of our financial instruments.

Risk management techniques, processes and strategies may not be fully effective in mitigating our risk exposure in all market environments or against all types of risk, and any risk management failures could expose us to material unanticipated losses.

Strategic Risk

Strategic risk represents the risk associated with executive management failing to develop and execute on the appropriate overall objectives and strategic vision which demonstrates a commitment to the Company's culture, appropriately responds to external factors in the marketplace, and is in the best interests of our clients, employees and shareholders.

Our leadership team is responsible for managing our strategic risks. The Board of Directors oversees the leadership team in setting and executing our strategic plan.

Market Risk

Market risk represents the risk of financial volatility that may result from the change in value of a financial instrument due to fluctuations in its market price. Our exposure to market risk is directly related to our role as a financial intermediary for our clients, to our market-making activities and our strategic trading activities. Market risks are inherent to both cash and derivative financial instruments. The scope of our market risk management policies and procedures includes all market-sensitive financial instruments.

Our different types of market risk include:

Interest Rate Risk — Interest rate risk represents the potential volatility from changes in market interest rates. We are exposed to interest rate risk arising from changes in the level and volatility of interest rates, changes in the shape of the yield curve, changes in credit spreads, and the rate of prepayments on our interest-earning assets (including client margin balances, investments, inventories, and resale agreements) and our funding sources (including client cash balances, short-term financing, senior notes and repurchase agreements), which finance these assets. Interest rate risk is managed by selling short U.S. government securities, agency securities, corporate debt securities and derivative contracts. See Note 6 of our accompanying consolidated financial statements for additional information on our derivative contracts. Our interest rate hedging strategies may not work in all market environments and as a result may not be effective in mitigating interest rate risk.

Equity Price Risk — Equity price risk represents the potential loss in value due to adverse changes in the level or volatility of equity prices. We are exposed to equity price risk through our trading activities in the U.S. market. We attempt to reduce the risk of loss inherent in our market-making and in our inventory of equity securities by establishing limits on the notional level of our inventory and by managing net position levels within those limits.

Value-at-Risk ("VaR")

We use the statistical technique known as VaR to measure, monitor and review the market risk exposures in our trading portfolios. VaR is the potential loss in value of our trading positions, excluding non-controlling interests, due to adverse market movements over a defined time horizon with a specified confidence level. We perform a daily VaR analysis on substantially all of our trading positions, including fixed income, equities, convertible bonds, mortgage-backed securities and all associated economic hedges. These positions encompass both customer-related and strategic trading activities, which focus on proprietary investments in municipal bonds, and mortgage-backed securities. A VaR model provides a common metric for assessing market risk across business lines and products. Changes in VaR between reporting periods are generally due to changes in levels of risk exposure, volatilities and/or correlations among asset classes and individual securities.

We use a Monte Carlo simulation methodology for VaR calculations. We believe this methodology provides VaR results that properly reflect the risk profile of all our instruments, including those that contain optionality, and also accurately models correlation movements among all of our asset classes. In addition, it provides improved tail results as there are no assumptions of distribution, and can provide additional insight for scenario shock analysis.

Model-based VaR derived from simulation has inherent limitations including: reliance on historical data to predict future market risk; VaR calculated using a one-day time horizon does not fully capture the market risk of positions that cannot be liquidated or offset with hedges within one day; and published VaR results reflect past trading positions while future risk depends on future positions.

The modeling of the market risk characteristics of our trading positions involves a number of assumptions and approximations. While we believe that these assumptions and approximations are reasonable, different assumptions and approximations could produce materially different VaR estimates. When comparing our VaR numbers to those of other firms, it is important to remember that different methodologies, assumptions and approximations could produce significantly different results.

The following table quantifies the model-based VaR simulated for each component of market risk for the periods presented, which are computed using the past 250 days of historical data. When calculating VaR we use a 95 percent confidence level and a one-day time horizon. This means that, over time, there is a one in 20 chance that daily trading net revenues will fall below the expected daily trading net revenues by an amount at least as large as the reported VaR. Shortfalls on a single day can exceed reported VaR by significant amounts. Shortfalls can also accumulate over a longer time horizon, such as a number of consecutive trading days. Therefore, there can be no assurance that actual losses occurring on any given day arising from changes in market conditions will not exceed the VaR amounts shown below or that such losses will not occur more than once in a 20-day trading period.

(Dollars in thousands)	**December 31, 2015**	**December 31, 2014**
Interest Rate Risk	**$ 608**	$ 740
Equity Price Risk	**119**	235
Diversification Effect (1)	**(66)**	(129)
Total Value-at-Risk	**$ 661**	$ 846

(1) Equals the difference between total VaR and the sum of the VaRs for the two risk categories. This effect arises because the two market risk categories are not perfectly correlated.

We view average VaR over a period of time as more representative of trends in the business than VaR at any single point in time. The table below illustrates the daily high, low and average value-at-risk calculated for each component of market risk during the years ended December 31, 2015 and 2014, respectively.

(Dollars in thousands)	**High**	**Low**	**Average**
For the Year Ended December 31, 2015			
Interest Rate Risk	$ 853	$ 415	$ 582
Equity Price Risk	618	31	314
Diversification Effect (1)			(133)
Total Value-at-Risk	$ 1,128	$ 487	$ 763

(Dollars in thousands)	**High**	**Low**	**Average**
For the Year Ended December 31, 2014			
Interest Rate Risk	$ 1,344	$ 291	$ 797
Equity Price Risk	920	17	265
Diversification Effect (1)			(232)
Total Value-at-Risk	$ 1,332	$ 302	$ 830

(1) Equals the difference between total VaR and the sum of the VaRs for the two risk categories. This effect arises because the two market risk categories are not perfectly correlated. Because high and low VaR numbers for these risk categories may have occurred on different days, high and low numbers for diversification benefit would not be meaningful.

Trading losses exceeded our one-day VaR on six occasions during 2015.

The aggregate VaR as of December 31, 2015 was lower than the reported VaR on December 31, 2014. The decrease in VaR is due to lower volatility during the measurement period and reduced inventory levels.

In addition to VaR, we also employ additional measures to monitor and manage market risk exposure including net market position, duration exposure, option sensitivities, and inventory turnover. All metrics are aggregated by asset concentration and are used for monitoring limits and exception approvals. In times of market volatility, we also perform ad hoc stress tests and scenario analysis as market conditions dictate. Unlike our VaR, which measures potential losses within a given confidence level, stress scenarios do not have an associated implied probability. Rather, stress testing is used to estimate the potential loss from market moves outside our VaR confidence levels.

Liquidity Risk

We are exposed to liquidity risk in our day-to-day funding activities, by holding potentially illiquid inventory positions and in our role as a remarketing agent for variable rate demand notes.

See the section entitled "Liquidity, Funding and Capital Resources" in Part II, Item 7, "Management’s Discussion and Analysis of Financial Condition and Results of Operations," in this Form 10-K for information regarding our liquidity and how we manage liquidity risk.

Our inventory positions, including those associated with strategic trading activities, subject us to potential financial losses from the reduction in value of illiquid positions. Market risk can be exacerbated in times of trading illiquidity when market participants refrain from transacting in normal quantities and/or at normal bid-offer spreads. Depending on the specific security, the structure of the financial product, and/or overall market conditions, we may be forced to hold a security for substantially longer than we had planned or forced to liquidate into a challenging market if funding becomes unavailable.

Credit Risk

Credit risk refers to the potential for loss due to the default or deterioration in credit quality of a counterparty, customer, borrower or issuer of securities we hold in our trading inventory. The nature and amount of credit risk depends on the type of transaction, the structure and duration of that transaction and the parties involved.

Credit spread risk arises from the possibility that changes in credit spreads will affect the value of financial instruments. Credit spreads represent the credit risk premiums required by market participants for a given credit quality (e.g., the additional yield that a debt instrument issued by a AA-rated entity must produce over a risk-free alternative). Changes in credit spreads result from potential changes in an issuer's credit rating or the market's perception of the issuer's credit worthiness. We are exposed to credit spread risk with the debt instruments held in our trading inventory, including those held for strategic trading activities. We enter into transactions to hedge our exposure to credit spread risk through the use of derivatives and certain other financial instruments. These hedging strategies may not work in all market environments and as a result may not be effective in mitigating credit spread risk.

We are exposed to credit risk in our role as a trading counterparty to dealers and customers, as a holder of securities and as a member of exchanges and clearing organizations. The risk of default depends on the creditworthiness of the counterparty and/or issuer of the security. We mitigate this risk by establishing and monitoring individual and aggregate position limits for each counterparty relative to potential levels of activity, holding and marking to market collateral on certain transactions and conducting business through clearing organizations, which guarantee performance. Our risk management functions also evaluate the potential risk associated with institutional counterparties with whom we hold repurchase and resale agreement facilities, stock borrow or loan facilities, derivatives, TBAs and other documented institutional counterparty agreements that may give rise to credit exposure.

Our client activities involve the execution, settlement and financing of various transactions. Client activities are transacted on a delivery versus payment, cash or margin basis. Our credit exposure to institutional client business is mitigated by the use of industry-standard delivery versus payment through depositories and clearing banks. Credit exposure associated with our customer margin accounts in the U.S. is monitored daily. Our risk management functions have credit risk policies establishing appropriate credit limits and collateralization thresholds for our customers utilizing margin lending.

We are subject to concentration risk if we hold large individual securities positions, execute large transactions with individual counterparties or groups of related counterparties, extend large loans to individual borrowers or make substantial underwriting commitments. Concentration risk can occur by industry, geographic area or type of client. Securities purchased under agreements to resell consist primarily of securities issued by the U.S. government or its agencies. The counterparties to these agreements typically are primary dealers of U.S. government securities and major financial institutions. Inventory and investment positions taken and commitments made, including underwritings, may result in exposure to individual issuers and businesses. Potential concentration risk is carefully monitored through review of counterparties and borrowers and is managed through the use of policies and limits established by senior management.

We have concentrated counterparty credit exposure with five non-publicly rated entities totaling $24.4 million at December 31, 2015. This counterparty credit exposure is part of our matched-book derivative program related to our public finance business, consisting primarily of interest rate swaps. One derivative counterparty represents 69.4 percent, or $16.9 million, of this exposure. Credit exposure associated with our derivative counterparties is driven by uncollateralized market movements in the fair value of the interest rate swap contracts and is monitored regularly by our financial risk committee. We attempt to minimize the credit (or repayment) risk in derivative instruments by entering into transactions with high-quality counterparties that are reviewed periodically by senior management.

Operational Risk

Operational risk is the risk of loss, or damage to our reputation, resulting from inadequate or failed processes, people and systems or from external events. We rely on the ability of our employees and our systems, both internal and at computer centers operated by third parties, to process a large number of transactions. Our systems may fail to operate properly or become disabled as a result of events that are wholly or partially beyond our control. In the event of a breakdown or improper operation of our systems or

improper action by our employees or third party vendors, we could suffer financial loss, a disruption of our businesses, regulatory sanctions and damage to our reputation. We also face the risk of operational failure or termination of any of the exchanges, clearing houses or other financial intermediaries we use to facilitate our securities transactions. Any such failure or termination could adversely affect our ability to effect transactions and manage our exposure to risk.

Our operations rely on secure processing, storage and transmission of confidential and other information in our internal and outsourced computer systems and networks. Our computer systems, software and networks may be vulnerable to unauthorized access, computer viruses or other malicious code, and other events that could have an information security impact. The occurrence of one or more of these events could jeopardize our or our clients' or counterparties' confidential and other information processed and stored in, and transmitted through, our computer systems and networks, or otherwise cause interruptions or malfunctions in our, our clients', our counterparties' or third parties' operations. We take protective measures and endeavor to modify them as circumstances warrant.

In order to mitigate and control operational risk, we have developed and continue to enhance policies and procedures that are designed to identify and manage operational risk at appropriate levels throughout the organization. We also have business continuity plans in place that we believe will cover critical processes on a company-wide basis, and redundancies are built into our systems as we have deemed appropriate. These control mechanisms attempt to ensure that operational policies and procedures are being followed and that our various businesses are operating within established corporate policies and limits.

Human Capital Risk

Our business is a human capital business and our success is dependent upon the skills, expertise and performance of our employees. Our ability to compete effectively in the marketplace is dependent upon attracting and retaining qualified individuals who are motivated to serve the best interests of our clients, thereby serving the best interests of our company. Attracting and retaining employees depends, among other things, on our company's culture, management, work environment, geographic locations and compensation.

Legal, Regulatory and Compliance Risk

Legal, regulatory and compliance risk includes the risk of non-compliance with applicable legal and regulatory requirements and loss to our reputation we may suffer as a result of failure to comply with laws, regulations, rules, related self-regulatory organization standards and codes of conduct applicable to our business activities. We are generally subject to extensive regulation in the various jurisdictions in which we conduct our business. We have established procedures that are designed to ensure compliance with applicable statutory and regulatory requirements, such as public company reporting obligations, regulatory net capital requirements, sales and trading practices, potential conflicts of interest, use and safekeeping of customer funds and securities, anti-money laundering, privacy and recordkeeping. We have also established procedures that are designed to require that our policies relating to ethics and business conduct are followed. The legal and regulatory focus on the financial services industry presents a continuing business challenge for us.

Our business also subjects us to the complex income tax laws of the jurisdictions in which we have business operations, and these tax laws may be subject to different interpretations by the taxpayer and the relevant governmental taxing authorities. We must make judgments and interpretations about the application of these inherently complex tax laws when determining the provision for income taxes.

Effects of Inflation

Because our assets are liquid and generally short-term in nature, they are not significantly affected by inflation. However, the rate of inflation affects our expenses, such as employee compensation, office space leasing costs and communications charges, which may not be readily recoverable in the price of services we offer to our clients. To the extent inflation results in rising interest rates and has other adverse effects upon the securities markets, it may adversely affect our financial position and results of operations.

ITEM 7A. ***QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.***

The information under the caption "Risk Management" in Part II, Item 7 entitled, "Management’s Discussion and Analysis of Financial Condition and Results of Operations," is incorporated herein by reference.

ITEM 8. ***FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.***

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MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting. Our internal control system is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2015. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013 framework). Based on its assessment and those criteria, management has concluded that we maintained effective internal control over financial reporting as of December 31, 2015.

Ernst & Young LLP, the independent registered public accounting firm that audited the consolidated financial statements of Piper Jaffray Companies included in this Annual Report on Form 10-K, has issued an attestation report on internal control over financial reporting as of December 31, 2015. Their report, which expresses an unqualified opinion on the effectiveness of Piper Jaffray Companies' internal control over financial reporting as of December 31, 2015, is included herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders
Piper Jaffray Companies

We have audited Piper Jaffray Companies' (the Company) internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Piper Jaffray Companies' management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Piper Jaffray Companies maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on the COSO criteria.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the 2015 consolidated financial statements of Piper Jaffray Companies and our report dated February 25, 2016, expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Minneapolis, Minnesota
February 25, 2016

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders
Piper Jaffray Companies

We have audited the accompanying consolidated statements of financial condition of Piper Jaffray Companies (the Company) as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive income, changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2015. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Piper Jaffray Companies at December 31, 2015 and 2014, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Piper Jaffray Companies' internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 25, 2016 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Minneapolis, Minnesota
February 25, 2016

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Piper Jaffray Companies

Consolidated Statements of Financial Condition

(Amounts in thousands, except share data)	December 31, 2015	December 31, 2014
Assets		
Cash and cash equivalents	**$ 189,910**	$ 15,867
Cash and cash equivalents segregated for regulatory purposes	**81,022**	25,011
Receivables:		
Customers	**41,167**	9,658
Brokers, dealers and clearing organizations	**147,949**	161,009
Securities purchased under agreements to resell	**136,983**	308,165
Financial instruments and other inventory positions owned	**283,579**	507,794
Financial instruments and other inventory positions owned and pledged as collateral	**707,355**	1,108,567
Total financial instruments and other inventory positions owned	**990,934**	1,616,361
Fixed assets (net of accumulated depreciation and amortization of $51,874 and $47,327, respectively)	**18,984**	18,171
Goodwill	**217,976**	211,878
Intangible assets (net of accumulated amortization of $48,803 and $41,141, respectively)	**30,530**	30,658
Investments	**163,861**	126,840
Other assets	**119,202**	100,299
Total assets	**$ 2,138,518**	$ 2,623,917
Liabilities and Shareholders' Equity		
Short-term financing	**$ 446,190**	$ 377,767
Senior notes	**175,000**	125,000
Payables:		
Customers	**37,364**	13,328
Brokers, dealers and clearing organizations	**48,131**	25,564
Securities sold under agreements to repurchase	**45,319**	102,646
Financial instruments and other inventory positions sold, but not yet purchased	**239,155**	738,124
Accrued compensation	**251,638**	228,877
Other liabilities and accrued expenses	**62,901**	43,151
Total liabilities	**1,305,698**	1,654,457
Shareholders' equity:		
Common stock, $0.01 par value:		
Shares authorized: 100,000,000 at December 31, 2015 and December 31, 2014;		
Shares issued: 19,510,858 at December 31, 2015 and 19,523,371 at December 31, 2014;		
Shares outstanding: 13,311,016 at December 31, 2015 and 15,265,420 at December 31, 2014	**195**	195
Additional paid-in capital	**752,066**	735,415
Retained earnings	**279,140**	227,065
Less common stock held in treasury, at cost: 6,199,842 at December 31, 2015 and 4,257,951 shares at December 31, 2014	**(247,553)**	(143,140)
Accumulated other comprehensive income/(loss)	**(189)**	377
Total common shareholders' equity	**783,659**	819,912
Noncontrolling interests	**49,161**	149,548
Total shareholders' equity	**832,820**	969,460
Total liabilities and shareholders' equity	**$ 2,138,518**	$ 2,623,917

See Notes to the Consolidated Financial Statements

Piper Jaffray Companies

Consolidated Statements of Operations

(Amounts in thousands, except per share data)	Year Ended December 31, 2015	2014	2013
Revenues:			
Investment banking	**$ 414,118**	$ 369,811	$ 248,563
Institutional brokerage	**154,889**	156,809	146,648
Asset management	**75,017**	85,062	83,045
Interest	**41,557**	48,716	50,409
Investment income	**10,736**	12,813	21,566
Total revenues	**696,317**	673,211	550,231
Interest expense	**23,399**	25,073	25,036
Net revenues	**672,918**	648,138	525,195
Non-interest expenses:			
Compensation and benefits	**421,733**	394,510	322,464
Outside services	**36,218**	37,055	32,982
Occupancy and equipment	**28,301**	28,231	25,493
Communications	**23,762**	22,732	21,431
Marketing and business development	**29,990**	27,260	21,603
Trade execution and clearance	**7,794**	7,621	8,270
Restructuring and integration costs	**10,652**	—	4,689
Intangible asset amortization expense	**7,662**	9,272	7,993
Other operating expenses	**20,383**	11,146	4,657
Total non-interest expenses	**586,495**	537,827	449,582
Income from continuing operations before income tax expense	**86,423**	110,311	75,613
Income tax expense	**27,941**	35,986	20,390
Income from continuing operations	**58,482**	74,325	55,223
Discontinued operations:			
Loss from discontinued operations, net of tax	**—**	—	(4,739)
Net income	**58,482**	74,325	50,484
Net income applicable to noncontrolling interests	**6,407**	11,153	5,394
Net income applicable to Piper Jaffray Companies	**$ 52,075**	$ 63,172	$ 45,090
Net income applicable to Piper Jaffray Companies' common shareholders	**$ 48,060**	$ 58,141	$ 40,596

Continued on next page

Piper Jaffray Companies

Consolidated Statements of Operations – Continued

(Amounts in thousands, except per share data)	Year Ended December 31, 2015	2014	2013
Amounts applicable to Piper Jaffray Companies			
Net income from continuing operations	**$ 52,075**	$ 63,172	$ 49,829
Net loss from discontinued operations	**—**	—	(4,739)
Net income applicable to Piper Jaffray Companies	**$ 52,075**	$ 63,172	$ 45,090
Earnings/(loss) per basic common share			
Income from continuing operations	**$ 3.34**	$ 3.88	$ 2.98
Loss from discontinued operations	**—**	—	(0.28)
Earnings per basic common share	**$ 3.34**	$ 3.88	$ 2.70
Earnings/(loss) per diluted common share			
Income from continuing operations	**$ 3.34**	$ 3.87	$ 2.98
Loss from discontinued operations	**—**	—	(0.28)
Earnings per diluted common share	**$ 3.34**	$ 3.87	$ 2.70
Weighted average number of common shares outstanding			
Basic	**14,368**	14,971	15,046
Diluted	**14,389**	15,025	15,061

See Notes to the Consolidated Financial Statements

Piper Jaffray Companies

Consolidated Statements of Comprehensive Income

(Amounts in thousands)	Year Ended December 31, 2015	2014	2013
Net income	**$ 58,482**	$ 74,325	$ 50,484
Other comprehensive income/(loss), net of tax:			
Adjustment to unrecognized pension cost	—	—	(38)
Foreign currency translation adjustment	**(566)**	(519)	267
Total other comprehensive income/(loss), net of tax	**(566)**	(519)	229
Comprehensive income	**57,916**	73,806	50,713
Comprehensive income applicable to noncontrolling interests	**6,407**	11,153	5,394
Comprehensive income applicable to Piper Jaffray Companies	**$ 51,509**	$ 62,653	$ 45,319

See Notes to the Consolidated Financial Statements

Piper Jaffray Companies

Consolidated Statements of Changes in Shareholders' Equity

(Amounts in thousands, except share amounts)	Common Shares Outstanding	Common Stock	Additional Paid-In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income/(Loss)	Total Common Shareholders' Equity	Noncontrolling Interests	Total Shareholders' Equity
Balance at December 31, 2012	**15,213,796**	**$ 195**	**$ 754,566**	**$ 118,803**	**$ (140,939)**	**$ 667**	**$ 733,292**	**$ 56,883**	**$ 790,175**
Net income	—	—	—	45,090	—	—	45,090	5,394	50,484
Amortization/issuance of restricted stock	—	—	23,528	—	—	—	23,528	—	23,528
Repurchase of common stock through share repurchase program	(1,719,662)	—	—	—	(55,929)	—	(55,929)	—	(55,929)
Issuance of treasury shares for restricted stock vestings	1,173,180	—	(38,636)	—	38,636	—	—	—	—
Repurchase of common stock for employee tax withholding	(386,713)	—	—	—	(15,533)	—	(15,533)	—	(15,533)
Issuance of treasury shares for 401k match	96,049	—	803	—	3,136	—	3,939	—	3,939
Shares reserved to meet deferred compensation obligations	6,768	—	60	—	—	—	60	—	60
Other comprehensive income	—	—	—	—	—	229	229	—	229
Fund capital contributions, net	—	—	—	—	—	—	—	85,119	85,119
Balance at December 31, 2013	**14,383,418**	**$ 195**	**$ 740,321**	**$ 163,893**	**$ (170,629)**	**$ 896**	**$ 734,676**	**$ 147,396**	**$ 882,072**
Net income	—	—	—	63,172	—	—	63,172	11,153	74,325
Amortization/issuance of restricted stock	—	—	23,649	—	—	—	23,649	—	23,649
Issuance of treasury shares for options exercised	137,864	—	834	—	4,618	—	5,452	—	5,452
Issuance of treasury shares for restricted stock vestings	892,385	—	(30,295)	—	30,295	—	—	—	—
Repurchase of common stock for employee tax withholding	(256,055)	—	—	—	(10,854)	—	(10,854)	—	(10,854)
Issuance of treasury shares for 401k match	103,598	—	726	—	3,430	—	4,156	—	4,156
Shares reserved to meet deferred compensation obligations	4,210	—	180	—	—	—	180	—	180
Other comprehensive loss	—	—	—	—	—	(519)	(519)	—	(519)
Fund capital withdrawals, net	—	—	—	—	—	—	—	(9,001)	(9,001)
Balance at December 31, 2014	**15,265,420**	**$ 195**	**$ 735,415**	**$ 227,065**	**$ (143,140)**	**$ 377**	**$ 819,912**	**$ 149,548**	**$ 969,460**

Continued on next page

Piper Jaffray Companies

Consolidated Statements of Changes in Shareholders' Equity – Continued

(Amounts in thousands, except share amounts)	Common Shares Outstanding	Common Stock	Additional Paid-In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income/(Loss)	Total Common Shareholders' Equity	Noncontrolling Interests	Total Shareholders' Equity
Net income	—	$ —	$ —	$ 52,075	$ —	$ —	$ 52,075	$ 6,407	$ 58,482
Amortization/issuance of restricted stock	—	—	43,237	—	—	—	43,237	—	43,237
Repurchase of common stock through share repurchase program	(2,459,400)	—	—	—	(118,464)	—	(118,464)	—	(118,464)
Issuance of treasury shares for options exercised	50,671	—	96	—	1,760	—	1,856	—	1,856
Issuance of treasury shares for restricted stock vestings	734,080	—	(26,752)	—	26,752	—	—	—	—
Repurchase of common stock for employee tax withholding	(281,180)	—	—	—	(14,461)	—	(14,461)	—	(14,461)
Shares reserved to meet deferred compensation obligations	1,425	—	70	—	—	—	70	—	70
Other comprehensive loss	—	—	—	—	—	(566)	(566)	—	(566)
Fund capital withdrawals, net	—	—	—	—	—	—	—	(106,794)	(106,794)
Balance at December 31, 2015	**13,311,016**	**$ 195**	**$ 752,066**	**$ 279,140**	**$ (247,553)**	**$ (189)**	**$ 783,659**	**$ 49,161**	**$ 832,820**

See Notes to the Consolidated Financial Statements

Piper Jaffray Companies

Consolidated Statements of Cash Flows

(Dollars in thousands)	Year Ended December 31, 2015	2014	2013
Operating Activities:			
Net income	**$ 58,482**	$ 74,325	$ 50,484
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Depreciation and amortization of fixed assets	**5,058**	5,269	5,714
Deferred income taxes	**(20,959)**	(10,843)	(2,630)
Loss on sale of FAMCO	**—**	—	1,876
Stock-based and deferred compensation	**48,754**	28,764	21,598
Amortization of intangible assets	**7,662**	9,272	7,993
Amortization of forgivable loans	**6,377**	5,316	6,300
Decrease/(increase) in operating assets:			
Cash and cash equivalents segregated for regulatory purposes	**(56,011)**	18,001	(12,005)
Receivables:			
Customers	**(31,509)**	1,975	2,162
Brokers, dealers and clearing organizations	**13,060**	(33,896)	21,004
Securities purchased under agreements to resell	**171,182**	(140,290)	(22,442)
Net financial instruments and other inventory positions owned	**126,458**	(27,042)	4,685
Investments	**(37,021)**	(14,797)	(26,271)
Other assets	**2,065**	3,785	(3,727)
Increase/(decrease) in operating liabilities:			
Payables:			
Customers	**24,036**	(19,781)	(8,898)
Brokers, dealers and clearing organizations	**22,567**	(2,158)	(33,559)
Securities sold under agreements to repurchase	**18,050**	—	—
Accrued compensation	**2,178**	67,247	32,233
Other liabilities and accrued expenses	**19,095**	(15,216)	(2,354)
Net cash provided by/(used in) operating activities	**379,524**	(50,069)	42,163
Investing Activities:			
Business acquisitions, net of cash acquired	**(11,739)**	—	(24,726)
Repayment of FAMCO note	**1,500**	2,000	250
Purchases of fixed assets, net	**(5,914)**	(7,387)	(5,476)
Net cash used in investing activities	**(16,153)**	(5,387)	(29,952)

Continued on next page

Piper Jaffray Companies

Consolidated Statements of Cash Flows – Continued

(Dollars in thousands)	Year Ended December 31, 2015	2014	2013
Financing Activities:			
Increase/(decrease) in short-term financing	**$ 68,423**	$ (136,944)	$ 37,697
Issuance of senior notes	**125,000**	50,000	—
Repayment of senior notes	**(75,000)**	(50,000)	—
Increase/(decrease) in securities sold under agreements to repurchase	**(75,377)**	98,249	(45,603)
Increase/(decrease) in noncontrolling interests	**(106,794)**	(9,001)	85,119
Repurchase of common stock	**(132,925)**	(10,854)	(71,462)
Excess tax benefit from stock-based compensation	**5,858**	1,081	47
Proceeds from stock option exercises	**1,856**	5,452	—
Net cash provided by/(used in) financing activities	**(188,959)**	(52,017)	5,798
Currency adjustment:			
Effect of exchange rate changes on cash	**(369)**	(343)	303
Net increase/(decrease) in cash and cash equivalents	**174,043**	(107,816)	18,312
Cash and cash equivalents at beginning of year	**15,867**	123,683	105,371
Cash and cash equivalents at end of year	**$ 189,910**	$ 15,867	$ 123,683
Supplemental disclosure of cash flow information –			
Cash paid during the year for:			
Interest	**$ 24,668**	$ 25,345	$ 23,487
Income taxes	**$ 31,950**	$ 58,599	$ 745
Non-cash financing activities –			
Issuance of common stock for retirement plan obligations:			
103,598 shares and 96,049 shares for the years ended December 31, 2014 and 2013, respectively	**$ —**	$ 4,156	$ 3,939
Issuance of restricted common stock for annual equity award:			
550,650 shares, 402,074 shares and 431,582 shares for the years ended December 31, 2015, 2014 and 2013, respectively	**$ 30,429**	$ 16,131	$ 17,699

See Notes to the Consolidated Financial Statements

Piper Jaffray Companies

Notes to the Consolidated Financial Statements

Note 1 *Organization and Basis of Presentation*

Organization

Piper Jaffray Companies is the parent company of Piper Jaffray & Co. ("Piper Jaffray"), a securities broker dealer and investment banking firm; Piper Jaffray Ltd., a firm providing securities brokerage and mergers and acquisitions services in Europe headquartered in London, England; Advisory Research, Inc. ("ARI"), which provides asset management services to separately managed accounts, closed-end and open-end funds and partnerships; Piper Jaffray Investment Group Inc., which consists of entities providing alternative asset management services; Piper Jaffray Financial Products Inc., Piper Jaffray Financial Products II Inc. and Piper Jaffray Financial Products III Inc., entities that facilitate derivative transactions; and other immaterial subsidiaries. Piper Jaffray Companies and its subsidiaries (collectively, the "Company") operate in two reporting segments: Capital Markets and Asset Management. A summary of the activities of each of the Company's business segments is as follows:

Capital Markets

The Capital Markets segment provides institutional sales, trading and research services and investment banking services. Institutional sales, trading and research services focus on the trading of equity and fixed income products with institutions, government and non-profit entities. Revenues are generated through commissions and sales credits earned on equity and fixed income institutional sales activities, net interest revenues on trading securities held in inventory, and profits and losses from trading these securities. Investment banking services include management of and participation in underwritings, merger and acquisition services and public finance activities. Revenues are generated through the receipt of advisory and financing fees. Also, the Company generates revenue through strategic trading and investing activities, which focus on investments in municipal bonds, mortgage-backed securities, U.S. government agency securities, and merchant banking activities involving equity or debt investments in late stage private companies. The Company has created alternative asset management funds in merchant banking and senior living in order to invest firm capital and to manage capital from outside investors. The Company receives management and performance fees for managing these funds.

As discussed in Note 5, the Company discontinued its Hong Kong capital markets business in 2012.

Asset Management

The Asset Management segment provides traditional asset management services with product offerings in equity securities and master limited partnerships to institutions and individuals. Revenues are generated in the form of management and performance fees. Revenues are also generated through investments in the partnerships and funds that the Company manages.

As discussed in Note 5, Fiduciary Asset Management, LLC ("FAMCO") was sold in 2013.

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") and include the accounts of Piper Jaffray Companies, its wholly owned subsidiaries, and all other entities in which the Company has a controlling financial interest. Noncontrolling interests represent equity interests in consolidated entities that are not attributable, either directly or indirectly, to Piper Jaffray Companies. Noncontrolling interests include the minority equity holders' proportionate share of the equity in a municipal bond fund, merchant banking fund and private equity investment vehicles. All material intercompany balances have been eliminated.

The preparation of financial statements and related disclosures in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Although these estimates and assumptions are based on the best information available, actual results could differ from those estimates.

Note 2 *Summary of Significant Accounting Policies*

Principles of Consolidation

The Company determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity ("VIE").

Voting interest entities are entities in which (i) the total equity investment at risk is sufficient to enable each entity to finance itself independently and (ii) the equity holders have the obligation to absorb losses, the right to receive residual returns and the right or power to make decisions about or direct the entity's activities that most significantly impact the entity's economic performance. Financial Accounting Standards Board ("FASB") Accounting Standards Codification Topic 810, "Consolidations," ("ASC 810") states that the usual condition for a controlling financial interest in a voting interest entity is ownership of a majority voting interest. Accordingly, the Company consolidates voting interest entities in which it has all, or a majority of, the voting interests.

VIEs are entities that lack one or more of the characteristics of a voting interest entity. With the exception of entities eligible for the deferral codified in FASB Accounting Standards Update ("ASU") No. 2010-10, "Consolidation: Amendments for Certain Investment Funds," ("ASU 2010-10") (generally asset managers and investment companies), ASC 810 states that a controlling financial interest in a VIE is present when an enterprise has one or more variable interests that have both (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses of the entity or the rights to receive benefits from the VIE that could potentially be significant to the VIE. Accordingly, the Company consolidates VIEs in which the Company has a controlling financial interest.

Entities meeting the deferral provision defined by ASU 2010-10 are evaluated under the historical VIE guidance. Under the historical guidance, a controlling financial interest in an entity is present when an enterprise has one or more variable interests that will absorb a majority of the entity's expected losses, receive a majority of the entity's expected residual returns, or both. The enterprise with a controlling financial interest is the primary beneficiary and consolidates the VIE. Accordingly, the Company consolidates VIEs subject to the deferral provisions defined by ASU 2010-10 in which the Company is deemed to be the primary beneficiary.

When the Company does not have a controlling financial interest in an entity but exerts significant influence over the entity's operating and financial policies (generally defined as owning a voting or economic interest of between 20 percent to 50 percent), the Company's investment is accounted for under the equity method of accounting. The Company accounts for certain investments in partnerships under the equity method of accounting. If the Company does not have a controlling financial interest in, or exert significant influence over, an entity, the Company accounts for its investment at fair value, if the fair value option was elected, or at cost.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and highly liquid investments with maturities of 90 days or less at the date of origination.

In accordance with Rule 15c3-3 of the Securities Exchange Act of 1934, Piper Jaffray, as a registered broker dealer carrying customer accounts, is subject to requirements related to maintaining cash or qualified securities in a segregated reserve account for the exclusive benefit of its customers.

Customer Transactions

Customer securities transactions are recorded on a settlement date basis, while the related revenues and expenses are recorded on a trade-date basis. Customer receivables and payables include amounts related to both cash and margin transactions. Securities owned by customers, including those that collateralize margin or other similar transactions, are not reflected on the consolidated statements of financial condition.

Receivables from and Payables to Brokers, Dealers and Clearing Organizations

Receivables from brokers, dealers and clearing organizations include receivables arising from unsettled securities transactions, deposits paid for securities borrowed, receivables from clearing organizations, deposits with clearing organizations and amounts receivable for securities not delivered to the purchaser by the settlement date ("securities failed to deliver"). Payables to brokers,

dealers and clearing organizations include payables arising from unsettled securities transactions, payables to clearing organizations and amounts payable for securities not received from a seller by the settlement date ("securities failed to receive"). Unsettled securities transactions related to the Company's broker dealer operations are recorded at contract value on a net basis. Unsettled securities transactions related to the Company's consolidated municipal bond fund are recorded on a gross basis.

Collateralized Securities Transactions

Securities purchased under agreements to resell and securities sold under agreements to repurchase are carried at the contractual amounts at which the securities will be subsequently resold or repurchased, including accrued interest. It is the Company's policy to take possession or control of securities purchased under agreements to resell at the time these agreements are entered into. The counterparties to these agreements typically are primary dealers of U.S. government securities and major financial institutions. Collateral is valued daily, and additional collateral is obtained from or refunded to counterparties when appropriate.

Securities borrowed and loaned result from transactions with other broker dealers or financial institutions and are recorded at the amount of cash collateral advanced or received. These amounts are included in receivables from and payables to brokers, dealers and clearing organizations on the consolidated statements of financial condition. Securities borrowed transactions require the Company to deposit cash or other collateral with the lender. Securities loaned transactions require the borrower to deposit cash with the Company. The Company monitors the market value of securities borrowed and loaned on a daily basis, with additional collateral obtained or refunded as necessary.

Interest is accrued on securities borrowed and loaned transactions and is included in (i) other assets or other liabilities and accrued expenses on the consolidated statements of financial condition and (ii) the respective interest income or interest expense amounts on the consolidated statements of operations.

Fair Value of Financial Instruments

Financial instruments and other inventory positions owned and financial instruments and other inventory positions sold, but not yet purchased on the consolidated statements of financial condition consist of financial instruments (including securities with extended settlements and derivative contracts) recorded at fair value. Unrealized gains and losses related to these financial instruments are reflected on the consolidated statements of operations. Securities (both long and short), including securities with extended settlements, are recognized on a trade-date basis. Additionally, certain of the Company's investments on the consolidated statements of financial condition are recorded at fair value, either as required by accounting guidance or through the fair value election.

Fair Value Measurement – Definition and Hierarchy – FASB Accounting Standards Codification Topic 820, "Fair Value Measurement," ("ASC 820") defines fair value as the amount at which an instrument could be exchanged in an orderly transaction between market participants at the measurement date (the exit price). ASC 820 establishes a fair value hierarchy based on the inputs used to measure fair value. The fair value hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from independent sources. Unobservable inputs reflect management's assumptions that market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. The hierarchy is broken down into three levels based on the observability of inputs as follows:

Level I – Quoted prices (unadjusted) are available in active markets for identical assets or liabilities as of the report date. A quoted price for an identical asset or liability in an active market provides the most reliable fair value measurement because it is directly observable to the market.

Level II – Pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the report date. The nature of these financial instruments include instruments for which quoted prices are available but traded less frequently, instruments whose fair value have been derived using a model where inputs to the model are directly observable in the market, or can be derived principally from or corroborated by observable market data, and instruments that are fair valued using other financial instruments, the parameters of which can be directly observed.

Level III – Instruments that have little to no pricing observability as of the report date. These financial instruments are measured using management's best estimate of fair value, where the inputs into the determination of fair value require significant management judgment or estimation.

Valuation of Financial Instruments – Based on the nature of the Company's business and its role as a "dealer" in the securities industry or its role as a manager of alternative asset management funds, the fair values of its financial instruments are determined internally. When available, the Company values financial instruments at observable market prices, observable market parameters, or broker or dealer prices (bid and ask prices). In the case of financial instruments transacted on recognized exchanges, the observable market prices represent quotations for completed transactions from the exchange on which the financial instrument is principally traded.

A substantial percentage of the fair value of the Company's financial instruments and other inventory positions owned and financial instruments and other inventory positions sold, but not yet purchased, are based on observable market prices, observable market parameters, or derived from broker or dealer prices. The availability of observable market prices and pricing parameters can vary from product to product. Where available, observable market prices and pricing or market parameters in a product may be used to derive a price without requiring significant judgment. In certain markets, observable market prices or market parameters are not available for all products, and fair value is determined using techniques appropriate for each particular product. These techniques involve some degree of judgment. Results from valuation models and other techniques in one period may not be indicative of future period fair value measurement.

For investments in illiquid or privately held securities that do not have readily determinable fair values, the determination of fair value requires the Company to estimate the value of the securities using the best information available. Among the factors considered by the Company in determining the fair value of such financial instruments are the cost, terms and liquidity of the investment, the financial condition and operating results of the issuer, the quoted market price of publicly traded securities with similar quality and yield, and other factors generally pertinent to the valuation of investments. In instances where a security is subject to transfer restrictions, the value of the security is based primarily on the quoted price of a similar security without restriction but may be reduced by an amount estimated to reflect such restrictions. In addition, even where the Company derives the value of a security based on information from an independent source, certain assumptions may be required to determine the security's fair value. For instance, the Company assumes that the size of positions in securities that the Company holds would not be large enough to affect the quoted price of the securities if the firm sells them, and that any such sale would happen in an orderly manner. The actual value realized upon disposition could be different from the currently estimated fair value.

Fixed Assets

Fixed assets include furniture and equipment, software and leasehold improvements. Furniture and equipment and software are depreciated using the straight-line method over estimated useful lives of three to ten years. Leasehold improvements are amortized over their estimated useful life or the life of the lease, whichever is shorter. The Company capitalizes certain costs incurred in connection with internal use software projects and amortizes the amount over the expected useful life of the asset, generally three to seven years.

Leases

The Company leases its corporate headquarters and other offices under various non-cancelable leases. The leases require payment of real estate taxes, insurance and common area maintenance, in addition to rent. The terms of the Company's lease agreements generally range up to twelve years. Some of the leases contain renewal options, escalation clauses, rent-free holidays and operating cost adjustments.

For leases that contain escalation clauses or rent-free holidays, the Company recognizes the related rent expense on a straight-line basis from the date the Company takes possession of the property to the end of the initial lease term. The Company records any difference between the straight-line rent amounts and amounts payable under the leases as part of other liabilities and accrued expenses.

Cash or lease incentives received upon entering into certain leases are recognized on a straight-line basis as a reduction of rent expense from the date the Company takes possession of the property or receives the cash to the end of the initial lease term. The Company records the unamortized portion of lease incentives as part of other liabilities and accrued expenses.

Goodwill and Intangible Assets

Goodwill represents the fair value of the consideration transferred in excess of the fair value of identifiable net assets at the acquisition date. The recoverability of goodwill is evaluated annually, at a minimum, or on an interim basis if circumstances indicate a possible inability to realize the carrying amount. See Note 14 for additional information on the Company's goodwill impairment testing.

Intangible assets with determinable lives consist of customer relationships and non-competition agreements that are amortized over their original estimated useful lives ranging from one to ten years. Indefinite-life intangible assets consist of the ARI trade name. It is not amortized and is evaluated annually, at a minimum, or on an interim basis if events or circumstances indicate a possible inability to realize the carrying amount.

Investments

The Company's investments include equity investments in private companies and partnerships, investments in registered mutual funds, warrants of public and private companies and private company debt. Equity investments in private companies are accounted for at fair value, as required by accounting guidance or if the fair value option was elected, or at cost. Investments in partnerships are accounted for under the equity method, which is generally the net asset value. Registered mutual funds are accounted for at fair value. Company-owned warrants with a cashless exercise option are valued at fair value, while warrants without a cashless exercise option are valued at cost. Private company debt investments are recorded at fair value, as required by accounting guidance, or at amortized cost, net of any unamortized premium or discount.

Other Assets

Other assets include net deferred income tax assets, receivables and prepaid expenses. Receivables include fee receivables, accrued interest and loans made to employees, typically in connection with their recruitment. Employee loans are forgiven based on continued employment and are amortized to compensation and benefits expense using the straight-line method over the respective terms of the loans, which generally range from two to five years.

Revenue Recognition

Investment Banking – Investment banking revenues, which include underwriting and advisory fees, are recorded when services for the transactions are completed under the terms of each engagement. Expenses associated with such transactions are deferred until the related revenue is recognized or the engagement is otherwise concluded. Investment banking revenues are presented net of related unreimbursed expenses for completed deals. Expenses related to investment banking deals not completed are recognized as non-interest expenses on the consolidated statements of operations.

Institutional Brokerage – Institutional brokerage revenues include (i) commissions received from customers for the execution of brokerage transactions in listed and over-the-counter (OTC) equity, fixed income and convertible debt securities, which are recorded on a trade-date basis, (ii) trading gains and losses and (iii) fees received by the Company for equity research. The Company permits institutional customers to allocate a portion of their gross commissions to pay for research products and other services provided by third parties. The amounts allocated for those purposes are commonly referred to as soft dollar arrangements. As the Company is not the primary obligor for these arrangements, expenses relating to soft dollars are netted against commission revenues and included in other liabilities and accrued expenses on the consolidated statements of financial condition.

Asset Management – Asset management fees include revenues the Company receives in connection with management and investment advisory services performed for separately managed accounts and various funds and partnerships. These fees are recognized in the period in which services are provided. Fees are defined in client contracts as either fixed or based on a percentage of portfolio assets under management and may include performance fees. Performance fees are earned when the investment return on assets under management exceeds certain benchmark targets or other performance targets over a specified measurement period (monthly, quarterly or annually). Performance fees, if earned, are generally recognized at the end of the specified measurement period, typically the fourth quarter of the applicable year, or upon client liquidation. Performance fees are recognized as of each reporting date for certain consolidated entities.

Interest Revenue and Expense – The Company nets interest expense within net revenues to mitigate the effects of fluctuations in interest rates on the Company's consolidated statements of operations. The Company recognizes contractual interest on financial instruments owned and financial instruments sold, but not yet purchased (excluding derivative instruments), on an accrual basis as a component of interest revenue and expense. The Company accounts for interest related to its short-term financing and its senior notes on an accrual basis with related interest recorded as interest expense. In addition, the Company recognizes interest revenue related to its securities borrowed and securities purchased under agreements to resell activities and interest expense related to its securities loaned and securities sold under agreements to repurchase activities on an accrual basis.

Investment Income – Investment income includes realized and unrealized gains and losses from the Company's merchant banking and other firm investments.

Stock-based Compensation

FASB Accounting Standards Codification Topic 718, "Compensation — Stock Compensation," ("ASC 718") requires all stock-based compensation to be expensed on the consolidated statements of operations based on the grant date fair value of the award. Compensation expense related to stock-based awards that do not require future service are recognized in the year in which the awards were deemed to be earned. Stock-based awards that require future service are amortized over the relevant service period net of estimated forfeitures. See Note 22 for additional information on the Company's accounting for stock-based compensation.

Income Taxes

The Company files a consolidated U.S. federal income tax return, which includes all of its qualifying subsidiaries. The Company is also subject to income tax in various states and municipalities and those foreign jurisdictions in which we operate. Income taxes are provided for using the asset and liability method. Deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to temporary differences between amounts reported for income tax purposes and financial statement purposes, using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The realization of deferred tax assets is assessed and a valuation allowance is recognized to the extent that it is more likely than not that any portion of a deferred tax asset will not be realized. Tax reserves for uncertain tax positions are recorded in accordance with FASB Accounting Standards Codification Topic 740, "Income Taxes" ("ASC 740").

Earnings Per Share

Basic earnings per common share is computed by dividing net income/(loss) applicable to common shareholders by the weighted average number of common shares outstanding for the period. Net income/(loss) applicable to common shareholders represents net income/(loss) reduced by the allocation of earnings to participating securities. Losses are not allocated to participating securities. Diluted earnings per common share is calculated by adjusting the weighted average outstanding shares to assume conversion of all potentially dilutive stock options.

Unvested stock-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and are included in the earnings allocation in the earnings per share calculation under the two-class method. The Company grants restricted stock and restricted stock units as part of its stock-based compensation program. Recipients of restricted stock are entitled to receive nonforfeitable dividends during the vesting period, and therefore meet the definition of a participating security. The Company's unvested restricted stock units are not participating securities as recipients are not eligible to receive nonforfeitable dividends.

Foreign Currency Translation

The Company consolidates foreign subsidiaries which have designated their local currency as their functional currency. Assets and liabilities of these foreign subsidiaries are translated at year-end rates of exchange. The gains or losses resulting from translating foreign currency financial statements are included in other comprehensive income. Gains or losses resulting from foreign currency transactions are included in net income.

Contingencies

The Company is involved in various pending and potential legal proceedings related to its business, including litigation, arbitration and regulatory proceedings. The Company establishes reserves for potential losses to the extent that claims are probable of loss and the amount of the loss can be reasonably estimated. The determination of the outcome and reserve amounts requires significant judgment on the part of management.

Note 3 *Recent Accounting Pronouncements*

Future Adoption of New Applicable Accounting Standards

Revenue Recognition

In May 2014, the FASB issued ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)," ("ASU 2014-09") which supersedes current revenue recognition guidance, including most industry-specific guidance. ASU 2014-09 requires a company to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods and services, and also requires additional disclosures regarding the nature, amount, timing and uncertainty of revenue that is recognized. The guidance, as stated in ASU 2014-09, is effective for annual and interim periods beginning after December 15, 2016. In August 2015, the FASB issued ASU No. 2015-14, "Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date," which defers the effective date by one year, with early adoption on the original effective date permitted. The Company is evaluating the impact of the new guidance on its consolidated financial statements.

Consolidation

In February 2015, the FASB issued ASU No. 2015-02, "Consolidation (Topic 810): Amendments to the Consolidation Analysis" ("ASU 2015-02"). ASU 2015-02 makes several modifications to the consolidation guidance for VIEs and general partners' investments in limited partnerships, as well as modifications to the evaluation of whether limited partnerships are VIEs or voting interest entities. It is effective for annual and interim periods beginning after December 15, 2015. Early adoption is permitted. The adoption of ASU 2015-02 will result in the deconsolidation of certain investment partnerships with assets of approximately $9.4 million.

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, "Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities" ("ASU 2016-01"). The amendments in ASU 2016-01 address certain aspects of the recognition, measurement, presentation and disclosure of financial instruments. ASU 2016-01 is effective for annual and interim periods beginning after December 15, 2017. Except for the early application guidance outlined in ASU 2016-01, early adoption is not permitted. The Company is evaluating the impact of the new guidance on its consolidated financial statements.

Note 4 *Acquisitions*

The following acquisitions were accounted for pursuant to FASB Accounting Standards Codification Topic 805, "Business Combinations." Accordingly, the purchase price of each acquisition was allocated to the acquired assets and liabilities assumed based on their estimated fair values as of the respective acquisition dates. The excess of the purchase price over the net assets acquired was allocated between goodwill and intangible assets within the Capital Markets segment.

River Branch Holdings LLC and BMO Capital Markets GKST Inc.

On September 30, 2015, the Company acquired the assets of River Branch Holdings LLC ("River Branch"), an equity investment banking boutique focused on the financial institutions sector. The purchase was completed pursuant to the Asset Purchase Agreement dated July 11, 2015.

On October 9, 2015, the Company completed the purchase of BMO Capital Markets GKST Inc. ("BMO GKST"), a municipal bond sales, trading and origination business of BMO Financial Corp. The purchase was completed pursuant to the Stock Purchase Agreement dated July 19, 2015.

The Company recorded $6.1 million of goodwill on the consolidated statements of financial condition. In management's opinion, the goodwill represents the reputation and operating expertise of River Branch and BMO GKST employees.

Identifiable intangible assets purchased by the Company consisted of customer relationships with acquisition-date fair values estimated to be $7.5 million. Transaction costs of $0.8 million were incurred for the year ended December 31, 2015, and are included in restructuring and integration costs on the consolidated statements of operations.

The results of operations of River Branch and BMO GKST have been included in the Company's consolidated financial statements prospectively from the respective dates of acquisition. The terms of these transactions were not disclosed as the acquisitions did not have a material impact on the Company's consolidated financial statements.

Seattle-Northwest Securities Corporation and Edgeview Partners, L.P.

On July 12, 2013, the Company completed the purchase of Seattle-Northwest Securities Corporation ("Seattle-Northwest"), a Seattle-based investment bank and broker dealer focused on public finance in the Northwest region of the U.S. The acquisition of Seattle-Northwest supported the Company's strategy to grow its public finance business.

On July 16, 2013, the Company completed the purchase of Edgeview Partners, L.P. ("Edgeview"), a middle-market advisory firm specializing in mergers and acquisitions. The acquisition of Edgeview further strengthened the Company's mergers and acquisitions position in the middle market and added resources dedicated to the private equity community.

The Company paid $32.7 million in cash for Seattle-Northwest and Edgeview, which represented the fair values as of the respective acquisition dates. The Company also entered into acquisition-related compensation arrangements of $14.3 million which consisted of cash, restricted stock and restricted mutual fund shares ("MFRS Awards") of registered funds managed by the Company's asset management business. Compensation expense related to these arrangements is amortized on a straight-line basis over the original requisite service period of two to five years (a weighted average remaining service period of 2.0 years).

The Company recorded $15.0 million of goodwill on the consolidated statements of financial condition, of which $9.1 million is expected to be deductible for income tax purposes. In management's opinion, the goodwill represents the reputation and expertise of Seattle-Northwest and Edgeview employees.

Identifiable intangible assets purchased by the Company consisted of customer relationships and non-competition agreements with acquisition-date fair values estimated to be $6.0 million and $0.7 million, respectively. Transaction costs of $1.1 million were incurred for the year ended December 31, 2013, and are included in restructuring and integration costs within continuing operations on the consolidated statements of operations.

Definitive Agreement to Acquire Simmons & Company International

On November 16, 2015, the Company entered into a Securities Purchase Agreement ("Purchase Agreement") with Simmons & Company International ("Simmons"), an employee-owned investment bank and broker dealer focused on the energy industry. Pursuant to the Purchase Agreement, the Company agreed to purchase 100 percent of the capital stock of Simmons and its subsidiaries for total consideration of approximately $139.0 million, consisting of $91.0 million in cash and $48.0 million of restricted stock. The Company has committed an additional $21.0 million in cash and stock for retention purposes. The transaction is expected to close in the first quarter of 2016.

Note 5 *Discontinued Operations*

The Company's Hong Kong capital markets business ceased operations in 2012 and incurred liquidation costs extending into 2013. In accordance with the provisions of FASB Accounting Standards Codification Topic 205-20, "Discontinued Operations," the results from this business, previously reported in the Capital Markets segment, have been classified as discontinued operations for all periods presented.

The components of discontinued operations for the Hong Kong capital markets business are as follows:

(Dollars in thousands)	Year Ended December 31, 2013
Other expenses	$ 1,197
Loss from discontinued operations before income tax benefit	(1,197)
Income tax benefit	(415)
Loss from discontinued operations, net of tax	$ (782)

In 2013, the Company completed the sale of FAMCO, an asset management subsidiary, for consideration of $4.0 million which consisted of $0.3 million in cash and a $3.7 million note receivable from the buyer. FAMCO's results, previously reported in the Asset Management segment, have been presented as discontinued operations for all periods presented.

The components of discontinued operations for FAMCO are as follows:

(Dollars in thousands)	Year Ended December 31, 2013
Net revenues	$ 1,650
Operating expenses	5,057
Loss from discontinued operations before income tax benefit	(3,407)
Income tax benefit	(1,326)
Loss from discontinued operations	(2,081)
Loss on sale, net of tax	(1,876)
Loss from discontinued operations, net of tax	$ (3,957)

Note 6 *Financial Instruments and Other Inventory Positions Owned and Financial Instruments and Other Inventory Positions Sold, but Not Yet Purchased*

(Dollars in thousands)	December 31, 2015	December 31, 2014
Financial instruments and other inventory positions owned:		
Corporate securities:		
Equity securities	**$ 9,505**	$ 50,365
Convertible securities	**18,460**	156,685
Fixed income securities	**48,654**	48,651
Municipal securities:		
Taxable securities	**111,591**	312,753
Tax-exempt securities	**416,966**	559,704
Short-term securities	**33,068**	68,717
Mortgage-backed securities	**121,794**	125,065
U.S. government agency securities	**188,140**	244,046
U.S. government securities	**7,729**	2,549
Derivative contracts	**35,027**	47,826
Total financial instruments and other inventory positions owned	**990,934**	1,616,361
Less noncontrolling interests (1)	**(43,397)**	(267,742)
	$ 947,537	$ 1,348,619
Financial instruments and other inventory positions sold, but not yet purchased:		
Corporate securities:		
Equity securities	**$ 15,740**	$ 154,589
Fixed income securities	**39,909**	21,460
U.S. government agency securities	**21,267**	27,735
U.S. government securities	**159,037**	523,527
Derivative contracts	**3,202**	10,813
Total financial instruments and other inventory positions sold, but not yet purchased	**239,155**	738,124
Less noncontrolling interests (2)	**(4,586)**	(98,669)
	$ 234,569	$ 639,455

(1) Noncontrolling interests attributable to third party ownership in a consolidated municipal bond fund consist of $7.5 million and $123.3 million of taxable municipal securities, $35.1 million and $139.5 million of tax-exempt municipal securities, and $0.8 million and $4.9 million of derivative contracts as of December 31, 2015 and 2014, respectively.

(2) Noncontrolling interests attributable to third party ownership in a consolidated municipal bond fund consist of $4.6 million and $97.6 million of U.S. government securities as of December 31, 2015 and 2014, respectively, and $1.1 million of derivative contracts as of December 31, 2014.

At December 31, 2015 and 2014, financial instruments and other inventory positions owned in the amount of $0.7 billion and $1.1 billion, respectively, had been pledged as collateral for short-term financings and repurchase agreements.

Financial instruments and other inventory positions sold, but not yet purchased represent obligations of the Company to deliver the specified security at the contracted price, thereby creating a liability to purchase the security in the market at prevailing prices. The Company is obligated to acquire the securities sold short at prevailing market prices, which may exceed the amount reflected on the consolidated statements of financial condition. The Company economically hedges changes in the market value of its financial instruments and other inventory positions owned using inventory positions sold, but not yet purchased, interest rate derivatives, credit default swap index contracts, U.S. treasury bond and Eurodollar futures and exchange traded options.

Derivative Contract Financial Instruments

The Company uses interest rate swaps, interest rate locks, credit default swap index contracts, U.S treasury bond and Eurodollar futures and equity option contracts as a means to manage risk in certain inventory positions. The Company also enters into interest rate swaps to facilitate customer transactions. The following describes the Company's derivatives by the type of transaction or security the instruments are economically hedging.

Customer matched-book derivatives: The Company enters into interest rate derivative contracts in a principal capacity as a dealer to satisfy the financial needs of its customers. The Company simultaneously enters into an interest rate derivative contract with a third party for the same notional amount to hedge the interest rate and credit risk of the initial client interest rate derivative contract. In certain limited instances, the Company has only hedged interest rate risk with a third party, and retains uncollateralized credit risk as described below. The instruments use interest rates based upon either the London Interbank Offer Rate ("LIBOR") index or the Securities Industry and Financial Markets Association ("SIFMA") index.

Trading securities derivatives: The Company enters into interest rate derivative contracts and uses U.S. treasury bond and Eurodollar futures to hedge interest rate and market value risks associated with its fixed income securities. These instruments use interest rates based upon either the Municipal Market Data ("MMD") index, LIBOR or the SIFMA index. The Company also enters into credit default swap index contracts to hedge credit risk associated with its taxable fixed income securities and option contracts to hedge market value risk associated with its convertible securities.

Derivatives are reported on a net basis by counterparty (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of offset exists and on a net basis by cross product when applicable provisions are stated in master netting agreements. Cash collateral received or paid is netted on a counterparty basis, provided a legal right of offset exists. The total absolute notional contract amount, representing the absolute value of the sum of gross long and short derivative contracts, provides an indication of the volume of the Company's derivative activity and does not represent gains and losses. The following table presents the gross fair market value and the total absolute notional contract amount of the Company's outstanding derivative instruments, prior to counterparty netting, by asset or liability position:

	December 31, 2015			December 31, 2014		
(Dollars in thousands) **Derivative Category**	**Derivative Assets (1)**	**Derivative Liabilities (2)**	**Notional Amount**	**Derivative Assets (1)**	**Derivative Liabilities (2)**	**Notional Amount**
Interest rate						
Customer matched-book	**$ 406,888**	**$ 386,284**	**$ 4,392,440**	$ 447,987	$ 425,227	$ 4,860,302
Trading securities	**—**	**7,685**	**290,600**	140	8,242	297,250
Credit default swap index						
Trading securities	**5,411**	**530**	**94,270**	5,808	5,188	267,796
Futures and equity options						
Trading securities	**164**	**149**	**2,345,037**	76	189	19,380
	$ 412,463	**$ 394,648**	**$ 7,122,347**	$ 454,011	$ 438,846	$ 5,444,728

(1) Derivative assets are included within financial instruments and other inventory positions owned on the consolidated statements of financial condition.

(2) Derivative liabilities are included within financial instruments and other inventory positions sold, but not yet purchased on the consolidated statements of financial condition.

The Company's derivative contracts do not qualify for hedge accounting, therefore, unrealized gains and losses are recorded on the consolidated statements of operations. The gains and losses on the related economically hedged inventory positions are not disclosed below as they are not in qualifying hedging relationships. The following table presents the Company's unrealized gains/(losses) on derivative instruments:

(Dollars in thousands)		Year Ended December 31,		
Derivative Category	**Operations Category**	**2015**	**2014**	**2013**
Interest rate derivative contract	Investment banking	**$ (2,274)**	$ (2,790)	$ (1,529)
Interest rate derivative contract	Institutional brokerage	**534**	(1,678)	(2,511)
Credit default swap index contract	Institutional brokerage	**12,228**	(1,080)	(1,522)
Futures and equity option derivative contracts	Institutional brokerage	**(252)**	1,037	(646)
		$ 10,236	$ (4,511)	$ (6,208)

Credit risk associated with the Company's derivatives is the risk that a derivative counterparty will not perform in accordance with the terms of the applicable derivative contract. Credit exposure associated with the Company's derivatives is driven by uncollateralized market movements in the fair value of the contracts with counterparties and is monitored regularly by the Company's financial risk committee. The Company considers counterparty credit risk in determining derivative contract fair value. The majority of the Company's derivative contracts are substantially collateralized by its counterparties, who are major financial institutions. The Company has a limited number of counterparties who are not required to post collateral. Based on market movements, the uncollateralized amounts representing the fair value of the derivative contract can become material, exposing the Company to the credit risk of these counterparties. As of December 31, 2015, the Company had $24.4 million of uncollateralized credit exposure with these counterparties (notional contract amount of $186.4 million), including $16.9 million of uncollateralized credit exposure with one counterparty.

Note 7 *Fair Value of Financial Instruments*

Based on the nature of the Company's business and its role as a "dealer" in the securities industry or as a manager of alternative asset management funds, the fair values of its financial instruments are determined internally. The Company's processes are designed to ensure that the fair values used for financial reporting are based on observable inputs wherever possible. In the event that observable inputs are not available, unobservable inputs are developed based on an evaluation of all relevant empirical market data, including prices evidenced by market transactions, interest rates, credit spreads, volatilities and correlations and other security-specific information. Valuation adjustments related to illiquidity or counterparty credit risk are also considered. In estimating fair value, the Company may utilize information provided by third party pricing vendors to corroborate internally-developed fair value estimates.

The Company employs specific control processes to determine the reasonableness of the fair value of its financial instruments. The Company's processes are designed to ensure that the internally-estimated fair values are accurately recorded and that the data inputs and the valuation techniques used are appropriate, consistently applied, and that the assumptions are reasonable and consistent with the objective of determining fair value. Individuals outside of the trading departments perform independent pricing verification reviews as of each reporting date. The Company has established parameters which set forth when the fair value of securities are independently verified. The selection parameters are generally based upon the type of security, the level of estimation risk of a security, the materiality of the security to the Company's financial statements, changes in fair value from period to period, and other specific facts and circumstances of the Company's securities portfolio. In evaluating the initial internally-estimated fair values made by the Company's traders, the nature and complexity of securities involved (e.g., term, coupon, collateral, and other key drivers of value), level of market activity for securities, and availability of market data are considered. The independent price verification procedures include, but are not limited to, analysis of trade data (both internal and external where available), corroboration to the valuation of positions with similar characteristics, risks and components, or comparison to an alternative pricing source, such as a discounted cash flow model. The Company's valuation committee, comprised of members of senior management and risk management, provides oversight and overall responsibility for the internal control processes and procedures related to fair value measurements.

The following is a description of the valuation techniques used to measure fair value.

Cash Equivalents

Cash equivalents include highly liquid investments with original maturities of 90 days or less. Actively traded money market funds are measured at their net asset value and classified as Level I.

Financial Instruments and Other Inventory Positions Owned

The Company records financial instruments and other inventory positions owned and financial instruments and other inventory positions sold, but not yet purchased at fair value on the consolidated statements of financial condition with unrealized gains and losses reflected on the consolidated statements of operations.

Equity securities – Exchange traded equity securities are valued based on quoted prices from the exchange for identical assets or liabilities as of the period-end date. To the extent these securities are actively traded and valuation adjustments are not applied, they are categorized as Level I. Non-exchange traded equity securities (principally hybrid preferred securities) are measured primarily using broker quotations, prices observed for recently executed market transactions and internally-developed fair value estimates based on observable inputs and are categorized within Level II of the fair value hierarchy.

Convertible securities – Convertible securities are valued based on observable trades, when available. Accordingly, these convertible securities are categorized as Level II.

Corporate fixed income securities – Fixed income securities include corporate bonds which are valued based on recently executed market transactions of comparable size, internally-developed fair value estimates based on observable inputs, or broker quotations. Accordingly, these corporate bonds are categorized as Level II.

Taxable municipal securities – Taxable municipal securities are valued using recently executed observable trades or market price quotations and therefore are generally categorized as Level II. Certain illiquid taxable municipal securities are valued using market data for comparable securities (maturity and sector) and management judgment to infer an appropriate current yield or other model-based valuation techniques deemed appropriate by management based on the specific nature of the individual security and are therefore categorized as Level III.

Tax-exempt municipal securities – Tax-exempt municipal securities are valued using recently executed observable trades or market price quotations and therefore are generally categorized as Level II. Certain illiquid tax-exempt municipal securities are valued using market data for comparable securities (maturity and sector) and management judgment to infer an appropriate current yield or other model-based valuation techniques deemed appropriate by management based on the specific nature of the individual security and are therefore categorized as Level III.

Short-term municipal securities – Short-term municipal securities include auction rate securities, variable rate demand notes, and other short-term municipal securities. Variable rate demand notes and other short-term municipal securities are valued using recently executed observable trades or market price quotations and therefore are generally categorized as Level II. Auction rate securities with limited liquidity are categorized as Level III and are valued using discounted cash flow models with unobservable inputs such as the Company's expected recovery rate on the securities.

Mortgage-backed securities – Mortgage-backed securities are valued using observable trades, when available. Certain mortgage-backed securities are valued using models where inputs to the model are directly observable in the market, or can be derived principally from or corroborated by observable market data. These mortgage-backed securities are categorized as Level II. Other mortgage-backed securities, which are principally collateralized by residential mortgages, have experienced low volumes of executed transactions resulting in less observable transaction data. Certain mortgage-backed securities collateralized by residential mortgages are valued using cash flow models that utilize unobservable inputs including credit default rates, prepayment rates, loss severity and valuation yields. As judgment is used to determine the range of these inputs, these mortgage-backed securities are categorized as Level III.

U.S. government agency securities – U.S. government agency securities include agency debt bonds and mortgage bonds. Agency debt bonds are valued by using either direct price quotes or price quotes for comparable bond securities and are categorized as Level II. Mortgage bonds include bonds secured by mortgages, mortgage pass-through securities, agency collateralized mortgage-obligation ("CMO") securities and agency interest-only securities. Mortgage pass-through securities, CMO securities and interest-only securities are valued using recently executed observable trades or other observable inputs, such as prepayment speeds and therefore are generally categorized as Level II. Mortgage bonds are valued using observable market inputs, such as market yields ranging from 200-300 basis points ("bps") on spreads over U.S. treasury securities, or models based upon prepayment expectations ranging from 14%-16% conditional prepayment rate ("CPR"). These securities are categorized as Level II.

U.S. government securities – U.S. government securities include highly liquid U.S. treasury securities which are generally valued using quoted market prices and therefore categorized as Level I. The Company does not transact in securities of countries other than the U.S. government.

Derivatives – Derivative contracts include interest rate swaps, interest rate locks, credit default swap index contracts, U.S treasury bond and Eurodollar futures and equity option contracts. These instruments derive their value from underlying assets, reference rates, indices or a combination of these factors. The Company's equity option derivative contracts are valued based on quoted prices from the exchange for identical assets or liabilities as of the period-end date. To the extent these contracts are actively traded and valuation adjustments are not applied, they are categorized as Level I. The Company's credit default swap index contracts are valued using market price quotations and are classified as Level II. The majority of the Company's interest rate derivative contracts, including both interest rate swaps and interest rate locks, are valued using market standard pricing models based on the net present value of estimated future cash flows. The valuation models used do not involve material subjectivity as the methodologies do not entail significant judgment and the pricing inputs are market observable, including contractual terms, yield curves and measures of volatility. These instruments are classified as Level II within the fair value hierarchy. Certain interest rate locks transact in less active markets and were valued using valuation models that included the previously mentioned observable inputs and certain unobservable inputs that required significant judgment, such as the premium over the MMD curve. These instruments are classified as Level III.

Investments

The Company's investments valued at fair value include equity investments in private companies and partnerships, investments in registered mutual funds, warrants of public and private companies and private company debt. Investments in registered mutual funds are valued based on quoted prices on active markets and classified as Level I. Company-owned warrants, which have a cashless exercise option, are valued based upon the Black-Scholes option-pricing model and certain unobservable inputs. The Company applies a liquidity discount to the value of its warrants in public and private companies. For warrants in private companies, valuation adjustments, based upon management's judgment, are made to account for differences between the measured security and the stock volatility factors of comparable companies. Company-owned warrants are reported as Level III assets. Investments in private companies are valued based on an assessment of each underlying security, considering rounds of financing, third party transactions and market-based information, including comparable company transactions, trading multiples (e.g., multiples of revenue and earnings before interest, taxes, depreciation and amortization ("EBITDA")) and changes in market outlook, among other factors. These securities are generally categorized as Level III.

Fair Value Option – The fair value option permits the irrevocable fair value option election on an instrument-by-instrument basis at initial recognition of an asset or liability or upon an event that gives rise to a new basis of accounting for that instrument. The fair value option was elected for certain merchant banking and other investments at inception to reflect economic events in earnings on a timely basis. Merchant banking and other equity investments of $19.7 million and $18.4 million, included within investments on the consolidated statements of financial condition, are accounted for at fair value and are classified as Level III assets at December 31, 2015 and 2014, respectively. The realized and unrealized gains from fair value changes included in earnings as a result of electing to apply the fair value option to certain financial assets were $1.3 million, $2.7 million and $10.6 million for the years ended December 31, 2015, 2014 and 2013, respectively.

The following table summarizes quantitative information about the significant unobservable inputs used in the fair value measurement of the Company's Level III financial instruments as of December 31, 2015:

	Valuation Technique	Unobservable Input	Range	Weighted Average
Assets:				
Financial instruments and other inventory positions owned:				
Municipal securities:				
Tax-exempt securities	Discounted cash flow	Debt service coverage ratio (2)	5 - 60%	19.4%
Short-term securities	Discounted cash flow	Expected recovery rate (% of par) (2)	66 - 94%	91.0%
Mortgage-backed securities:				
Collateralized by residential mortgages	Discounted cash flow	Credit default rates (3)	1 - 12%	4.2%
		Prepayment rates (4)	2 - 21%	10.0%
		Loss severity (3)	30 - 90%	62.3%
		Valuation yields (3)	2 - 8%	4.6%
Investments at fair value:				
Equity securities in private companies	Market approach	Revenue multiple (2)	2 - 6 times	4.4 times
		EBITDA multiple (2)	10 - 12 times	10.4 times
Liabilities:				
Financial instruments and other inventory positions sold, but not yet purchased:				
Derivative contracts:				
Interest rate locks	Discounted cash flow	Premium over the MMD curve (1)	1 - 32 bps	6.5 bps

Sensitivity of the fair value to changes in unobservable inputs:

(1) Significant increase/(decrease) in the unobservable input in isolation would result in a significantly lower/(higher) fair value measurement.

(2) Significant increase/(decrease) in the unobservable input in isolation would result in a significantly higher/(lower) fair value measurement.

(3) Significant changes in any of these inputs in isolation could result in a significantly different fair value. Generally, a change in the assumption used for credit default rates is accompanied by a directionally similar change in the assumption used for the loss severity and a directionally inverse change in the assumption for valuation yields.

(4) The potential impact of changes in prepayment rates on fair value is dependent on other security-specific factors, such as the par value and structure. Changes in the prepayment rates may result in directionally similar or directionally inverse changes in fair value depending on whether the security trades at a premium or discount to the par value.

Piper Jaffray Companies

Notes to the Consolidated Financial Statements – Continued

The following table summarizes the valuation of the Company's financial instruments by pricing observability levels defined in ASC 820 as of December 31, 2015:

(Dollars in thousands)	Level I	Level II	Level III	Counterparty and Cash Collateral Netting (1)	Total
Assets:					
Financial instruments and other inventory positions owned:					
Corporate securities:					
Equity securities	$ 7,569	$ 1,936	$ —	$ —	$ 9,505
Convertible securities	—	18,460	—	—	18,460
Fixed income securities	—	48,654	—	—	48,654
Municipal securities:					
Taxable securities	—	105,775	5,816	—	111,591
Tax-exempt securities	—	415,789	1,177	—	416,966
Short-term securities	—	32,348	720	—	33,068
Mortgage-backed securities	—	670	121,124	—	121,794
U.S. government agency securities	—	188,140	—	—	188,140
U.S. government securities	7,729	—	—	—	7,729
Derivative contracts	164	412,299	—	(377,436)	35,027
Total financial instruments and other inventory positions owned:	15,462	1,224,071	128,837	(377,436)	990,934
Cash equivalents	130,138	—	—	—	130,138
Investments at fair value	34,874	—	107,907	—	142,781
Total assets	$ 180,474	$ 1,224,071	$ 236,744	$ (377,436)	$ 1,263,853
Liabilities:					
Financial instruments and other inventory positions sold, but not yet purchased:					
Corporate securities:					
Equity securities	$ 13,489	$ 2,251	$ —	$ —	$ 15,740
Fixed income securities	—	39,909	—	—	39,909
U.S. government agency securities	—	21,267	—	—	21,267
U.S. government securities	159,037	—	—	—	159,037
Derivative contracts	149	387,351	7,148	(391,446)	3,202
Total financial instruments and other inventory positions sold, but not yet purchased:	$ 172,675	$ 450,778	$ 7,148	$ (391,446)	$ 239,155

(1) Represents cash collateral and the impact of netting on a counterparty basis. The Company had no securities posted as collateral to its counterparties.

Piper Jaffray Companies

Notes to the Consolidated Financial Statements – Continued

The following table summarizes the valuation of the Company's financial instruments by pricing observability levels defined in ASC 820 as of December 31, 2014:

(Dollars in thousands)	Level I	Level II	Level III	Counterparty and Cash Collateral Netting (1)	Total
Assets:					
Financial instruments and other inventory positions owned:					
Corporate securities:					
Equity securities	$ 39,191	$ 11,174	$ —	$ —	$ 50,365
Convertible securities	—	156,685	—	—	156,685
Fixed income securities	—	48,651	—	—	48,651
Municipal securities:					
Taxable securities	—	312,753	—	—	312,753
Tax-exempt securities	—	558,518	1,186	—	559,704
Short-term securities	—	67,997	720	—	68,717
Mortgage-backed securities	—	316	124,749	—	125,065
U.S. government agency securities	—	244,046	—	—	244,046
U.S. government securities	2,549	—	—	—	2,549
Derivative contracts	76	453,795	140	(406,185)	47,826
Total financial instruments and other inventory positions owned:	41,816	1,853,935	126,795	(406,185)	1,616,361
Cash equivalents	1,562	—	—	—	1,562
Investments at fair value	20,704	—	74,165	—	94,869
Total assets	$ 64,082	$ 1,853,935	$ 200,960	$ (406,185)	$ 1,712,792
Liabilities:					
Financial instruments and other inventory positions sold, but not yet purchased:					
Corporate securities:					
Equity securities	$ 153,254	$ 1,335	$ —	$ —	$ 154,589
Fixed income securities	—	21,460	—	—	21,460
U.S. government agency securities	—	27,735	—	—	27,735
U.S. government securities	523,527	—	—	—	523,527
Derivative contracts	189	430,835	7,822	(428,033)	10,813
Total financial instruments and other inventory positions sold, but not yet purchased:	$ 676,970	$ 481,365	$ 7,822	$ (428,033)	$ 738,124

(1) Represents cash collateral and the impact of netting on a counterparty basis. The Company had no securities posted as collateral to its counterparties.

The Company's Level III assets were $236.7 million and $201.0 million, or 18.7 percent and 11.7 percent of financial instruments measured at fair value at December 31, 2015 and 2014, respectively. The value of transfers between levels are recognized at the beginning of the reporting period. There were no significant transfers between Level I, Level II or Level III for the year ended December 31, 2015.

Piper Jaffray Companies

Notes to the Consolidated Financial Statements – Continued

The following tables summarize the changes in fair value associated with Level III financial instruments held at the beginning or end of the periods presented:

(Dollars in thousands)	**Balance at December 31, 2014**	Purchases	Sales	Transfers in	Transfers out	Realized gains/ (losses) (1)	Unrealized gains/ (losses) (1)	**Balance at December 31, 2015**	**Unrealized gains/ (losses) for assets/ liabilities held at December 31, 2015 (1)**
Assets:									
Financial instruments and other inventory positions owned:									
Municipal securities:									
Taxable securities	**$ —**	$ 5,133	$ —	$ —	$ —	$ —	$ 683	**$ 5,816**	**$ 683**
Tax-exempt securities	**1,186**	—	—	—	—	—	(9)	**1,177**	**(9)**
Short-term securities	**720**	—	—	—	—	—	—	**720**	**—**
Mortgage-backed securities	**124,749**	130,534	(138,874)	—	—	3,301	1,414	**121,124**	**2,157**
Derivative contracts	**140**	520	—	—	—	(520)	(140)	**—**	**—**
Total financial instruments and other inventory positions owned:	**126,795**	136,187	(138,874)	—	—	2,781	1,948	**128,837**	**2,831**
Investments at fair value	**74,165**	17,089	(1,089)	—	—	84	17,658	**107,907**	**17,552**
Total assets	**$ 200,960**	$ 153,276	$ (139,963)	$ —	$ —	$ 2,865	$ 19,606	**$ 236,744**	**$ 20,383**
Liabilities:									
Financial instruments and other inventory positions sold, but not yet purchased:									
Derivative contracts	**$ 7,822**	$ (10,349)	$ —	$ —	$ —	$ 10,349	$ (674)	**$ 7,148**	**$ 7,148**
Total financial instruments and other inventory positions sold, but not yet purchased:	**$ 7,822**	$ (10,349)	$ —	$ —	$ —	$ 10,349	$ (674)	**$ 7,148**	**$ 7,148**

(1) Realized and unrealized gains/(losses) related to financial instruments, with the exception of customer matched-book derivatives, are reported in institutional brokerage on the consolidated statements of operations. Realized and unrealized gains/(losses) related to customer matched-book derivatives are reported in investment banking. Realized and unrealized gains/(losses) related to investments are reported in investment banking revenues or investment income on the consolidated statements of operations.

Piper Jaffray Companies

Notes to the Consolidated Financial Statements – Continued

(Dollars in thousands)	Balance at December 31, 2013	Purchases	Sales	Transfers in	Transfers out	Realized gains/ (losses) (1)	Unrealized gains/ (losses) (1)	Balance at December 31, 2014	Unrealized gains/ (losses) for assets/ liabilities held at December 31, 2014 (1)
Assets:									
Financial instruments and other inventory positions owned:									
Corporate securities:									
Fixed income securities	**$ 100**	$ —	$ (100)	$ —	$ —	$ —	$ —	**$ —**	**$ —**
Municipal securities:									
Tax-exempt securities	**1,433**	—	—	—	—	—	(247)	**1,186**	**(247)**
Short-term securities	**656**	—	(25)	—	—	6	83	**720**	**83**
Mortgage-backed securities	**119,799**	154,338	(161,962)	3,552	—	9,189	(167)	**124,749**	**1,745**
Derivative contracts	**691**	3,602	—	—	—	(3,602)	(551)	**140**	**140**
Total financial instruments and other inventory positions owned:	**122,679**	157,940	(162,087)	3,552	—	5,593	(882)	**126,795**	**1,721**
Investments at fair value	**49,240**	21,730	(2,368)	—	—	2,368	3,195	**74,165**	**3,195**
Total assets	**$ 171,919**	$ 179,670	$ (164,455)	$ 3,552	$ —	$ 7,961	$ 2,313	**$ 200,960**	**$ 4,916**
Liabilities:									
Financial instruments and other inventory positions sold, but not yet purchased:									
Derivative contracts	**$ 6,643**	$ (16,751)	$ —	$ —	$ —	$ 16,751	$ 1,179	**$ 7,822**	**$ 7,822**
Total financial instruments and other inventory positions sold, but not yet purchased:	**$ 6,643**	$ (16,751)	$ —	$ —	$ —	$ 16,751	$ 1,179	**$ 7,822**	**$ 7,822**

(1) Realized and unrealized gains/(losses) related to financial instruments, with the exception of customer matched-book derivatives, are reported in institutional brokerage on the consolidated statements of operations. Realized and unrealized gains/(losses) related to customer matched-book derivatives are reported in investment banking. Realized and unrealized gains/(losses) related to investments are reported in investment banking revenues or investment income on the consolidated statements of operations.

The carrying values of the Company's cash, securities either purchased or sold under agreements to resell, receivables and payables either from or to customers and brokers, dealers and clearing organizations and short-term financings approximate fair value due to their liquid or short-term nature.

Note 8 *Variable Interest Entities*

The Company has investments in and/or acts as the managing partner of various partnerships, limited liability companies, or registered mutual funds. These entities were established for the purpose of investing in securities of public or private companies, or municipal debt obligations and were initially financed through the capital commitments or seed investments of the members.

VIEs are entities in which equity investors lack the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities. The determination as to whether an entity is a VIE is based on the amount and nature of the members' equity investment in the entity. The Company also considers other characteristics such as the power through voting rights or similar rights to direct the activities of an entity that most significantly impact the entity's economic performance. For those entities that meet the deferral provisions defined by ASU 2010-10, the Company considers characteristics such as the ability to influence the decision making about the entity's activities and how the entity is financed. The Company has identified certain of the entities described above as VIEs. These VIEs had net assets approximating $0.4 billion and $0.6 billion at December 31, 2015 and 2014, respectively. The Company's exposure to loss from these VIEs is $8.0 million, which is the carrying value of its capital contributions recorded in investments on the consolidated statements of financial condition at December 31, 2015. The Company had no liabilities related to these VIEs at December 31, 2015 and 2014.

The Company is required to consolidate all VIEs for which it is considered to be the primary beneficiary. The determination as to whether the Company is considered to be the primary beneficiary is based on whether the Company has both the power to direct the activities of the VIE that most significantly impact the entity's economic performance and the obligation to absorb losses or the right to receive benefits of the VIE that could potentially be significant to the VIE. For those entities that meet the deferral provisions defined by ASU 2010-10 (generally asset managers and investment companies), the determination as to whether the Company is considered to be the primary beneficiary differs in that it is based on whether the Company will absorb a majority of the VIE's expected losses, receive a majority of the VIE's expected residual returns, or both. The Company determined it is not the primary beneficiary of these VIEs and accordingly does not consolidate them. Furthermore, the Company has not provided financial or other support to these VIEs that it was not previously contractually required to provide as of December 31, 2015.

The Company has investments in a grantor trust which was established as part of a nonqualified deferred compensation plan. The Company is the primary beneficiary of the grantor trust. Accordingly, the assets and liabilities of the grantor trust are consolidated by the Company on the consolidated statements of financial condition. See Note 22 for additional information on the nonqualified deferred compensation plan.

The Company also originates CMOs through secondary market vehicles. The Company's risk of loss with respect to these entities is limited to the fair value of the securities held by the Company.

Note 9 *Receivables from and Payables to Brokers, Dealers and Clearing Organizations*

(Dollars in thousands)	December 31, 2015	December 31, 2014
Receivable arising from unsettled securities transactions	**$ 62,105**	$ 52,571
Deposits paid for securities borrowed	**47,508**	57,572
Receivable from clearing organizations	**3,155**	4,933
Deposits with clearing organizations	**27,019**	33,799
Securities failed to deliver	**2,100**	1,753
Other	**6,062**	10,381
Total receivables from brokers, dealers and clearing organizations	**$ 147,949**	$ 161,009

(Dollars in thousands)	December 31, 2015	December 31, 2014
Payable arising from unsettled securities transactions	**$ 34,445**	$ 11,048
Payable to clearing organizations	**3,115**	5,185
Securities failed to receive	**4,468**	2,430
Other	**6,103**	6,901
Total payables to brokers, dealers and clearing organizations	**$ 48,131**	$ 25,564

Deposits paid for securities borrowed approximate the market value of the securities. Securities failed to deliver and receive represent the contract value of securities that have not been delivered or received by the Company on settlement date.

Note 10 *Receivables from and Payables to Customers*

(Dollars in thousands)	December 31, 2015	December 31, 2014
Cash accounts	**$ 39,415**	$ 6,135
Margin accounts	**1,752**	3,523
Total receivables from customers	**$ 41,167**	$ 9,658

Securities owned by customers are held as collateral for margin loan receivables. This collateral is not reflected on the consolidated financial statements. Margin loan receivables earn interest at floating interest rates based on prime rates.

(Dollars in thousands)	December 31, 2015	December 31, 2014
Cash accounts	**$ 19,650**	$ 13,172
Margin accounts	**17,714**	156
Total payables to customers	**$ 37,364**	$ 13,328

Payables to customers primarily comprise certain cash balances in customer accounts consisting of customer funds pending settlement of securities transactions and customer funds on deposit. Except for amounts arising from customer short sales, all amounts payable to customers are subject to withdrawal by customers upon their request.

Note 11 *Collateralized Securities Transactions*

The Company's financing and customer securities activities involve the Company using securities as collateral. In the event that the counterparty does not meet its contractual obligation to return securities used as collateral (e.g., pursuant to the terms of a repurchase agreement), or customers do not deposit additional securities or cash for margin when required, the Company may be exposed to the risk of reacquiring the securities or selling the securities at unfavorable market prices in order to satisfy its obligations to its customers or counterparties. The Company seeks to control this risk by monitoring the market value of securities pledged or used as collateral on a daily basis and requiring adjustments in the event of excess market exposure. The Company also uses unaffiliated third party custodians to administer the underlying collateral for the majority of its short-term financing to mitigate risk.

In a reverse repurchase agreement the Company purchases financial instruments from a seller, typically in exchange for cash, and agrees to resell the same or substantially the same financial instruments to the seller at a stated price plus accrued interest in the future. In a repurchase agreement, the Company sells financial instruments to a buyer, typically for cash, and agrees to repurchase the same or substantially the same financial instruments from the buyer at a stated price plus accrued interest at a future date. Even though repurchase and reverse repurchase agreements involve the legal transfer of ownership of financial instruments, they are accounted for as financing arrangements because they require the financial instruments to be repurchased or resold at maturity of the agreement.

In a securities borrowed transaction, the Company borrows securities from a counterparty in exchange for cash. When the Company returns the securities, the counterparty returns the cash. Interest is generally paid periodically over the life of the transaction.

In the normal course of business, the Company obtains securities purchased under agreements to resell, securities borrowed and margin agreements on terms that permit it to repledge or resell the securities to others, typically pursuant to repurchase agreements. The Company obtained securities with a fair value of approximately $185.8 million and $369.7 million at December 31, 2015 and 2014, respectively, of which $175.8 million and $338.8 million, respectively, had been pledged or otherwise transferred to satisfy its commitments under financial instruments and other inventory positions sold, but not yet purchased.

The following is a summary of the Company's securities sold under agreements to repurchase ("Repurchase Liabilities"), the fair market value of collateral pledged and the interest rate charged by the Company's counterparty, which is based on LIBOR plus an applicable margin, as of December 31, 2015:

(Dollars in thousands)	Repurchase Liabilities	Fair Market Value	Interest Rate
Term up to 30 day maturities:			
Mortgage-backed securities	$ 27,269	$ 39,202	2.14 - 2.27%
On demand maturities:			
U.S. government securities	18,050	17,558	0.05%
	$ 45,319	$ 56,760	

Reverse repurchase agreements, repurchase agreements and securities borrowed and loaned are reported on a net basis by counterparty when a legal right of offset exists. There were no gross amounts offset on the consolidated statements of financial condition for reverse repurchase agreements, securities borrowed or repurchase agreements at December 31, 2015 and 2014, respectively, as a legal right of offset did not exist. The Company had no outstanding securities lending arrangements as of December 31, 2015 or 2014. See Note 6 for information related to the Company's offsetting of derivative contracts.

Note 12 *Investments*

The Company's investments include investments in private companies and partnerships, registered mutual funds, warrants of public and private companies and private company debt. Investments included:

(Dollars in thousands)	December 31, 2015	December 31, 2014
Investments at fair value	**$ 142,781**	$ 94,869
Investments at cost	**3,299**	8,214
Investments accounted for under the equity method	**17,781**	23,757
Total investments	**163,861**	126,840
Less investments attributable to noncontrolling interests (1)	**(40,069)**	(32,563)
	$ 123,792	$ 94,277

(1) Noncontrolling interests are attributable to third party ownership in a consolidated merchant banking fund and private equity investment vehicles.

Management regularly reviews the Company's investments in private company debt and has concluded that no valuation allowance is needed as it is probable that all contractual principal and interest will be collected.

At December 31, 2015, investments carried on a cost basis had an estimated fair market value of $4.9 million. Because valuation estimates were based upon management's judgment, investments carried at cost would be categorized as Level III assets in the fair value hierarchy, if they were carried at fair value.

Investments accounted for under the equity method include general and limited partnership interests. The carrying value of these investments is based on the investment vehicle's net asset value. The net assets of investment partnerships consist of investments in both marketable and non-marketable securities. The underlying investments held by such partnerships are valued based on the estimated fair value determined by management in our capacity as general partner or investor and, in the case of investments in unaffiliated investment partnerships, are based on financial statements prepared by the unaffiliated general partners.

Note 13 *Other Assets*

(Dollars in thousands)	December 31, 2015	December 31, 2014
Net deferred income tax assets	**$ 66,810**	$ 45,851
Fee receivables	**18,362**	23,959
Accrued interest receivables	**6,145**	10,061
Forgivable loans, net	**10,234**	8,366
Prepaid expenses	**6,161**	6,067
Other	**11,490**	5,995
Total other assets	**$ 119,202**	$ 100,299

See Note 26 for additional details concerning the Company's net deferred income tax assets.

Note 14 *Goodwill and Intangible Assets*

(Dollars in thousands)	Capital Markets	Asset Management	Total
Goodwill			
Balance at December 31, 2013	**$ 13,790**	**$ 196,844**	**$ 210,634**
Goodwill acquired	—	—	—
Measurement period adjustment	1,244	—	1,244
Balance at December 31, 2014	**$ 15,034**	**$ 196,844**	**$ 211,878**
Goodwill acquired	6,098	—	6,098
Balance at December 31, 2015	**$ 21,132**	**$ 196,844**	**$ 217,976**
Intangible assets			
Balance at December 31, 2013	**$ 5,316**	**$ 34,614**	**$ 39,930**
Intangible assets acquired	—	—	—
Amortization of intangible assets	(2,972)	(6,300)	(9,272)
Balance at December 31, 2014	**$ 2,344**	**$ 28,314**	**$ 30,658**
Intangible assets acquired	7,534	—	7,534
Amortization of intangible assets	(1,622)	(6,040)	(7,662)
Balance at December 31, 2015	**$ 8,256**	**$ 22,274**	**$ 30,530**

The Company tests goodwill and indefinite-life intangible assets for impairment on an annual basis and on an interim basis when circumstances exist that could indicate possible impairment. The Company tests for impairment at the reporting unit level, which is generally one level below its operating segments. The Company has identified two reporting units: capital markets and asset management. When testing for impairment, the Company has the option to first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after making an assessment, the Company determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the two-step impairment test is unnecessary. However, if the Company concludes otherwise, then the Company is required to perform the two-step impairment test, which requires management to make judgments in determining what assumptions to use in the calculation. The first step of the process consists of estimating the fair value of the reporting units based on the following factors: a discounted cash flow model using revenue and profit forecasts, the Company's market capitalization, public company comparables and multiples of recent mergers and acquisitions of similar businesses, if available. The estimated fair values of the reporting units are compared with their carrying values, which includes the allocated goodwill. If the estimated fair value is less than the carrying values, a second step is performed to measure the amount of the impairment loss, if any. An impairment loss is equal to the excess of the carrying amount of goodwill over its fair value.

The Company completed its annual goodwill impairment analysis as of October 31, 2015, and concluded there was no goodwill impairment. The Company also evaluated its intangible assets (indefinite and definite-lived) and concluded there was no impairment in 2015. The Company concluded there was no goodwill or intangible asset impairment in 2014 and 2013, respectively.

The addition of goodwill and intangible assets during the year ended December 31, 2015 related to the acquisitions of River Branch and BMO GKST, as discussed in Note 4. Management identified intangible assets consisting of customer relationships with acquisition-date fair values currently estimated to be $7.5 million, which will be amortized over an estimated weighted average life of 2.1 years. The Company anticipates finalizing the fair values of intangible assets in the first quarter of 2016. The final goodwill and intangible assets recorded on the Company's consolidated statements of financial condition may differ from that reflected herein as a result of measurement period adjustments.

Intangible assets with determinable lives consist of customer relationships and non-competition agreements. The intangible assets are amortized over their original estimated useful lives ranging from one to ten years. The following table summarizes the future aggregate amortization expense of the Company's intangible assets with determinable lives for the years ended:

(Dollars in thousands)	
2016	$ 10,412
2017	6,109
2018	5,497
2019	4,989
Thereafter	663
Total	$ 27,670

Note 15 *Fixed Assets*

(Dollars in thousands)	**December 31, 2015**	**December 31, 2014**
Furniture and equipment	**$ 31,953**	$ 28,669
Leasehold improvements	**25,213**	23,697
Software	**13,692**	13,132
Total	**70,858**	65,498
Accumulated depreciation and amortization	**(51,874)**	(47,327)
	$ 18,984	$ 18,171

For the years ended December 31, 2015, 2014 and 2013, depreciation and amortization of furniture and equipment, leasehold improvements and software from continuing operations totaled $5.1 million, $5.3 million and $5.6 million, respectively, and are included in occupancy and equipment expense on the consolidated statements of operations.

Note 16 *Short-Term Financing*

	Outstanding Balance		**Weighted Average Interest Rate**	
(Dollars in thousands)	**December 31, 2015**	**December 31, 2014**	**December 31, 2015**	**December 31, 2014**
Commercial paper (secured)	**$ 276,894**	$ 238,013	**1.74%**	1.48%
Prime broker arrangement	**169,296**	127,754	**1.07%**	0.91%
Bank lines (secured)	**—**	12,000	**N/A**	1.50%
Total short-term financing	**$ 446,190**	$ 377,767		

The Company issues secured commercial paper to fund a portion of its securities inventory. The commercial paper notes (“CP Notes”) can be issued with maturities of 27 days to 270 days from the date of issuance. The CP Notes are issued under three separate programs, CP Series A, CP Series II A and CP Series III A, and are secured by different inventory classes. As of December 31, 2015, the weighted average maturity of CP Series A, CP Series II A and CP Series III A was 65 days, 55 days and 21 days, respectively. The CP Notes are interest bearing or sold at a discount to par with an interest rate based on LIBOR plus an applicable margin. CP Series III A includes a covenant that requires the Company’s U.S. broker dealer subsidiary to maintain excess net capital of $120 million.

The Company has established an arrangement to obtain financing with a prime broker related to its municipal bond funds. Financing under this arrangement is secured by certain securities, primarily municipal securities, and collateral limitations could reduce the amount of funding available under this arrangement. The prime broker financing activities are recorded net of receivables from trading activity. The funding is at the discretion of the prime broker subject to a notice period.

The Company has committed short-term bank line financing available on a secured basis and uncommitted short-term bank line financing available on both a secured and unsecured basis. The Company uses these credit facilities in the ordinary course of business to fund a portion of its daily operations and the amount borrowed under these credit facilities varies daily based on the Company's funding needs.

The Company's committed short-term bank line financing at December 31, 2015 consisted of a one-year $250 million committed revolving credit facility with U.S. Bank, N.A., which was renewed in December 2015. Advances under this facility are secured by certain marketable securities. The facility includes a covenant that requires the Company's U.S. broker dealer subsidiary to maintain minimum net capital of $120 million, and the unpaid principal amount of all advances under this facility will be due on December 17, 2016. The Company pays a nonrefundable commitment fee on the unused portion of the facility on a quarterly basis. At December 31, 2015, the Company had no advances against this line of credit.

The Company's uncommitted secured lines at December 31, 2015 totaled $185 million with two banks and are dependent on having appropriate collateral, as determined by the bank agreement, to secure an advance under the line. The availability of the Company's uncommitted lines are subject to approval by the individual banks each time an advance is requested and may be denied. At December 31, 2015, the Company had no advances against these lines of credit.

Note 17 *Senior Notes*

The Company has entered into variable and fixed rate senior notes with certain entities advised by Pacific Investment Management Company ("PIMCO"). The following table presents the outstanding balance by note class at December 31, 2015 and 2014, respectively.

	Outstanding Balance	
(Dollars in thousands)	**December 31, 2015**	**December 31, 2014**
Class A Notes	**$ 50,000**	$ 50,000
Class B Notes	**—**	75,000
Class C Notes	**125,000**	—
Total senior notes	**$ 175,000**	$ 125,000

On October 8, 2015, the Company entered into a second amended and restated note purchase agreement ("Second Amended and Restated Note Purchase Agreement") under which the Company issued $125 million of fixed rate Class C Notes. The Class C Notes bear interest at an annual fixed rate of 5.06 percent, payable semi-annually and mature on October 9, 2018. The variable rate Class A Notes bear interest at a rate equal to three-month LIBOR plus 3.00 percent, adjusted and payable quarterly and mature on May 31, 2017. The variable rate Class B Notes were repaid by the Company on November 30, 2015, from the proceeds of the Class C Notes. The unpaid principal amounts are due in full on the respective maturity dates and may not be prepaid by the Company.

The Second Amended and Restated Note Purchase Agreement includes customary events of default and covenants that, among other things, require the Company to maintain a minimum consolidated tangible net worth and regulatory net capital, limit the Company's leverage ratio and require the Company to maintain a minimum ratio of operating cash flow to fixed charges. With respect to the net capital covenant, the Company's U.S. broker dealer subsidiary is required to maintain minimum net capital of $120 million. At December 31, 2015, the Company was in compliance with all covenants.

The senior notes are recorded at amortized cost. As of December 31, 2015, the carrying value of the senior notes approximated fair value.

Note 18 *Contingencies, Commitments and Guarantees*

Legal Contingencies

The Company has been named as a defendant in various legal actions, including complaints and litigation and arbitration claims, arising from its business activities. Such actions include claims related to securities brokerage and investment banking activities, and certain class actions that primarily allege violations of securities laws and seek unspecified damages, which could be substantial. Also, the Company is involved from time to time in investigations and proceedings by governmental agencies and self-regulatory organizations ("SROs") which could result in adverse judgments, settlement, penalties, fines or other relief.

The Company has established reserves for potential losses that are probable and reasonably estimable that may result from pending and potential legal actions, investigations and regulatory proceedings. In many cases, however, it is inherently difficult to determine whether any loss is probable or even possible or to estimate the amount or range of any potential loss, particularly where proceedings may be in relatively early stages or where plaintiffs are seeking substantial or indeterminate damages. Matters frequently need to be more developed before a loss or range of loss can reasonably be estimated.

Given uncertainties regarding the timing, scope, volume and outcome of pending and potential legal actions, investigations and regulatory proceedings and other factors, the amounts of reserves and ranges of reasonably possible losses are difficult to determine and of necessity subject to future revision. Subject to the foregoing, management of the Company believes, based on currently available information, after consultation with outside legal counsel and taking into account its established reserves, that pending legal actions, investigations and regulatory proceedings will be resolved with no material adverse effect on the consolidated statements of financial condition, results of operations or cash flows of the Company. However, if during any period a potential adverse contingency should become probable or resolved for an amount in excess of the established reserves, the results of operations and cash flows in that period and the financial condition as of the end of that period could be materially adversely affected. In addition, there can be no assurance that material losses will not be incurred from claims that have not yet been brought to the Company's attention or are not yet determined to be reasonably possible.

Several class action complaints were brought on behalf of a purported class of state, local and municipal government entities in connection with the bidding or sale of municipal investment contracts and municipal derivative products directly from one of the defendants or through a broker, from January 1, 1992, to the present. The complaints, which have been consolidated into a single nationwide class action entitled *In re Municipal Derivatives Antitrust Litigation*, MDL No. 1950 (Master Docket No. 08-2516), allege antitrust violations and are pending in the U.S. District Court for the Southern District of New York under the multi-district litigation rules. The consolidated complaint seeks unspecified treble damages under Section 1 of the Sherman Act. Several California municipalities also brought separate class action complaints in California federal court, and approximately eighteen California municipalities and two New York municipalities filed individual lawsuits that are not as part of class actions, all of which have since been transferred to the Southern District of New York and consolidated for pretrial purposes. All three sets of complaints assert similar claims under federal (and for the California and New York plaintiffs, state) antitrust claims. The plaintiffs in the consolidated class action and Piper Jaffray entered into a settlement agreement for *In re Municipal Derivatives Antitrust Litigation* on February 22, 2016. The settlement is subject to court approval after notice to the class. If approved, Piper Jaffray will be required to pay $9.8 million to settle the MDL class action. Litigation in the separate California and New York cases is ongoing.

Litigation-related reserve activity from continuing operations included within other operating expenses resulted in expense of $9.7 million primarily related to the MDL class action litigation, expense of $0.8 million, and a benefit of $4.1 million primarily attributable to the receipt of insurance proceeds for the reimbursement of prior legal settlements for the years ended December 31, 2015, 2014 and 2013, respectively.

Operating Lease Commitments

The Company leases office space throughout the United States and in a limited number of foreign countries where the Company's international operations reside. Aggregate minimum lease commitments under operating leases as of December 31, 2015 are as follows:

(Dollars in thousands)		
2016	$	12,872
2017		10,169
2018		9,694
2019		9,103
2020		8,578
Thereafter		17,884
	$	68,300

Total minimum rentals to be received from 2016 through 2020 under noncancelable subleases were $6.1 million at December 31, 2015.

Rental expense, including operating costs and real estate taxes, from continuing operations was $13.7 million, $13.8 million and $12.9 million for the years ended December 31, 2015, 2014 and 2013, respectively.

Fund Commitments

As of December 31, 2015, the Company had commitments to invest approximately $32.8 million in limited partnerships that make investments in private equity companies or provide financing for senior living facilities.

Other Guarantees

The Company is a member of numerous exchanges and clearinghouses. Under the membership agreements with these entities, members generally are required to guarantee the performance of other members, and if a member becomes unable to satisfy its obligations to the clearinghouse, other members would be required to meet shortfalls. To mitigate these performance risks, the exchanges and clearinghouses often require members to post collateral. In addition, the Company identifies and guarantees certain clearing agents against specified potential losses in connection with providing services to the Company or its affiliates. The Company's maximum potential liability under these arrangements cannot be quantified. However, management believes the likelihood that the Company would be required to make payments under these arrangements is remote. Accordingly, no liability is recorded in the consolidated financial statements for these arrangements.

Concentration of Credit Risk

The Company provides investment, capital-raising and related services to a diverse group of domestic and foreign customers, including governments, corporations, and institutional and individual investors. The Company's exposure to credit risk associated with the non-performance of customers in fulfilling their contractual obligations pursuant to securities transactions can be directly impacted by volatile securities markets, credit markets and regulatory changes. This exposure is measured on an individual customer basis and on a group basis for customers that share similar attributes. To alleviate the potential for risk concentrations, counterparty credit limits have been implemented for certain products and are continually monitored in light of changing customer and market conditions.

Note 19 *Restructuring*

The Company incurred pre-tax restructuring charges of $9.4 million for the year ended December 31, 2015 within the Capital Markets segment. The charges included severance benefits of $8.8 million primarily in conjunction with the 2015 acquisitions discussed in Note 4. The restructuring charges included severance, benefits and outplacement costs associated with the termination of approximately 70 employees. The Company also incurred contract termination costs of $0.6 million.

For the year ended December 31, 2013, the Company incurred pre-tax restructuring charges of $3.6 million from continuing operations. The charges included severance benefits of $2.4 million, $0.5 million for vacating redundant leased office space and $0.7 million for contract termination costs.

Note 20 *Shareholders' Equity*

The certificate of incorporation of Piper Jaffray Companies provides for the issuance of up to 100,000,000 shares of common stock with a par value of $0.01 per share and up to 5,000,000 shares of undesignated preferred stock with a par value of $0.01 per share.

Common Stock

The holders of Piper Jaffray Companies common stock are entitled to one vote per share on all matters to be voted upon by the shareholders. Subject to preferences that may be applicable to any outstanding preferred stock of Piper Jaffray Companies, the holders of its common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the Piper Jaffray Companies board of directors out of funds legally available for that purpose. Piper Jaffray Companies does not currently pay cash dividends on its common stock. Additionally, there are dividend restrictions as set forth in Note 25.

In the event that Piper Jaffray Companies is liquidated or dissolved, the holders of its common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to any prior distribution rights of Piper Jaffray Companies preferred stock, if any, then outstanding. Currently, there is no outstanding preferred stock. The holders of the common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to Piper Jaffray Companies common stock.

During the year ended December 31, 2013, the Company repurchased 1,719,662 shares at an average price of $32.52 per share for an aggregate purchase price of $55.9 million. During the year ended December 31, 2014, the Company did not repurchase any shares of the Company's outstanding common stock.

Effective October 1, 2014, the Company's board of directors authorized the repurchase of up to $100.0 million in common shares through September 30, 2016. Effective August 14, 2015, the Company's board of directors authorized the repurchase of up to an additional $150.0 million in common shares through September 30, 2017. During the year ended December 31, 2015, the Company repurchased 2,459,400 shares at an average price of $48.17 per share for an aggregate purchase price of $118.5 million related to these authorizations. The Company has $131.5 million remaining under these authorizations.

The Company also purchases shares of common stock from restricted stock award recipients upon the award vesting as recipients sell shares to meet their employment tax obligations. The Company purchased 281,180 shares or $14.5 million, 256,055 shares or $10.9 million and 386,713 shares or $15.5 million of the Company's common stock for this purpose during the years ended December 31, 2015, 2014 and 2013, respectively.

The Company issues common shares out of treasury stock as a result of employee restricted share vesting and exercise transactions as discussed in Note 22. During the years ended December 31, 2015, 2014 and 2013, the Company issued 503,571 shares, 774,194 shares and 786,467 shares, respectively, related to these obligations. The Company also issued common shares out of treasury stock related to obligations under the Piper Jaffray Companies Retirement Plan (the "Retirement Plan"). During the years ended December 31, 2014 and 2013, the Company issued 103,598 shares or $4.2 million and 96,049 shares or $3.9 million, respectively, out of treasury stock in fulfillment of these obligations.

Preferred Stock

The Piper Jaffray Companies board of directors has the authority, without action by its shareholders, to designate and issue preferred stock in one or more series and to designate the rights, preferences and privileges of each series, which may be greater than the rights associated with the common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of holders of common stock until the Piper Jaffray Companies board of directors determines the specific rights of the holders of preferred stock. However, the effects might include, among other things, the following: restricting dividends on its common stock, diluting the voting power of its common stock, impairing the liquidation rights of its common stock and delaying or preventing a change in control of Piper Jaffray Companies without further action by its shareholders.

Noncontrolling Interests

The consolidated financial statements include the accounts of Piper Jaffray Companies, its wholly owned subsidiaries and other entities in which the Company has a controlling financial interest. Noncontrolling interests represent equity interests in consolidated entities that are not attributable, either directly or indirectly, to Piper Jaffray Companies. Noncontrolling interests include the minority equity holders' proportionate share of the equity in a municipal bond fund with limited employee investors of $7.0 million, a merchant banking fund of $31.8 million and private investment vehicles aggregating $10.4 million as of December 31, 2015. As of December 31, 2014, noncontrolling interests included the minority equity holders' proportionate share of the equity in a municipal bond fund with outside investors of $117.0 million, a merchant banking fund of $24.7 million and private investment vehicles aggregating $7.8 million. The Company closed and completed liquidation of the municipal bond fund with outside investors in 2015.

Ownership interests in entities held by parties other than the Company's common shareholders are presented as noncontrolling interests within shareholders' equity, separate from the Company's own equity. Revenues, expenses and net income or loss are reported on the consolidated statements of operations on a consolidated basis, which includes amounts attributable to both the Company's common shareholders and noncontrolling interests. Net income or loss is then allocated between the Company and noncontrolling interests based upon their relative ownership interests. Net income applicable to noncontrolling interests is deducted from consolidated net income to determine net income applicable to the Company. There was no other comprehensive income or loss attributed to noncontrolling interests for the years ended December 31, 2015, 2014 and 2013.

Note 21 *Employee Benefit Plans*

The Company has various employee benefit plans, and substantially all employees are covered by at least one plan. The plans include health and welfare plans and a tax-qualified retirement plan (the "Retirement Plan"). During the years ended December 31, 2015, 2014 and 2013, the Company incurred employee benefits expenses from continuing operations of $15.1 million, $13.2 million and $12.1 million, respectively.

Health and Welfare Plans

Company employees who meet certain work schedule and service requirements are eligible to participate in the Company's health and welfare plans. The Company subsidizes the cost of coverage for employees. The health plans contain cost-sharing features such as deductibles and coinsurance.

The Company is self-insured for losses related to health claims, although it obtains third party stop loss insurance coverage on both an individual and a group plan basis. Self-insured liabilities are based on a number of factors, including historical claims experience, an estimate of claims incurred but not reported and valuations provided by third party actuaries. For the years ended December 31, 2015, 2014 and 2013, the Company recognized expense of $9.1 million, $7.7 million and $7.2 million, respectively, in compensation and benefits expense from continuing operations on the consolidated statements of operations related to its health plans.

Retirement Plan

The Retirement Plan consists of a defined contribution retirement savings plan. The defined contribution retirement savings plan allows qualified employees, at their option, to make contributions through salary deductions under Section 401(k) of the Internal Revenue Code. Employee contributions are 100 percent matched by the Company to a maximum of six percent of recognized compensation up to the social security taxable wage base. Although the Company's matching contribution vests immediately, a participant must be employed on December 31 to receive that year's matching contribution.

Note 22 *Compensation Plans*

Stock-Based Compensation Plans

The Company maintains one stock-based compensation plan, the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan (the "Incentive Plan"). The Company's equity awards are recognized on the consolidated statements of operations at grant date fair value over the service period of the award, net of estimated forfeitures.

The following table provides a summary of the Company's outstanding Incentive Plan equity awards (in shares or units) as of December 31, 2015:

Restricted Stock	
Annual grants	932,377
Sign-on grants	355,538
	1,287,915
Restricted Stock Units	
Market conditon leadership grants	356,242
Stock Options	157,201

Incentive Plan

The Incentive Plan permits the grant of equity awards, including restricted stock, restricted stock units and non-qualified stock options, to the Company's employees and directors for up to 8.2 million shares of common stock (1.6 million shares remained available for future issuance under the Incentive Plan as of December 31, 2015). The Company believes that such awards help align the interests of employees and directors with those of shareholders and serve as an employee retention tool. The Incentive Plan provides for accelerated vesting of awards if there is a severance event, a change in control of the Company (as defined in the Incentive Plan), in the event of a participant's death, and at the discretion of the compensation committee of the Company's board of directors.

Restricted Stock Awards

Restricted stock grants are valued at the market price of the Company's common stock on the date of grant and are amortized over the related requisite service period. The Company grants shares of restricted stock to current employees as part of year-end compensation ("Annual Grants") and as a retention tool. Employees may also receive restricted stock upon initial hiring or as a retention award ("Sign-on Grants").

The Company's Annual Grants are made each year in February. Annual Grants vest ratably over three years in equal installments. The Annual Grants provide for continued vesting after termination of employment, so long as the employee does not violate certain post-termination restrictions set forth in the award agreement or any agreements entered into upon termination. The Company determined the service inception date precedes the grant date for the Annual Grants, and that the post-termination restrictions do not meet the criteria for an in-substance service condition, as defined by ASC 718. Accordingly, restricted stock granted as part of the Annual Grants is expensed in the one-year period in which those awards are deemed to be earned, which is generally the calendar year preceding the February grant date. For example, the Company recognized compensation expense during fiscal 2015 for its February 2016 Annual Grant. If an equity award related to the Annual Grants is forfeited as a result of violating the post-termination restrictions, the lower of the fair value of the award at grant date or the fair value of the award at the date of forfeiture is recorded within the consolidated statements of operations as a reversal of compensation expense.

Sign-on Grants are used as a recruiting tool for new employees and are issued to current employees as a retention tool. These awards have both cliff and ratable vesting terms, and the employees must fulfill service requirements in exchange for rights to the awards. Compensation expense is amortized on a straight-line basis from the grant date over the requisite service period, generally two to five years. Employees forfeit unvested shares upon termination of employment and a reversal of compensation expense is recorded.

Annually, the Company grants stock to its non-employee directors. The stock-based compensation paid to non-employee directors is fully expensed on the grant date and included within outside services expense on the consolidated statements of operations.

Restricted Stock Units

The Company grants restricted stock units to its leadership team ("Leadership Grants"). The units will vest and convert to shares of common stock at the end of each 36-month performance period only if the Company's stock performance satisfies predetermined market conditions over the performance period. Under the terms of the grants, the number of units that will vest and convert to shares will be based on the Company's stock performance achieving specified market conditions during each performance period as described below. Compensation expense is amortized on a straight-line basis over the three-year requisite service period based on the fair value of the award on the grant date. The market condition must be met for the awards to vest and compensation cost will be recognized regardless if the market condition is satisfied. Employees forfeit unvested share units upon termination of employment with a corresponding reversal of compensation expense.

Up to 50 percent of the award can be earned based on the Company's total shareholder return relative to members of a predetermined peer group and up to 50 percent of the award can be earned based on the Company's total shareholder return. The fair value of the awards on the grant date was determined using a Monte Carlo simulation with the following assumptions:

Grant Year	Risk-free Interest Rate	Expected Stock Price Volatility
2015	0.90%	29.8%
2014	0.82%	41.3%
2013	0.40%	44.0%

Because a portion of the award vesting depends on the Company's total shareholder return relative to a peer group, the valuation modeled the performance of the peer group as well as the correlation between the Company and the peer group. The expected stock price volatility assumptions were determined using historical volatility, as correlation coefficients can only be developed through historical volatility. The risk-free interest rates were determined based on three-year U.S. Treasury bond yields.

Stock Options

The Company previously granted options to purchase Piper Jaffray Companies common stock to employees and non-employee directors in fiscal years 2004 through 2008. Employee and director options were expensed by the Company on a straight-line basis over the required service period, based on the estimated fair value of the award on the date of grant using a Black-Scholes option-pricing model. As described above pertaining to the Company's Annual Grants of restricted shares, stock options granted to employees were expensed in the calendar year preceding the annual February grant date. For example, the Company recognized compensation expense during fiscal 2007 for its February 2008 option grant. The maximum term of the stock options granted to employees and directors is ten years. The Company has not granted stock options since 2008.

Inducement Plan

In 2010, the Company established the 2010 Employment Inducement Award Plan (the "Inducement Plan") in conjunction with the acquisition of ARI. The Company granted $7.0 million in restricted stock (158,801 shares) under the Inducement Plan to ARI employees upon closing of the transaction. These shares vested ratably over five years in equal annual installments ending on March 1, 2015. The Company terminated the Inducement Plan in March 2015.

Stock-Based Compensation Activity

The Company recorded total compensation expense within continuing operations of $48.2 million, $28.2 million and $21.0 million for the years ended December 31, 2015, 2014 and 2013, respectively, related to employee restricted stock and restricted stock unit awards. Total compensation cost includes year-end compensation for Annual Grants and the amortization of Sign-on and Leadership Grants, less forfeitures of $0.5 million, $0.7 million and $1.0 million for the years ended December 31, 2015, 2014 and 2013, respectively. The tax benefit related to stock-based compensation costs totaled $18.8 million, $11.0 million and $8.2 million for the years ended December 31, 2015, 2014 and 2013, respectively.

The following table summarizes the changes in the Company's unvested restricted stock under the Incentive Plan and Inducement Plan:

	Unvested Restricted Stock (in Shares)	Weighted Average Grant Date Fair Value
December 31, 2012	**2,322,438**	**$ 37.01**
Granted	682,760	38.35
Vested	(1,165,989)	39.83
Canceled	(257,147)	38.30
December 31, 2013	**1,582,062**	**$ 35.25**
Granted	421,728	40.57
Vested	(883,761)	36.22
Canceled	(24,724)	36.02
December 31, 2014	**1,095,305**	**$ 36.51**
Granted	783,758	51.08
Vested	(575,716)	34.72
Canceled	(15,432)	40.83
December 31, 2015	**1,287,915**	**$ 46.20**

The fair value of restricted stock that vested during the years ended December 31, 2015, 2014 and 2013 was $20.0 million, $32.0 million and $46.4 million, respectively.

The following table summarizes the changes in the Company's unvested restricted stock units under the Incentive Plan:

	Unvested Restricted Stock Units	Weighted Average Grant Date Fair Value
December 31, 2012	**173,271**	**$ 12.12**
Granted	117,265	21.32
Vested	—	—
Canceled	—	—
December 31, 2013	**290,536**	**$ 15.83**
Granted	115,290	23.42
Vested	—	—
Canceled	—	—
December 31, 2014	**405,826**	**$ 17.99**
Granted	123,687	21.83
Vested	(149,814)	12.12
Canceled	(23,457)	12.12
December 31, 2015	**356,242**	**$ 22.18**

As of December 31, 2015, there was $15.2 million of total unrecognized compensation cost related to restricted stock and restricted stock units expected to be recognized over a weighted average period of 2.3 years.

The following table summarizes the changes in the Company's outstanding stock options:

	Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value
December 31, 2012	**486,563**	**$ 44.76**	**2.9**	**$ 94,150**
Granted	—	—		
Exercised	—	—		
Canceled	(17,274)	42.85		
December 31, 2013	**469,289**	**$ 44.83**	**2.0**	**$ 288,318**
Granted	—	—		
Exercised	(137,864)	39.55		
Canceled	(55)	39.62		
Expired	(113,497)	$ 47.72		
December 31, 2014	**217,873**	**$ 46.66**	**2.0**	**$ 3,066,839**
Granted	—	—		
Exercised	(50,671)	36.62		
Canceled	—	—		
Expired	(10,001)	39.62		
December 31, 2015	**157,201**	**$ 50.35**	**1.6**	**$ —**
Options exercisable at December 31, 2013	**469,289**	**$ 44.83**	**2.0**	**$ 288,318**
Options exercisable at December 31, 2014	**217,873**	**$ 46.66**	**2.0**	**$ 3,066,839**
Options exercisable at December 31, 2015	**157,201**	**$ 50.35**	**1.6**	**$ —**

Additional information regarding Piper Jaffray Companies options outstanding as of December 31, 2015 is as follows:

	Options Outstanding			Exercisable Options	
Range of Exercise Prices	**Shares**	**Weighted Average Remaining Contractual Life (in Years)**	**Weighted Average Exercise Price**	**Shares**	**Weighted Average Exercise Price**
$41.09	99,147	2.1	$ 41.09	99,147	$ 41.09
$47.85	10,641	0.1	$ 47.85	10,641	$ 47.85
$70.13 - $70.65	47,413	0.9	$ 70.26	47,413	$ 70.26

As of December 31, 2015, there was no unrecognized compensation cost related to stock options expected to be recognized over future years.

The intrinsic value of options exercised and the resulting tax benefit realized was $0.9 million and $0.3 million, respectively, for the year ended December 31, 2015. For the year ended December 31, 2014, the intrinsic value of options exercised and the resulting tax benefit realized was $1.7 million and $0.7 million, respectively. There were no options exercised during the year ended December 31, 2013.

The Company has a policy of issuing shares out of treasury (to the extent available) to satisfy share option exercises and restricted stock vesting. The Company expects to withhold approximately 0.3 million shares from employee equity awards vesting in 2016, related to employee individual income tax withholding obligations on restricted stock vesting. For accounting purposes, withholding shares to cover employees' tax obligations is deemed to be a repurchase of shares by the Company.

Deferred Compensation Plans

The Company maintains various deferred compensation arrangements for employees.

The nonqualified deferred compensation plan is an unfunded plan which allows certain highly compensated employees, at their election, to defer a percentage of their base salary, commissions and/or cash bonuses. The deferrals vest immediately and are non-forfeitable. The amounts deferred under this plan are held in a grantor trust. The Company invests, as a principal, in investments to economically hedge its obligation under the nonqualified deferred compensation plan. Investments in the grantor trust, consisting of mutual funds, totaled $14.6 million and $6.6 million as of December 31, 2015 and 2014, respectively, and are included in investments on the consolidated statements of financial condition. The compensation deferred by the employees is expensed in the period earned. The deferred compensation liability was $14.5 million and $6.6 million as of December 31, 2015 and 2014, respectively. Changes in the fair value of the investments made by the Company are reported in investment income and changes in the corresponding deferred compensation liability are reflected as compensation and benefits expense on the consolidated statements of operations.

The Piper Jaffray Companies Mutual Fund Restricted Share Investment Plan is a fully funded deferred compensation plan which allows eligible employees to elect to receive a portion of the incentive compensation they would otherwise receive in the form of restricted stock, instead in restricted mutual fund shares ("MFRS Awards") of registered funds managed by the Company's asset management business. MFRS Awards are awarded to qualifying employees in February of each year, and represent a portion of their compensation for performance in the preceding year similar to the Company's Annual Grants. MFRS Awards vest ratably over three years in equal installments and provide for continued vesting after termination of employment so long as the employee does not violate certain post-termination restrictions set forth in the award agreement or any agreement entered into upon termination. Forfeitures are recorded as a reduction of compensation and benefits expense within the consolidated statements of operations.

The Company has also granted MFRS Awards to new employees as a recruiting tool. Employees must fulfill service requirements in exchange for rights to the awards. Compensation expense from these awards will be amortized on a straight-line basis over the requisite service period of two to five years.

The Company recorded total compensation expense within continuing operations of $26.6 million, $20.0 million and $15.2 million for the years ended December 31, 2015, 2014 and 2013, respectively, related to employee MFRS Awards. Total compensation cost includes year-end compensation for MFRS Awards and the amortization of sign-on MFRS Awards, less forfeitures. Forfeitures were immaterial for the years ended December 31, 2015, 2014 and 2013, respectively. MFRS Awards are owned by employee recipients and as such are not included on the consolidated statements of financial condition.

Note 23 *Earnings Per Share*

The Company calculates earnings per share using the two-class method. Basic earnings per common share is computed by dividing net income/(loss) applicable to Piper Jaffray Companies' common shareholders by the weighted average number of common shares outstanding for the period. Net income/(loss) applicable to Piper Jaffray Companies' common shareholders represents net income/(loss) applicable to Piper Jaffray Companies reduced by the allocation of earnings to participating securities. Losses are not allocated to participating securities. All of the Company's unvested restricted shares are deemed to be participating securities as they are eligible to share in the profits (e.g., receive dividends) of the Company. The Company's unvested restricted stock units are not participating securities as they are not eligible to share in the profits of the Company. Diluted earnings per common share is calculated by adjusting the weighted average outstanding shares to assume conversion of all potentially dilutive stock options.

The computation of earnings per share is as follows:

	Year Ended December 31,		
(Amounts in thousands, except per share data)	**2015**	**2014**	**2013**
Net income from continuing operations applicable to Piper Jaffray Companies	**$ 52,075**	$ 63,172	$ 49,829
Net loss from discontinued operations	**—**	—	(4,739)
Net income applicable to Piper Jaffray Companies	**52,075**	63,172	45,090
Earnings allocated to participating securities (1)	**(4,015)**	(5,031)	(4,494)
Net income applicable to Piper Jaffray Companies' common shareholders (2)	**$ 48,060**	$ 58,141	$ 40,596
Shares for basic and diluted calculations:			
Average shares used in basic computation	**14,368**	14,971	15,046
Stock options	**21**	54	15
Average shares used in diluted computation	**14,389**	15,025	15,061
Earnings/(loss) per basic common share:			
Income from continuing operations	**$ 3.34**	$ 3.88	$ 2.98
Loss from discontinued operations	**—**	—	(0.28)
Earnings per basic common share	**$ 3.34**	$ 3.88	$ 2.70
Earnings/(loss) per diluted common share:			
Income from continuing operations	**$ 3.34**	$ 3.87	$ 2.98
Loss from discontinued operations	**—**	—	(0.28)
Earnings per diluted common share	**$ 3.34**	$ 3.87	$ 2.70

(1) Represents the allocation of earnings to participating securities. Losses are not allocated to participating securities. Participating securities include all of the Company's unvested restricted shares. The weighted average participating shares outstanding were 1,201,610; 1,299,827 and 1,667,067 for the years ended December 31, 2015, 2014 and 2013, respectively.

(2) Net income/(loss) applicable to Piper Jaffray Companies' common shareholders for diluted and basic EPS may differ under the two-class method as a result of adding the effect of the assumed exercise of stock options to dilutive shares outstanding, which alters the ratio used to allocate earnings to Piper Jaffray Companies' common shareholders and participating securities for purposes of calculating diluted and basic EPS.

The anti-dilutive effects from stock options were immaterial for the years ended December 31, 2015, 2014 and 2013.

Note 24 *Segment Reporting*

Basis for Presentation

The Company structures its segments primarily based upon the nature of the financial products and services provided to customers and the Company's management organization. The Company evaluates performance and allocates resources based on segment pre-tax operating income or loss and segment pre-tax operating margin. Revenues and expenses directly associated with each respective segment are included in determining their operating results. Other revenues and expenses that are not directly attributable to a particular segment are allocated based upon the Company's allocation methodologies, including each segment's respective net revenues, use of shared resources, headcount or other relevant measures. Segment assets are based on those directly associated with each segment, and include an allocation of certain assets based on the most relevant measures applicable, including headcount and other factors. The substantial majority of the Company's net revenues and long-lived assets are located in the U.S.

Segment pre-tax operating income and segment pre-tax operating margin exclude the results of discontinued operations.

Reportable segment financial results are as follows:

	Year Ended December 31,		
(Dollars in thousands)	**2015**	**2014**	**2013**
Capital Markets			
Investment banking			
Financing			
Equities	**$ 114,468**	$ 109,706	$ 94,472
Debt	**91,195**	63,005	71,164
Advisory services	**209,163**	197,880	83,292
Total investment banking	**414,826**	370,591	248,928
Institutional sales and trading			
Equities	**78,584**	82,211	91,169
Fixed income	**94,305**	92,200	76,275
Total institutional sales and trading	**172,889**	174,411	167,444
Management and performance fees	**4,642**	5,398	3,891
Investment income	**24,468**	24,046	30,404
Long-term financing expenses	**(7,494)**	(6,655)	(7,420)
Net revenues	**609,331**	567,791	443,247
Operating expenses (1)	**530,937**	478,661	393,231
Segment pre-tax operating income	**$ 78,394**	$ 89,130	$ 50,016
Segment pre-tax operating margin	**12.9%**	15.7%	11.3%

Continued on next page

Piper Jaffray Companies

Notes to the Consolidated Financial Statements – Continued

(Dollars in thousands)	Year Ended December 31, 2015	2014	2013
Asset Management			
Management and performance fees			
Management fees	**$ 70,167**	$ 78,772	$ 71,314
Performance fees	**208**	892	7,840
Total management and performance fees	**70,375**	79,664	79,154
Investment income/(loss)	**(6,788)**	683	2,794
Net revenues	**63,587**	80,347	81,948
Operating expenses (1)	**55,558**	59,166	56,351
Segment pre-tax operating income	**$ 8,029**	$ 21,181	$ 25,597
Segment pre-tax operating margin	**12.6%**	26.4%	31.2%
Total			
Net revenues	**$ 672,918**	$ 648,138	$ 525,195
Operating expenses (1)	**586,495**	537,827	449,582
Pre-tax operating income	**$ 86,423**	$ 110,311	$ 75,613
Pre-tax operating margin	**12.8%**	17.0%	14.4%

(1)Operating expenses include intangible asset amortization expense as set forth in the table below:

(Dollars in thousands)	Year Ended December 31, 2015	2014	2013
Capital Markets	**$ 1,622**	$ 2,972	$ 1,349
Asset Management	**6,040**	6,300	6,644
Total intangible asset amortization expense	**$ 7,662**	$ 9,272	$ 7,993

Reportable segment assets are as follows:

(Dollars in thousands)	December 31, 2015	December 31, 2014
Capital Markets	**$ 1,870,272**	$ 2,352,404
Asset Management	**268,246**	271,513
	$ 2,138,518	$ 2,623,917

Note 25 *Net Capital Requirements and Other Regulatory Matters*

Piper Jaffray is registered as a securities broker dealer with the SEC and is a member of various SROs and securities exchanges. The Financial Industry Regulatory Authority ("FINRA") serves as Piper Jaffray's primary SRO. Piper Jaffray is subject to the uniform net capital rule of the SEC and the net capital rule of FINRA. Piper Jaffray has elected to use the alternative method permitted by the SEC rule, which requires that it maintain minimum net capital of the greater of $1.0 million or 2 percent of aggregate debit balances arising from customer transactions, as such term is defined in the SEC rule. Under its rules, FINRA may prohibit a member firm from expanding its business or paying dividends if resulting net capital would be less than 5 percent of aggregate debit balances. Advances to affiliates, repayment of subordinated debt, dividend payments and other equity withdrawals by Piper Jaffray are subject to certain notification and other provisions of SEC and FINRA rules.

At December 31, 2015, net capital calculated under the SEC rule was $187.9 million, and exceeded the minimum net capital required under the SEC rule by $186.9 million.

The Company's committed short-term credit facility and its senior notes include covenants requiring Piper Jaffray to maintain minimum net capital of $120 million. CP Notes issued under CP Series III A include a covenant that requires Piper Jaffray to maintain excess net capital of $120 million.

Piper Jaffray Ltd., a broker dealer subsidiary registered in the United Kingdom, was subject to the capital requirements of the Prudential Regulation Authority and the Financial Conduct Authority. As of December 31, 2015, Piper Jaffray Ltd. was in compliance with the capital requirements of the Prudential Regulation Authority and the Financial Conduct Authority.

Piper Jaffray Hong Kong Limited is licensed by the Hong Kong Securities and Futures Commission, which is subject to the liquid capital requirements of the Securities and Futures (Financial Resources) Rule promulgated under the Securities and Futures Ordinance. At December 31, 2015, Piper Jaffray Hong Kong Limited was in compliance with the liquid capital requirements of the Hong Kong Securities and Futures Commission.

Note 26 *Income Taxes*

Income tax expense is provided using the asset and liability method. Deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to temporary differences between amounts reported for income tax purposes and financial statement purposes, using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

The components of income tax expense from continuing operations are as follows:

	Year Ended December 31,		
(Dollars in thousands)	**2015**	**2014**	**2013**
Current:			
Federal	**$ 33,818**	$ 37,331	$ 20,468
State	**7,030**	8,117	3,795
Foreign	**58**	161	183
	40,906	45,609	24,446
Deferred:			
Federal	**(11,620)**	(8,641)	(1,582)
State	**(1,901)**	(1,317)	(4,041)
Foreign	**556**	335	1,567
	(12,965)	(9,623)	(4,056)
Total income tax expense from continuing operations	**$ 27,941**	$ 35,986	$ 20,390
Total income tax benefit from discontinued operations	**$ —**	$ —	$ (2,935)

A reconciliation of federal income taxes at statutory rates to the Company's effective tax rates from continuing operations is as follows:

	Year Ended December 31,		
(Dollars in thousands)	**2015**	**2014**	**2013**
Federal income tax expense at statutory rates	**$ 30,248**	$ 38,609	$ 26,464
Increase/(reduction) in taxes resulting from:			
State income taxes, net of federal tax benefit	**3,155**	3,857	2,785
Net tax-exempt interest income	**(4,299)**	(3,693)	(3,917)
Foreign jurisdictions tax rate differential	**191**	(63)	(185)
Change in valuation allowance	**—**	—	(4,182)
Income attributable to noncontrolling interests	**(2,243)**	(3,903)	(1,888)
Other, net	**889**	1,179	1,313
Total income tax expense from continuing operations	**$ 27,941**	$ 35,986	$ 20,390

In accordance with ASC 740, U.S. income taxes are not provided on undistributed earnings of international subsidiaries that are permanently reinvested. As of December 31, 2015, undistributed earnings permanently reinvested in the Company's foreign subsidiaries were not material.

Deferred income tax assets and liabilities reflect the tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for the same items for income tax reporting purposes. The net deferred income tax assets included in other assets on the consolidated statements of financial condition consisted of the following items:

(Dollars in thousands)	**December 31, 2015**	**December 31, 2014**
Deferred tax assets:		
Deferred compensation	**$ 74,127**	$ 56,893
Net operating loss carry forwards	**3,947**	4,854
Liabilities/accruals not currently deductible	**5,454**	1,601
Other	**5,175**	2,930
Total deferred tax assets	**88,703**	66,278
Valuation allowance	**(159)**	(159)
Deferred tax assets after valuation allowance	**88,544**	66,119
Deferred tax liabilities:		
Goodwill amortization	**16,951**	15,028
Unrealized gains on firm investments	**2,917**	3,221
Fixed assets	**1,189**	945
Other	**677**	1,074
Total deferred tax liabilities	**21,734**	20,268
Net deferred tax assets	**$ 66,810**	$ 45,851

The realization of deferred tax assets is assessed and a valuation allowance is recorded to the extent that it is more likely than not that any portion of the deferred tax asset will not be realized. The Company believes that its future tax profits will be sufficient to recognize its deferred tax assets, with the exception of $0.2 million in state net operating loss carryforwards.

The Company accounts for unrecognized tax benefits in accordance with the provisions of ASC 740, which requires tax reserves to be recorded for uncertain tax positions on the consolidated statements of financial condition. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(Dollars in thousands)		
Balance at December 31, 2012	**$**	**290**
Additions based on tax positions related to the current year		—
Additions for tax positions of prior years		2,000
Reductions for tax positions of prior years		(90)
Settlements		—
Balance at December 31, 2013	**$**	**2,200**
Additions based on tax positions related to the current year		—
Additions for tax positions of prior years		123
Reductions for tax positions of prior years		—
Settlements		—
Balance at December 31, 2014	**$**	**2,323**
Additions based on tax positions related to the current year		—
Additions for tax positions of prior years		—
Reductions for tax positions of prior years		(2,000)
Settlements		(200)
Balance at December 31, 2015	**$**	**123**

As of December 31, 2015, approximately $0.1 million of the Company's unrecognized tax benefits would impact the annual effective rate, if recognized.

The Company recognizes interest and penalties accrued related to unrecognized tax benefits as a component of income tax expense. The Company had no accruals related to the payment of interest and penalties at December 31, 2015. The Company had approximately $0.2 million for the payment of interest and penalties accrued at December 31, 2014 and 2013, respectively, which was recognized during the year ended December 31, 2013. The Company or one of its subsidiaries files income tax returns with the various states and foreign jurisdictions in which the Company operates. The Company is not subject to U.S. federal tax authorities for years before 2012 and is not subject to state and local or non-U.S. tax authorities for taxable years before 2010. The Company anticipates all of its uncertain income tax provisions will be resolved within the next twelve months.

Note 27 *Piper Jaffray Companies (Parent Company only)*

Condensed Statements of Financial Condition

(Amounts in thousands)		December 31, 2015		December 31, 2014
Assets				
Cash and cash equivalents	**$**	**48**	$	200
Investment in and advances to subsidiaries		**982,426**		956,609
Other assets		**15,843**		13,819
Total assets	**$**	**998,317**	$	970,628
Liabilities and Shareholders' Equity				
Senior notes	**$**	**175,000**	$	125,000
Accrued compensation		**36,347**		24,618
Other liabilities and accrued expenses		**3,311**		1,098
Total liabilities		**214,658**		150,716
Shareholders' equity		**783,659**		819,912
Total liabilities and shareholders' equity	**$**	**998,317**	$	970,628

Piper Jaffray Companies

Notes to the Consolidated Financial Statements – Continued

Condensed Statements of Operations

(Amounts in thousands)	Year Ended December 31, 2015	2014	2013
Revenues:			
Dividends from subsidiaries	**$ 37,649**	$ 50,333	$ 46,000
Interest	**650**	662	254
Investment income/(loss)	**(2,033)**	275	198
Total revenues	**36,266**	51,270	46,452
Interest expense	**6,406**	5,463	5,850
Net revenues	**29,860**	45,807	40,602
Non-interest expenses:			
Total non-interest expenses	**3,487**	5,318	3,096
Income from continuing operations before income tax expense and equity in undistributed income of subsidiaries	**26,373**	40,489	37,506
Income tax expense	**9,191**	14,795	13,263
Income from continuing operations of parent company	**17,182**	25,694	24,243
Equity in undistributed income of subsidiaries	**34,893**	37,478	25,200
Net income from continuing operations	**52,075**	63,172	49,443
Discontinued operations:			
Loss from discontinued operations, net of tax	**—**	—	(4,353)
Net income	**$ 52,075**	$ 63,172	$ 45,090

Piper Jaffray Companies

Notes to the Consolidated Financial Statements – Continued

Condensed Statements of Cash Flows

	Year Ended December 31,		
(Amounts in thousands)	**2015**	**2014**	**2013**
Operating Activities:			
Net income	**$ 52,075**	$ 63,172	$ 45,090
Adjustments to reconcile net income to net cash provided by operating activities:			
Stock-based and deferred compensation	**70**	180	60
Equity in undistributed income of subsidiaries	**(34,893)**	(37,478)	(25,200)
Net cash provided by operating activities	**17,252**	25,874	19,950
Investing Activities:			
Repayment of FAMCO note	**1,500**	2,000	250
Net cash provided by investing activities	**1,500**	2,000	250
Financing Activities:			
Issuance of senior notes	**125,000**	50,000	—
Repayment of senior notes	**(75,000)**	(50,000)	—
Advances from/(to) subsidiaries	**49,560**	(28,010)	34,996
Repurchase of common stock	**(118,464)**	—	(55,929)
Net cash used in financing activities	**(18,904)**	(28,010)	(20,933)
Net decrease in cash and cash equivalents	**(152)**	(136)	(733)
Cash and cash equivalents at beginning of year	**200**	336	1,069
Cash and cash equivalents at end of year	**$ 48**	$ 200	$ 336
Supplemental disclosures of cash flow information			
Cash paid during the year for:			
Interest	**$ (5,756)**	$ (4,801)	$ (5,596)
Income taxes	**$ (9,191)**	$ (14,795)	$ (13,263)

Piper Jaffray Companies

Supplementary Data

Quarterly Information (unaudited)

	2015 Fiscal Quarter			
(Amounts in thousands, except per share data)	**First**	**Second**	**Third**	**Fourth**
Total revenues	$ 168,431	$ 170,110	$ 154,732	$ 203,044
Interest expense	6,560	6,044	5,115	5,680
Net revenues	161,871	164,066	149,617	197,364
Non-interest expenses	130,579	138,207	142,829	174,880
Income before income tax expense	31,292	25,859	6,788	22,484
Income tax expense	9,490	9,542	1,573	7,336
Net income	21,802	16,317	5,215	15,148
Net income/(loss) applicable to noncontrolling interests	4,830	(682)	384	1,875
Net income applicable to Piper Jaffray Companies	$ 16,972	$ 16,999	$ 4,831	13,273
Net income applicable to Piper Jaffray Companies' common shareholders	$ 15,810	$ 15,699	$ 4,448	$ 12,147
Earnings per common share				
Basic	$ 1.03	$ 1.08	$ 0.32	$ 0.88
Diluted	$ 1.03	$ 1.08	$ 0.32	$ 0.88
Weighted average number of common shares				
Basic	15,294	14,487	13,938	13,775
Diluted	15,332	14,513	13,952	13,782

	2014 Fiscal Quarter			
(Amounts in thousands, except per share data)	**First**	**Second**	**Third**	**Fourth**
Total revenues	$ 173,894	$ 175,976	$ 165,947	$ 157,394
Interest expense	5,761	5,945	6,521	6,846
Net revenues	168,133	170,031	159,426	150,548
Non-interest expenses	135,420	139,614	133,734	129,059
Income before income tax expense	32,713	30,417	25,692	21,489
Income tax expense	9,827	10,049	8,596	7,514
Net income	22,886	20,368	17,096	13,975
Net income applicable to noncontrolling interests	5,138	2,155	2,428	1,432
Net income applicable to Piper Jaffray Companies	$ 17,748	$ 18,213	$ 14,668	$ 12,543
Net income applicable to Piper Jaffray Companies' common shareholders	$ 16,089	$ 16,717	$ 13,552	$ 11,700
Earnings per common share				
Basic	$ 1.10	$ 1.12	$ 0.90	$ 0.77
Diluted	$ 1.10	$ 1.11	$ 0.90	$ 0.77
Weighted average number of common shares				
Basic	14,612	14,958	15,066	15,241
Diluted	14,657	15,013	15,129	15,293

ITEM 9. ***CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.***

None.

ITEM 9A. ***CONTROLS AND PROCEDURES.***

As of the end of the period covered by this report, we conducted an evaluation, under the supervision and with the participation of our principal executive officer and principal financial officer, of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934). Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is (a) recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and (b) accumulated and communicated to our management, including our principal executive officer and principal financial officer to allow timely decisions regarding disclosure.

During the fourth quarter of our fiscal year ended December 31, 2015, there was no change in our system of internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934) that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting and the attestation report of our independent registered public accounting firm on management's assessment of internal control over financial reporting are included in Part II, Item 8 entitled "Financial Statements and Supplementary Data" and are incorporated herein by reference.

ITEM 9B. ***OTHER INFORMATION.***

Not applicable.

PART III

ITEM 10. ***DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.***

The information regarding our executive officers included in Part I of this Form 10-K under the caption "Executive Officers" is incorporated herein by reference. The information in the definitive proxy statement for our 2016 annual meeting of shareholders to be held on May 4, 2016, under the captions "Item I — Election of Directors," "Information Regarding the Board of Directors and Corporate Governance — Committees of the Board — Audit Committee," "Information Regarding the Board of Directors and Corporate Governance — Codes of Ethics and Business Conduct" and "Section 16(a) Beneficial Ownership Reporting Compliance" is incorporated herein by reference.

ITEM 11. ***EXECUTIVE COMPENSATION.***

The information in the definitive proxy statement for our 2016 annual meeting of shareholders to be held on May 4, 2016, under the captions "Executive Compensation," "Certain Relationships and Related Transactions — Compensation Committee Interlocks and Insider Participation," "Information Regarding the Board of Directors and Corporate Governance — Compensation Program for Non-Employee Directors" and "Information Regarding the Board of Directors and Corporate Governance — Non-Employee Director Compensation for 2015" is incorporated herein by reference.

ITEM 12. ***SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED SHAREHOLDER MATTERS.***

The information in the definitive proxy statement for our 2016 annual meeting of shareholders to be held on May 4, 2016, under the captions "Security Ownership — Beneficial Ownership of Directors, Nominees and Executive Officers," "Security Ownership — Beneficial Owners of More than Five Percent of Our Common Stock" and "Executive Compensation — Outstanding Equity Awards" are incorporated herein by reference.

ITEM 13. ***CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.***

The information in the definitive proxy statement for our 2016 annual meeting of shareholders to be held on May 4, 2016, under the captions "Information Regarding the Board of Directors and Corporate Governance — Director Independence," "Certain Relationships and Related Transactions — Transactions with Related Persons" and "Certain Relationships and Related Transactions — Review and Approval of Transactions with Related Persons" is incorporated herein by reference.

ITEM 14. ***PRINCIPAL ACCOUNTANT FEES AND SERVICES.***

The information in the definitive proxy statement for our 2016 annual meeting of shareholders to be held on May 4, 2016, under the captions "Audit Committee Report and Payment of Fees to Our Independent Auditor — Auditor Fees" and "Audit Committee Report and Payment of Fees to Our Independent Auditor — Auditor Services Pre-Approval Policy" is incorporated herein by reference.

PART IV

ITEM 15. ***EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.***

(a)(1) FINANCIAL STATEMENTS OF THE COMPANY.

The Consolidated Financial Statements are incorporated herein by reference and included in Part II, Item 8 to this Form 10-K.

(a)(2) FINANCIAL STATEMENT SCHEDULES.

All financial statement schedules for the Company have been included in the consolidated financial statements or the related footnotes, or are either inapplicable or not required.

(a)(3) EXHIBITS.

Exhibit Number	Description
2.1	Separation and Distribution Agreement dated as of December 23, 2003, between U.S. Bancorp and Piper Jaffray Companies (incorporated by reference to Exhibit 2.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003, filed March 8, 2004). #
2.2	Securities Purchase Agreement dated November 16, 2015 among Piper Jaffray Companies, Piper Jaffray & Co., Simmons & Company International, SCI JV LP, SCI GP, LLC, and Simmons & Company International Holdings LLC (*excluding schedules and exhibits, which the registrant agrees to furnish supplementally to the Securities and Exchange Commission upon request*) (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, filed November 17, 2015).
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2007, filed August 3, 2007).
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2007, filed August 3, 2007).
4.1	Form of Specimen Certificate for Piper Jaffray Companies Common Stock. *
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10.3	U.S. Bancorp Piper Jaffray Inc. Second Century 2000 Deferred Compensation Plan (incorporated by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003, filed March 8, 2004). †
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10.6	Piper Jaffray Companies Deferred Compensation Plan (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2013, filed July 31, 2013). †
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10.10	Form of Restricted Stock Agreement for California-based Employee Grants in 2015 (related to 2014 performance) under the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan (incorporated by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed February 26, 2015). †
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10.14	Form of Stock Option Agreement for Non-Employee Director Grants under the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan (incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2004, filed August 4, 2004). †
10.15	Form of Performance Share Unit Agreement for 2012 Leadership Team Grants under the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2012, filed August 2, 2012). †
10.16	Form of Performance Share Unit Agreement for 2013 Leadership Team Grants under the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2013, filed July 31, 2013). †

Exhibit Number	Description
10.17	Form of Performance Share Unit Agreement for 2014 Leadership Team Grants under the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2014, filed July 30, 2014). †
10.18	Form of Performance Share Unit Agreement for 2015 Leadership Team Grants under the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2015, filed August 5, 2015). †
10.19	Piper Jaffray Companies Deferred Compensation Plan for Non-Employee Directors (incorporated by reference to Exhibit 10.14 to the Company's Annual Report on Form 10-K for the year ended December 31, 2010, filed February 28, 2011). †
10.20	Summary of Non-Employee Director Compensation Program. † *
10.21	Form of Notice Period Agreement (incorporated by reference to Exhibit 10.16 to the Company's Annual Report on Form 10-K for the year ended December 31, 2006, filed March 1, 2007). †
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10.23	First Amendment to Amended and Restated Loan Agreement, dated December 28, 2013, between Piper Jaffray & Co. and U.S. Bank National Association (incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, filed February 28, 2014).
10.24	Second Amendment to Amended and Restated Loan Agreement, dated December 19, 2014, between Piper Jaffray & Co. and U.S. Bank National Association (incorporated by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed February 26, 2015).
10.25	Third Amendment to Amended and Restated Loan Agreement, dated December 18, 2015, between Piper Jaffray & Co. and U.S. Bank National Association. *
10.26	Amended and Restated Note Purchase Agreement dated June 2, 2014 among Piper Jaffray Companies, Piper Jaffray & Co. and the Purchasers party thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed June 5, 2014).
10.27	Second Amended and Restated Note Purchase Agreement dated October 8, 2015 among Piper Jaffray Companies, Piper Jaffray & Co., and the Purchasers party thereto (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed October 13, 2015).
10.28	Consulting Agreement dated March 19, 2014, by and between Advisory Research, Inc. and Brien M. O'Brien (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed March 19, 2014).
10.29	Compensation Arrangement with M. Brad Winges (incorporated by reference to Exhibit 10.24 to the Company's Annual Report on Form 10-K for the year ended December 31, 2012, filed February 27, 2013). †
10.30	Restricted Limited Partnership Interest Agreement dated February 23, 2015, by and between Piper Jaffray Investment Management LLC and M. Brad Winges (incorporated by reference to Exhibit 10.27 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed February 26, 2015). †
10.31	Advisory Research, Inc. Long-Term Incentive Plan (incorporated by reference to Exhibit 10.26 to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, filed February 28, 2014). †
10.32	Amended and Restated Piper Jaffray Companies Mutual Fund Restricted Share Investment Plan (incorporated by reference to Exhibit 10.29 to the Company's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 27, 2012). †
10.33	Form of Mutual Fund Restricted Share Agreement for Employee Grants in 2012 and 2013 (related to performance in 2011 and 2012, respectively) (incorporated by reference to Exhibit 10.30 to the Company's Annual Report on Form 10-K for the year ended December 31, 2011, filed February 27, 2012). †
10.34	Form of Mutual Fund Restricted Share Agreement for Employee Grants in 2014 (related to performance in 2013) (incorporated by reference to Exhibit 10.29 to the Company's Annual Report on Form 10-K for the year ended December 31, 2013, filed February 28, 2014). †
10.35	Form of Mutual Fund Restricted Share Agreement for Employee Grants in 2015 (related to performance in 2014) (incorporated by reference to Exhibit 10.32 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed February 26, 2015). †
10.36	Form of Mutual Fund Restricted Share Agreement for California-based Employee Grants in 2015 (related to performance in 2014) (incorporated by reference to Exhibit 10.33 to the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed February 26, 2015). †

Exhibit Number	Description
10.37	Form of Restricted Stock and Mutual Fund Restricted Share Agreement for Employee Grants in 2016 (related to performance in 2015) under the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan and Mutual Fund Restricted Share Investment Plan. † *
10.38	Form of Restricted Stock and Mutual Fund Restricted Share Agreement for California-based Employee Grants in 2016 (related to performance in 2015) under the Piper Jaffray Companies Amended and Restated 2003 Annual and Long-Term Incentive Plan and Mutual Fund Restricted Share Investment Plan. † *
21.1	Subsidiaries of Piper Jaffray Companies *
23.1	Consent of Ernst & Young LLP *
24.1	Power of Attorney *
31.1	Rule 13a-14(a)/15d-14(a) Certification of Chairman and Chief Executive Officer. *
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32.1	Section 1350 Certifications. **
101	Interactive data files pursuant to Rule 405 Registration S-T: (i) the Consolidated Statements of Financial Condition as of December 31, 2015 and December 31, 2014, (ii) the Consolidated Statements of Operations for the years ended December 31, 2015, 2014 and 2013, (iii) the Consolidated Statements of Comprehensive Income for the years ended December 31, 2015, 2014 and 2013, (iv) the Consolidated Statements of Cash Flows for the years ended December 31, 2015, 2014 and 2013 and (v) the notes to the Consolidated Financial Statements.

The Company hereby agrees to furnish supplementally to the Commission upon request any omitted exhibit or schedule.

† This exhibit is a management contract or compensatory plan or agreement.

* Filed herewith

** This information is furnished and not filed for purposes of Section 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 25, 2016.

PIPER JAFFRAY COMPANIES

By /s/ Andrew S. Duff
Its Chairman and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 25, 2016.

SIGNATURE	TITLE
/s/ Andrew S. Duff Andrew S. Duff	Chairman and Chief Executive Officer (Principal Executive Officer)
/s/ Debbra L. Schoneman Debbra L. Schoneman	Chief Financial Officer (Principal Financial and Accounting Officer)
/s/ William R. Fitzgerald William R. Fitzgerald	Director
/s/ B. Kristine Johnson B. Kristine Johnson	Director
/s/ Addison L. Piper Addison L. Piper	Director
/s/ Lisa K. Polsky Lisa K. Polsky	Director
/s/ Sherry M. Smith Sherry M. Smith	Director
/s/ Philip E. Soran Philip E. Soran	Director
/s/ Scott C. Taylor Scott C. Taylor	Director
/s/ Michele Volpi Michele Volpi	Director

Exhibit Index

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2.1	Separation and Distribution Agreement dated as of December 23, 2003, between U.S. Bancorp and Piper Jaffray Companies (incorporated by reference to Exhibit 2.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003, filed March 8, 2004). #
2.2	Securities Purchase Agreement dated November 16, 2015 among Piper Jaffray Companies, Piper Jaffray & Co., Simmons & Company International, SCI JV LP, SCI GP, LLC, and Simmons & Company International Holdings LLC (*excluding schedules and exhibits, which the registrant agrees to furnish supplementally to the Securities and Exchange Commission upon request*) (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, filed November 17, 2015).
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2007, filed August 3, 2007).
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The Company hereby agrees to furnish supplementally to the Commission upon request any omitted exhibit or schedule.

† This exhibit is a management contract or compensatory plan or agreement.

* Filed herewith

** This information is furnished and not filed for purposes of Section 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934.

COMMON STOCK

PIPER JAFFRAY COMPANIES

SEE REVERSE SIDE FOR CERTAIN DEFINITIONS

CUSIP 724078 10 0

PJ **********

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

****SPECIMEN****

THIS CERTIFIES THAT

MR. SAMPLE & MRS. SAMPLE &
MR. SAMPLE & MRS. SAMPLE

is the owner of

MR. SAMPLE & MRS. SAMPLE &
MR. SAMPLE & MRS. SAMPLE

FULLY PAID AND NON-ASSESSABLE COMMON SHARES, $0.01 PAR VALUE, OF

PIPER JAFFRAY COMPANIES

transferable on the books of the Corporation by the holder hereof in person or by Attorney upon surrender of this certificate properly endorsed. This certificate is not valid until countersigned and registered by the Transfer Agent and Registrar.

IN WITNESS WHEREOF, the said Corporation has caused this certificate to be signed by facsimile signatures of its duly authorized officers.

Dated:

COUNTERSIGNED AND REGISTERED:
WELLS FARGO BANK, N.A.

BY

TRANSFER AGENT
AND REGISTRAR

AUTHORIZED SIGNATURE

CHAIRMAN & CHIEF EXECUTIVE OFFICER

CORPORATE SECRETARY

SHARES

000000****
000000**

PIPER JAFFRAY COMPANIES

THE CORPORATE SECRETARY OF THE CORPORATION WILL FURNISH WITHOUT CHARGE TO EACH STOCKHOLDER WHO SO REQUESTS, THE POWERS, DESIGNATIONS, PREFERENCES, AND RELATIVE, PARTICIPATING, OPTIONAL, OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OR SERIES THEREOF OF THE CORPORATION, AND THE QUALIFICATIONS, LIMITATIONS, OR RESTRICTIONS OF SUCH PREFERENCES AND/OR RIGHTS.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM – as tenants in common

TEN ENT – as tenants by entireties

JT TEN – as joint tenants with right of survivorship and not as tenants in common

UTMA – _____ Custodian _____
(Cust) (Minor)
under Uniform Transfers to Minors

Act _____
(State)

Additional abbreviations may also be used though not in the above list.

For value received ____ hereby sell, assign, and transfer unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

_____

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS INCLUDING POSTAL ZIP CODE OF ASSIGNEE)

_____

_____

_____ *Shares of the capital stock represented by the within Certificate, and do hereby irrevocably constitute and appoint* _____ _____ *Attorney to transfer the said stock on the books of the within-named Corporation with full power of substitution in the premises.*

Dated _____ _____

NOTICE: THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATEVER.

SIGNATURE GUARANTEED

ALL GUARANTEES MUST BE MADE BY A FINANCIAL INSTITUTION (SUCH AS A BANK OR BROKER) WHICH IS A PARTICIPANT IN THE SECURITIES TRANSFER AGENTS MEDALLION PROGRAM ("STAMP"), THE NEW YORK STOCK EXCHANGE, INC. MEDALLION SIGNATURE PROGRAM ("MSP"), OR THE STOCK EXCHANGES MEDALLION PROGRAM ("SEMP") AND MUST NOT BE DATED. GUARANTEES BY A NOTARY PUBLIC ARE NOT ACCEPTABLE.

Exhibit 10.20

PIPER JAFFRAY COMPANIES
2016 Compensation and Benefits for Non-Employee Directors

	Amount	*Objective*	*Time and Terms of Payment*
Annual Cash Retainer	$60,000	Consideration for Board and committee service for the current calendar year	Paid quarterly in arrears. For any director joining or leaving the Board during a quarter, the amount paid shall be a pro rata sum based on the number of days served during the quarter.
Additional Annual Cash Retainer for Lead Director and Committee Chairpersons	$20,000-Lead Director $25,000-Audit $15,000-Compensation $15,000-Nominating and Governance	Consideration for service as lead director or committee chairperson for the current calendar year	Paid quarterly in arrears. For any director gaining (or resigning) a lead director or committee chairperson position during a quarter, the amount paid shall be a pro rata sum based on the number of days served during the quarter.
Additional Annual Cash Retainer for Committee Members	$10,000-Audit $5,000-Compensation $5,000-Nominating and Governance	Consideration for service as committee member for the current calendar year	Paid quarterly in arrears. For any director joining or leaving a committee during a quarter, the amount paid shall be a pro rata sum based on the number of days served during the quarter.
Additional Cash Fee for Non-Member Attendance at Committee Meetings	$1,000 per meeting	Consideration for attendance at a meeting of a committee on which the attendee is not a member	Paid on the last business day in December.
Initial Equity Grant	$60,000 (valued as of election date)	Establish PJC equity interest upon initial election to the Board to align director and shareholder interests	Shares of PJC common stock granted on the date of the director's initial election or appointment to the Board.
Annual Equity Grant	$70,000 (valued on the date of the annual meeting of shareholders)	Incentive compensation for continuing service on the Board and enhanced alignment of director and shareholder interests	Shares of PJC common stock granted on the date of the annual meeting of shareholders to any director whose service on the Board will continue following the annual meeting. For directors joining the Board after the annual meeting in any year, an equity award will be granted on the date the director is elected to the Board covering a pro rata number of shares based on the number of days during which the director will serve on the Board during that year.
Deferral Opportunity	All cash and equity received on an annual basis	Increase equity stake by directors	Annual opportunity to participate in the Amended and Restated Piper Jaffray Companies Deferred Compensation Plan for Non-Employee Directors, permitting deferral into phantom stock units of all or a portion of the director's annual cash compensation for service as a Piper Jaffray Companies director, and deferral of any shares granted in consideration of the director's service as a director. To participate in any year, irrevocable election must be made by December 31 of the preceding year for continuing directors and on the date of initial election or appointment to the Board for new directors. Annual opportunity to change the subsequent year's election. The deferral date for the cash retainer is the first business day in January each year; the deferral date for the equity grant is the date of the annual meeting of shareholders each year.

	Amount	*Objective*	*Time and Terms of Payment*
Charitable Gift Matching Program	Up to $1,500	Encourage charitable giving	Pursuant to the Piper Jaffray Gift Matching Program, Piper Jaffray will match directors' gifts to eligible organizations dollar for dollar from a minimum of $50 up to an aggregate maximum of $1,500 per year (the same terms and conditions as are applicable to employees).
Reimbursement of Out-of-Pocket Expenses	In addition to the foregoing, non-employee directors will be reimbursed for reasonable out-of-pocket expenses incurred in connection with their service on the Board and Board committees.		

Exhibit 10.25

THIRD AMENDMENT TO AMENDED AND RESTATED LOAN AGREEMENT

THIS THIRD AMENDMENT TO AMENDED AND RESTATED LOAN AGREEMENT (this " Amendment") made and entered into as of December 18, 2015, by and between: **PIPER JAFFRAY & CO.**, a Delaware corporation ("Borrower"), and **U.S. BANK NATIONAL ASSOCIATION**, a national banking association ("Lender"); has reference to the following facts and circumstances (the "Preambles"):

A. Borrower and Lender entered into the Amended and Restated Loan Agreement dated as of December 28, 2012 (as amended, the "Agreement"; all capitalized terms used and not otherwise defined in this Amendment shall have the respective meanings ascribed to them in the Agreement as amended by this Amendment).

B. The Agreement was previously amended as described in the First Amendment to Amended and Restated Loan Agreement dated as of December 28, 2013 and the Second Amendment to Amended and Restated Loan Agreement dated as of December 19, 2014, and Borrower and Lender desire to further amend the Agreement in order to, among other things, extend the Termination Date until December 17, 2016, on the terms set forth below.

NOW, THEREFORE, in consideration of the premises and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Borrower and Lender hereby agree as follows:

1. Preambles. The Preambles are true and correct, and, with the defined terms set forth herein, are incorporated herein by this reference.

2. Amendment to Agreement. The Agreement is amended as follows:

(a) The definition "Termination Date" in Section 1 of the Agreement is deleted and replaced with the following:

> Termination Date shall mean the earlier of December 17, 2016, or the date on which this Agreement is terminated pursuant to Section 12.

(b) The reference to "December 19, 2014" in Exhibit C (Pricing and Fees) to the Agreement is deleted and replaced with "December 18, 2015."

3. Collateral Schedules. Borrower acknowledges receipt of the Schedules of Eligible Securities attached to this Amendment as Exhibit A, which are the current Collateral Summaries.

4. References. All references in the Note, the Collateral Pledge Agreement, and the other Credit Documents to "the Loan Agreement" and any other references of similar import shall henceforth mean the Agreement as amended by this Amendment.

4. Full Force and Effect. Except to the extent specifically amended by this Amendment, all of the terms, provisions, conditions, covenants, representations and warranties contained in the Agreement shall be and remain in full force and effect and the same are hereby ratified and confirmed.

5. Continuing Security. The Agreement, as hereby amended, and the Note, are, and shall continue to be, secured by the Collateral Pledge Agreement.

6. Successors and Assigns. This Amendment shall be binding upon and inure to the benefit of Borrower and Lender and their respective successors and assigns, except that Borrower may not assign, transfer or delegate any of its rights or obligations under the Agreement as amended by this Amendment.

7. Representations and Warranties. Borrower hereby represents and warrants to Lender that:

(a) the execution, delivery and performance by Borrower of this Amendment are within the corporate powers of Borrower, have been duly authorized by all necessary corporate action and require no action by or in respect of, consent of or filing or recording with, any governmental or regulatory body, instrumentality, authority, agency or official or any other person or entity;

(b) the execution, delivery and performance by Borrower of this Amendment do not conflict with, or result in a breach of the terms, conditions or provisions of, or constitute a default under or result in any violation of, the terms of the Certificate of Incorporation or Bylaws of Borrower, any applicable law, rule, regulation, order, writ, judgment or decree of any court or governmental or regulatory body, instrumentality authority, agency or official or any agreement, document or instrument to which Borrower is a party or by which Borrower or any of its property or assets is bound or to which Borrower or any of its property is subject;

(c) this Amendment has been duly executed and delivered by Borrower and constitutes the legal, valid and binding obligation of Borrower enforceable against Borrower in accordance with its terms, except as such enforceability may be limited by (i) applicable bankruptcy, insolvency or similar laws affecting the enforcement of creditors' rights generally and (ii) general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law);

(d) all of the representations and warranties made by Borrower in the Agreement, the Note, the Collateral Pledge Agreement, and the other Credit Documents are true and correct in all material respects on and as of the date of this Amendment as if made on and as of the date of this Amendment;

(e) Borrower is an "exempted borrower" (as defined in Section 221.2 of Federal Reserve Board Regulation U) and Borrower acknowledges that Lender is entering into this Agreement and the Other Agreements based on Lender's good faith determination that Borrower is an "exempted borrower"; and

(e) as of the date of this Amendment, Borrower is in compliance with all provisions of the Agreement, the Note, the Collateral Pledge Agreement, and the other Credit Documents.

8. Inconsistency. In the event of any inconsistency or conflict between this Amendment and the Agreement, the terms, provisions and conditions contained in this Amendment shall govern and control.

9. Governing Law. This Amendment shall be governed by and construed in accordance with the substantive laws of the State of Minnesota (without reference to conflict of law principles) but giving effect to Federal laws applicable to national banks.

10. Electronic Imaging. Borrower hereby acknowledges the receipt of a copy of the Agreement, the Note, the Collateral Pledge Agreement, this Amendment and all other Advance Documents. Lender may, on behalf of Borrower, create a microfilm or optical disk or other electronic image of any or all of the Credit Documents. Lender may store the electronic image of any Credit Document in its electronic form and then destroy the paper original as part of Lender's normal business practices, with the electronic image deemed to be an original.

11. Conditions. Notwithstanding any provision contained in this Amendment to the contrary, this Amendment shall not be effective unless and until Lender shall have received:

(a) this Amendment and the Pricing Letter, duly executed by Borrower;

(b) a Certificate of Secretary (with Resolutions), certified by the Secretary of Borrower;

(c) the current Schedule I (Schedule of Eligible Securities) to the Control Agreement;

(d) a certificate of good standing for Borrower issued by the Delaware Secretary of State (or other evidence of good standing acceptable to Lender); and

(e) such other documents and information as reasonably required by Lender.

Borrower and Lender have executed this Amendment as of the day and year first above written.

[SIGNATURES ON FOLLOWING PAGE]

SIGNATURE PAGE-
THIRD AMENDMENT TO AMENDED AND RESTATED LOAN AGREEMENT

Borrower:

PIPER JAFFRAY & CO.

By:/s/ Debbra L. Schoneman
Debbra L. Schoneman, Chief Financial Officer

By:/s/ Timothy L. Carter
Timothy L. Carter, Treasurer

Lender:

U.S. BANK NATIONAL ASSOCIATION

By:/s/ Christopher M. Doering
Christopher M. Doering, Senior Vice President

Exhibit A

Collateral Schedules

[U.S. BANK LETTERHEAD]

December 18, 2015

Piper Jaffray & Co.
800 Nicollet Mall, J09S04
Minneapolis, Minnesota 55402
Attention: Debbra L. Schoneman, Chief Financial Officer and Timothy L. Carter, Treasurer

Re: Amended and Restated Loan Agreement dated as of December 28, 2012, executed by U.S. Bank National Association ("Lender") and Piper Jaffray & Co. ("Borrower"), as amended by the First Amendment to Amended and Restated Loan Agreement dated as of December 28, 2013, the Second Amendment to Amended and Restated Loan Agreement dated as of December 19, 2014 and the Third Amendment to Amended and Restated Loan Agreement dated as of December 18, 2015 (as amended, the "Agreement"; all capitalized terms used and not otherwise defined in this Amendment shall have the respective meanings ascribed to them in the Agreement as amended by this letter agreement).

Dear Debbra and Tim:

This letter agreement is the Pricing Letter, as defined in the Agreement (and amends, restates and replaces the Pricing Letter dated December 19, 2014). The following terms are defined and incorporated into the Agreement by reference:

Applicable Margin shall mean 1.0%.

Commitment Fee. From and including the date of this Agreement to but excluding the Termination Date, Borrower shall pay a nonrefundable commitment fee on the unused portion of the Facility Amount (determined by subtracting the outstanding principal amount of all Advances from the Facility Amount) at an annual rate of 0.20%. The commitment fee shall be (a) calculated on a daily basis, (b) payable quarterly in arrears on the first (1st) day of each calendar quarter prior to the Termination Date and on the Termination Date, and (c) calculated on an actual day, 360-day year basis.

Work Fee. Borrower shall pay Lender, in conjunction with the Third Amendment to Loan Agreement dated as of December 18, 2015, a work fee in the amount of $312,500.

Please indicate your acceptance of this Pricing Letter by signing in the space indicated below and returning a copy of this letter to the undersigned.

Very Truly Yours,

U.S. BANK NATIONAL ASSOCIATION

By:/s/ Christopher M. Doering_____
Christopher M. Doering, Senior Vice President

[BORROWER'S SIGNATURES ON PAGE 2]

Accepted and agreed to by Borrower as of December 18, 2015:

PIPER JAFFRAY & CO.

By:/s/ Debbra L. Schoneman
Debbra L. Schoneman, Chief Financial Officer

By:/s/ Timothy L. Carter
Timothy L. Carter, Treasurer

6287884

Exhibit 10.37

RESTRICTED STOCK AND MUTUAL FUND RESTRICTED SHARE AGREEMENT

(2016 Annual Grant)

Under the

PIPER JAFFRAY COMPANIES
AMENDED AND RESTATED 2003 ANNUAL AND LONG-TERM INCENTIVE PLAN
AND
MUTUAL FUND RESTRICTED SHARE INVESTMENT PLAN

Notice of Grant

Piper Jaffray Companies, a Delaware corporation (the "Company"), hereby grants to the below-named employee of the Company or an Affiliate of the Company (the "Employee") (i) a Restricted Stock Award pursuant to the Company's Amended and Restated 2003 Annual and Long-Term Incentive Plan, as amended from time to time (the "2003 Plan"), and (ii) to the extent the Employee has so elected for this award cycle, a Mutual Fund Restricted Share Award (the "MFRS Award") pursuant to the Company's Mutual Fund Restricted Share Investment Plan, as amended from time to time (the "MFRS Plan" and together with the Restricted Stock Plan, the "Plans"). The terms and conditions of the Restricted Stock Award and any MFRS Award that has been elected (collectively, the "Awards") are set forth in this Restricted Stock and Mutual Fund Restricted Share Agreement (the "Agreement"), consisting of this Notice of Grant and the Terms and Conditions on the following pages. This Agreement and the Awards are subject to all of the provisions of the applicable Plans. Any capitalized term that is not defined in this Agreement shall have the meaning set forth in the Plans as they currently exist or as they are amended in the future.

Name of Employee: _____

Date of Issuance: _____, 2016

Restricted Stock Award

No. of Shares Covered:	
Vesting Schedule pursuant to Section 3:	
Vesting Date(s)	No. of Restricted Shares Which Become Vested as of Such Date

Mutual Fund Restricted Share Award

Restricted Mutual Fund Shares Covered:*

Advisory Research All Cap Value Fund (ADVGX)	
Advisory Research Global Value Fund (ADVWX)	
Advisory Research MLP & Energy Income Fund (Class I: INFIX)	
Vanguard 500 Index Fund Investor Shares (VFINX)	
JP Morgan Short Duration Bond Fund (JSDUX)	

Vesting Schedule pursuant to Section 3:

	No. of Restricted Mutual Fund Shares Vested as of Each Date		
Vesting Date(s)	Advisory Research All Cap Value Fund	Advisory Research Global Value Fund	Advisory Research MLP & Energy Income Fund
_____, 2017			
_____, 2018			
_____, 2019			

* Subject to adjustment in accordance with the terms of this Agreement.

IMPORTANT ACKNOWLEDGEMENT: *By signing this Agreement, Employee voluntarily elects to receive and accept the Restricted Stock Award and any MFRS Award subject to all of the terms and conditions set forth in this Agreement, and specifically acknowledges and agrees that under certain circumstances, as specified in Section 5(a), the unvested Restricted Shares and Restricted Mutual Fund Shares may cease to vest and be forfeited to the Company. Employee also acknowledges and agrees that such terms and conditions are fair and reasonable under the circumstances.*

EMPLOYEE

_____

PIPER JAFFRAY COMPANIES

By_____

Its _____

Terms and Conditions

1. Restricted Shares.

(a) The Shares subject to the Restricted Stock Award are subject to the restrictions provided for in this Agreement and are referred to collectively as the "Restricted Shares" and each as a "Restricted Share."

(b) The Restricted Shares will be evidenced by a book entry made in the records of the Company's transfer agent in the name of the Employee (unless the Employee requests a certificate evidencing the Restricted Shares). All restrictions provided for in this Agreement will apply to each Restricted Share and to any other securities distributed with respect to that Restricted Share. Unless otherwise permitted by the Committee in accordance with the terms of the Plan, the Restricted Shares may not (until such Restricted Shares have vested in the Employee in accordance with all terms and conditions of this Agreement) be assigned or transferred other than by will or the laws of descent and distribution and shall not be subject to pledge, hypothecation, execution, attachment or similar process. Each Restricted Share will remain restricted and subject to forfeiture to the Company unless and until that Restricted Share has vested in the Employee in accordance with all of the terms and conditions of this Agreement and the 2003 Plan. Each book entry (or stock certificate if requested by the Employee) evidencing any Restricted Share may contain such notations or legends and stock transfer instructions or limitations as may be determined or authorized by the Company in its sole discretion. If a certificate evidencing any Restricted Share is requested by the Employee, the Company may, in its sole discretion, retain custody of the certificate throughout the period during which any restrictions are in effect and require, as a condition to issuing a certificate, that the Employee tender to the Company a stock power duly executed in blank relating to such custody.

2. Restricted Mutual Fund Shares.

(a) The MFRS Plan allows the Employee to elect to receive a portion (not less than ten percent (10%) or more than fifty percent (50%)) of a Restricted Stock Award that would otherwise have been granted to the Employee under the 2003 Plan in the form of Restricted Mutual Fund Shares of selected mutual funds managed by Affiliates of the Company. The Mutual Fund Restricted Share Award section of the Notice of Grant reflects the election, if any, made by the Employee to receive Restricted Mutual Fund Shares. The deadline for submitting an election form for this award cycle having passed, no reallocation among selected mutual funds shall be permitted and the Employee's election is irrevocable.

(b) All vesting contingencies and restrictions provided for in this Agreement will apply to each Restricted Mutual Fund Share. The Restricted Mutual Fund Shares may not (until such Restricted Mutual Fund Shares have vested in the Employee in accordance with all terms and conditions of this Agreement) be assigned or transferred other than by will or the laws of descent and distribution and shall not be subject to pledge, hypothecation, execution, attachment or similar process. Each Restricted Mutual Fund Share will remain restricted, and its unvested portion subject to forfeiture to the Company, unless and until that Restricted Mutual Fund Share

has vested in the Employee in accordance with all of the terms and conditions of this Agreement and the MFRS Plan. The Employee shall execute such pledge or other agreement that the Company may require at any time to perfect such restriction.

3. Vesting.

(a) Continuous Employment: So long as the Employee remains continuously employed (including during the continuance of any leave of absence as approved by the Company or an Affiliate) by the Company or an Affiliate, then the Restricted Shares and Restricted Mutual Fund Shares will vest in the numbers and on the dates specified in their respective Vesting Schedules in the Notice of Grant. Except as otherwise provided herein, if and when the Employee's employment with the Company or an Affiliate terminates, whether by the Employee or by the Company (or an Affiliate), voluntarily or involuntarily, for any reason, then, in accordance with Section 5 of this Agreement, the Restricted Shares and Restricted Mutual Fund Shares shall cease vesting, the unvested Restricted Shares and Restricted Mutual Fund Shares as of the termination date shall be forfeited to the Company.

(b) Vesting in Event of Death: If the Employee's employment by the Company or an Affiliate terminates because of the Employee's death, then the unvested Restricted Shares and Restricted Mutual Fund Shares will immediately vest in full.

(c) Vesting in Event of Long-Term Disability: If the Employee's employment by the Company or an Affiliate terminates because of the Employee's long-term disability (as defined in the Company's long-term disability plan, a "Disability"), then the unvested Restricted Shares and Restricted Mutual Fund Shares will continue vesting during the Employee's long-term disability period in accordance with their respective Vesting Schedules set forth in the Notice of Grant. If, however, the Employee recovers from the Disability, and returns to gainful employment with any employer other than the Company or an Affiliate, the Employee's entitlement to the unvested Restricted Shares and Restricted Mutual Fund Shares will be subject to the requirements of subparagraph 3(f) below.

(d) Vesting in Event of Severance Event: If the Employee's employment by the Company or an Affiliate is involuntarily terminated as a result of a Company-determined severance event (i.e., an event specifically designated as a severance event by the Company in a written notice to the Employee that he or she is eligible for severance benefits under the Company's Severance Plan, as may be amended from time to time), then the unvested Restricted Shares and Restricted Mutual Fund Shares will, as set forth in writing in a severance agreement, vest in full upon the expiration of a thirty-day period commencing upon the Employee's execution of a general release of all claims against the Company and its Affiliates, on a form provided by the Company for this purpose and within the timeframe designated by the Company; provided that, no such vesting will occur unless (i) the Employee has not revoked the general release and it remains effective and enforceable upon expiration of the thirty-day period following its execution, and (ii) the Employee has complied with the terms and conditions of the Company's Severance Plan and the applicable severance agreement.

(e) Vesting in Event of For Cause Discharge: If the Employee's employment with the Company or an Affiliate terminates because the Employee was discharged for "Cause" (as that term is defined in subparagraph 5(b)) below, then the unvested Restricted Shares and Restricted Mutual Fund Shares shall cease vesting and be forfeited to the Company.

(f) Vesting in the Event of Any Other Type of Separation: If the Employee's employment with the Company or an Affiliate terminates for any reason other than the Employee's death, Disability, termination in a Company-determined severance event, or for Cause (all as described above), then the unvested Restricted Shares and Restricted Mutual Fund Shares shall cease vesting and be forfeited to the Company, unless, at or around the time of such termination: (a) the Employee voluntarily elects to sign a Post-Termination Agreement with the Company; and (b) the Employee executes a general release of all claims against the Company and its Affiliates on a form provided by the Company for this purpose and within the timeframe designated by the Company, and takes no action to revoke the general release in whole or in part.

If the Employee signs a Post-Termination Agreement, and thereafter complies with the Employee's obligations under such Post-Termination Agreement, including the obligation to refrain from engaging in any Restricted Activities (as defined below) for the shorter of the remaining vesting period of the unvested Restricted Shares and Restricted Mutual Fund Shares, or the restricted period identified in the Post-Termination Agreement (which may extend beyond the Applicable Post-Employment Restricted Period (as defined below) and be up to two years following the date of termination), and the Employee signs and does not rescind the general release as described above, then the unvested Restricted Shares and Restricted Mutual Fund Shares shall not cease to vest and shall not be forfeited, but rather, as set forth in the Post-Termination Agreement, shall continue to vest in the numbers and on the dates specified in their respective Vesting Schedules in the Notice of Grant for so long as the Employee continuously refrains from engaging in all Restricted Activities for the shorter of the remaining vesting period of the unvested Restricted Shares and Restricted Mutual Fund Shares, or the restricted period identified in the Post-Termination Agreement.

(g) Notwithstanding any other provisions of this Agreement to the contrary, the Committee may, in its sole discretion, declare at any time that the unvested Restricted Shares or Restricted Mutual Fund Shares, or any portion of either thereof, shall vest immediately or, to the extent they otherwise would be forfeited, shall vest in the numbers and on such dates as are determined by the Committee to be in the interests of the Company as determined by the Committee in its sole discretion.

4. Effect of Vesting. Upon the vesting of any Restricted Shares or Restricted Mutual Fund Shares, such vested Restricted Shares and Restricted Mutual Fund Shares will no longer be subject to forfeiture; provided, however, that such vested Restricted Shares and Restricted Mutual Fund Shares shall remain subject to potential recovery by the Company pursuant to Section 7 of this Agreement.

5. Forfeiture of Unvested Restricted Shares and Restricted Mutual Fund Shares.

(a) If (i) the Employee attempts to pledge, encumber, assign, transfer or otherwise dispose of any of the Restricted Shares (except as permitted by Section 1(b) of these Terms and Conditions) or the Employee's interest in or rights to any of the Restricted Mutual Fund Shares (except as permitted by Section 2(b) of these Terms and Conditions), or the Restricted Shares or Restricted Mutual Fund Shares become subject to attachment or any similar involuntary process in violation of this Agreement, or (ii) the Employee's employment with the Company or an Affiliate (A) is terminated for Cause or (B) terminates under the circumstances covered by Section 3(d) or Section 3(f) (including as Section 3(f) applies with respect to Section 3(c)) of this Agreement and either (1) the conditions or restrictions of such Section, as applicable, are not satisfied or (2) the conditions or restrictions of such Section, as applicable, are satisfied but the Employee subsequently violates any of them, then any Restricted Shares and Restricted Mutual Fund Shares that have not previously vested shall cease to vest and shall be forfeited to the Company immediately, the Employee shall thereafter have no right, title or interest whatsoever in such unvested Restricted Shares and Restricted Mutual Fund Shares, and, if the Company does not have custody of any and all certificates representing Restricted Shares so forfeited, the Employee shall immediately return to the Company any and all certificates representing Restricted Shares so forfeited. Additionally, the Employee will deliver to the Company a stock power duly executed in blank relating to any and all certificates representing such forfeited Restricted Shares to the Company in accordance with the previous sentence or, if such stock power has previously been tendered to the Company, the Company will be authorized to deem such previously tendered stock power delivered, and the Company will be authorized to cancel any and all certificates representing Restricted Shares so forfeited and to cause a book entry to be made in the records of the Company's transfer agent in the name of the Employee (or a new stock certificate to be issued, if requested by the Employee) evidencing any Restricted Shares that vested prior to the forfeiture of unvested Restricted Shares under this Section 5. If the Restricted Shares are evidenced by a book entry made in the records of the Company's transfer agent, then the Company will be authorized to cause such book entry to be adjusted to reflect the number of Restricted Shares so forfeited.

(b) For purposes of this Agreement, "Cause" means (i) the Employee's continued failure to substantially perform his or her duties with the Company or an Affiliate after written demand for substantial performance is delivered to the Employee; the Employee shall be provided thirty (30) days to attempt to remedy the deficiencies identified by the Company or an Affiliate in its written demand; (ii) the Employee's conviction of a felony; (iii) the Employee committing a felony or engaging in other misconduct that the Company determines in its sole discretion impairs the Employee's ability to perform his or her duties with the Company or an Affiliate, and/or results in negative or otherwise adverse publicity for the Company or an Affiliate; (iv) the Employee's violation of any policy of the Company or an Affiliate that the Company, in its sole discretion, deems material; (v) the Employee's violation of any securities law, rule or regulation that the Company, in its sole discretion, deems material; (vi) the Employee's engagement in conduct that, in the Company's sole discretion, exposes the Company or an Affiliate to civil or regulatory liability or injury to its reputation; (vii) the Employee's engagement in conduct that would subject the Employee to statutory disqualification pursuant to

Section 15(b) of the Exchange Act and the regulations promulgated thereunder; or (viii) the Employee's gross or willful misconduct that the Company, in its sole discretion, deems material.

6. <u>Restricted Activities</u>. In consideration of the grant of this Award, the Employee agrees to comply with and be bound by the following restrictive covenants (each a "Restricted Activity" and together the "Restricted Activities"):

(a) the Employee will not, either during the Employee's employment by the Company or an Affiliate or at any time thereafter, except in connection with the performance of the Employee's job duties for the benefit of the Company, use, disclose or misappropriate any Company-Confidential Information (as defined below) unless the Company or an Affiliate consents otherwise in writing. "Company-Confidential Information" shall have the same meaning as provided in the Company's Code of Ethics and Business Conduct, and shall include without limitation any confidential, secret or proprietary knowledge or information of the Company or an Affiliate that the Employee has acquired or become acquainted with during the Employee's employment with the Company or an Affiliate.

(b) the Employee will not, during the Employee's employment by the Company or an Affiliate and during the Applicable Post-Employment Restricted Period, directly or indirectly, on behalf of the Employee or any other person (including but not limited to any Talent Competitor (as defined below)), solicit, induce or encourage any person then employed, or employed within the 180-day period preceding the Employee's termination, by the Company or an Affiliate to terminate or otherwise modify their employment relationship with the Company;

(c) the Employee will not, during the Employee's employment by the Company or an Affiliate and during the Applicable Post-Employment Restricted Period, on behalf of the Employee or any other person (including but not limited to any Talent Competitor (as defined below)), hire, retain or employ in any capacity any person then employed, or employed within the 180-day period preceding the Employee's termination, by the Company or an Affiliate;

(d) the Employee will not, during the Employee's employment by the Company or an Affiliate and during the Applicable Post-Employment Restricted Period, directly or indirectly, on behalf of the Employee or any other person (including but not limited to any Talent Competitor), solicit any customer, client or account of the Company or an Affiliate, or otherwise otherwise seek to divert any customer, client or account of the Company or an Affiliate away from engaging in business with the Company or an Affiliate. For purposes of this subparagraph, "customer, client or account" shall include the following: then-current customers, clients, or accounts of the Company or an Affiliate; any customers, clients or accounts that had been represented by or had a business relationship with the Company or an Affiliate within the 365-day period preceding the Employee's termination; and any individual, company or other form of legal entity that had been solicited or pitched for business by the Company or an Affiliate within the 365-day period preceding the Employee's termination, if the Employee was involved in any capacity in the solicitation or pitch;

(e) the Employee will not, during the Employee's employment by the Company or an Affiliate and during the Applicable Post-Employment Restricted Period, without the prior written consent of the Company or an Affiliate, (x) become a director, officer, employee, partner, consultant or independent contractor of, or otherwise work or provide services for, a Talent Competitor doing business in the same geographic or market area(s) in which the Company or an Affiliate is also doing business, or (y) acquire any material ownership or similar financial interest in any such Talent Competitor;

(f) the Employee will not, either during the Employee's employment by the Company or an Affiliate or at any time thereafter, make disparaging, derogatory, or defamatory statements about the Company or an Affiliate in any public forum or media; and

(g) the Employee will not, either during the Employee's employment by the Company or an Affiliate or at any time thereafter, fail to cooperate fully with and provide full and accurate information to the Company and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which the Employee may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable expenses incurred by the Employee.

For purposes of this Section 6, the "Applicable Post-Employment Restricted Period" means: (i) with respect to Sections 6(b) and (c), one year following any termination of the Employee's employment with the Company or an Affiliate (not including any period of notice provided by the Employee); (ii) with respect to Section 6(d), six months following any termination of the Employee's employment with the Company or an Affiliate (not including any period of notice provided by the Employee); and (iii) with respect to Section 6(e), one month following any termination of the Employee's employment initiated and effected by the Company or an Affiliate without Cause, or three months following any other termination of the Employee's employment with the Company or an Affiliate (not including any period of notice provided by the Employee); provided, however, that if the Company requests that the Employee sign a Post-Termination Agreement and the Employee voluntarily elects to sign such Post-Termination Agreement with the Company pursuant to Section 3(f), then such Post-Termination Agreement may include one or more restricted periods that are longer than the Applicable Post-Employment Restricted Period with respect to one or more of the Restricted Activities.

For purposes of this Section 6, a "Talent Competitor" means any corporation, partnership, limited liability company or other business association, organization or entity that engages in the investment banking, securities brokerage or investment management business, including, but not limited to, investment banks, sell-side broker dealers, mergers and acquisitions or strategic advisory firms, merchant banks, hedge funds, private equity firms, venture capital firms, asset managers and investment advisory firms.

7. Potential Clawback. The Employee acknowledges that he or she has been provided a copy of the Company's Incentive Compensation Recovery Policy, dated February 4, 2014 (the "Recovery Policy"), and understands, accepts and agrees that this grant in this Agreement of Restricted Shares and Restricted Mutual Fund Shares, and any other outstanding Award he or she may have been granted under the Plans after May 8, 2013 (a "Prior Award") are subject to the

terms and conditions of the Recovery Policy as it currently exists and as it may be amended from time to time, which include the potential forfeiture to or recovery by the Company of the Restricted Stock Award or the MFRS Award, any Prior Award, any Shares issued or mutual fund shares vested pursuant to this Agreement or any Prior Award, any proceeds received by the Employee upon the sale of any such Shares or mutual fund shares, and any other compensatory value received by Employee under the Restricted Stock Award, the MFRS Award or any Prior Award under the circumstances and to the extent set forth in the Recovery Policy. This Agreement may be unilaterally amended by the Committee at any time to comply with the Recovery Policy as it may be amended from time to time.

8. Shareholder Rights. As of the date of issuance specified at the beginning of this Agreement, the Employee shall have all of the rights of a shareholder of the Company with respect to the Restricted Shares, and all the rights of a mutual fund shareholder with respect to the Restricted Mutual Fund Shares, except as otherwise specifically provided in this Agreement.

9. Fees and Distributions.

(a) Management fees of the applicable mutual funds for the Restricted Mutual Fund Shares shall be the sole responsibility of the Employee.

(b) If any mutual fund in which the Employee holds an interest distributes dividends, income or earnings with respect to the Restricted Mutual Fund Shares prior to the vesting of such Restricted Mutual Fund Shares, then the following shall apply. In the event of distributions made in cash, such cash distributions shall be reinvested in the mutual fund from which the distribution occurred and the mutual fund shares representing the reinvested amounts shall be considered Restricted Mutual Fund Shares under this Agreement, and shall vest along with the other unvested Restricted Mutual Fund Shares in equal installments over the remaining vesting dates provided in the Vesting Schedule in the Notice of Grant. In the event of in-kind distributions, extraordinary distributions (whether in other securities or other property) or other adjustments, such distributions shall be held in the account of the Employee together with the Restricted Mutual Fund Shares. All Restricted Mutual Fund Shares received via distributions shall also be restricted and shall vest on the dates specified in the applicable Vesting Schedule in the Notice of Grant. For the avoidance of doubt, in the event that any unvested Restricted Mutual Fund Shares are forfeited in accordance with this Agreement, the distributions with respect to any such Restricted Mutual Fund Shares not previously paid out will also be forfeited.

10. Tax Withholding. The parties hereto recognize that the Company or an Affiliate may be obligated to withhold federal and state taxes or other taxes upon the vesting of the Restricted Shares or Restricted Mutual Fund Shares, or, in the event that the Employee elects under Code Section 83(b) to report the receipt of the Restricted Shares or Restricted Mutual Fund Shares as income in the year of receipt, upon the Employee's receipt of the Restricted Shares or Restricted Mutual Fund Shares, respectively. The Employee agrees that, at such time, if the Company or an Affiliate is required to withhold such taxes, the Employee will promptly pay, in cash upon demand (or in any other manner permitted by the Committee in accordance with the terms of the Plans), to the Company or an Affiliate such amounts as shall be necessary to satisfy such obligation. The Employee further acknowledges that the Company has directed the Employee to

seek independent advice regarding the applicable provisions of the Code, the income tax laws of any municipality, state or foreign country in which the Employee may reside, and the tax consequences of the Employee's death.

11. Injunctive Relief. In the event of a breach by the Employee of the Employee's obligations under this Agreement, including but not limited to a commission by the Employee of a Restricted Activity as described in Section 6, in addition to being entitled to exercise all rights granted by law, including recovery of damages, the Company will be entitled to specific performance of its rights under this Agreement. The Employee acknowledges that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Company, and therefore agrees that the Company shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations (without posting any bond or other security).

12. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. The book entry or certificate representing the Restricted Shares shall contain a notation or bear the following legend (as well as any notations or legends required by applicable state and federal corporate and securities laws) noting the existence of the restrictions and the Company's rights to reacquire the Restricted Shares set forth in this Agreement:

> "THE SHARES REPRESENTED BY THIS [BOOK ENTRY] [CERTIFICATE] MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF A RESTRICTED STOCK AND MUTUAL FUND RESTRICTED SHARE AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY."

(b) Stop-Transfer Notices. The Employee agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Restricted Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of the Restricted Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom the Restricted Shares shall have been so transferred.

13. Interpretation of This Agreement. All decisions and interpretations made by the Committee with regard to any question arising hereunder or under the Plans shall be binding and conclusive upon the Company and the Employee. If there is any inconsistency between the provisions of this Agreement and the Plans, the provisions of the Plans shall govern.

14. No Promise of Future Awards or Continued Employment. The Employee acknowledges that this Agreement awards restricted stock and/or property to the Employee, but does not impose any obligation on the Company to make any future grants or issue any future restricted shares or restricted mutual fund shares to the Employee or otherwise continue the participation of the Employee under either of the Plans. This Agreement shall not give the Employee a right to continued employment with the Company or any Affiliate, and the Company or Affiliate employing the Employee may terminate his or her employment at will, and otherwise deal with the Employee without regard to this Agreement.

15. Binding Effect. This Agreement shall be binding in all respects on the heirs, administrators, representatives, executors and successors of the Employee, and on the Company and its successors and assigns.

16. Agreement to Arbitrate. The Company and the Employee each agrees (i) that any dispute, claim or controversy arising out of or relating directly or indirectly to the construction, performance or breach of this Agreement (including, without limitation, the grant, issuance or forfeiture of Restricted Shares and Restricted Mutual Fund Shares) shall be settled by arbitration conducted before and in accordance with the rules of the Financial Industry Regulatory Authority; and (ii) that judgment upon any award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Accordingly, the Company and the Employee each waive their right (if any) to a trial before a court judge and/or jury to resolve any such disputes; provided, this Section 16 shall not be construed to limit the Company's right to obtain equitable relief under Section 11 with respect to any matter or controversy subject to Section 11, and pending a final determination by the arbitrators with respect to any such matter or controversy, the Company shall be entitled to obtain any such relief by direct application to state, federal, or other applicable court, without being required to first arbitrate such matter or controversy.

17. Choice of Law. The Company is incorporated in the State of Delaware, and by their terms the Plans are governed by the laws of the State of Delaware. Accordingly, this Agreement is entered into under the laws of the State of Delaware and shall be construed and interpreted thereunder (without regard to its conflict-of-law principles).

18. Modification. In the event that any one or more of the Restricted Activities described in Section 6 above shall be held to be unenforceable, invalid or illegal for any reason including, but not limited to, being excessively broad as to duration, geographical scope, activity or subject, such restriction shall be construed or modified by limiting and reducing it, so as to provide the Company with the maximum protection of its business interests and the intent of the parties as set forth herein and yet be valid and enforceable under the applicable law as it shall then exist. If any such restriction held to be unenforceable, invalid or illegal cannot be so construed or modified, such finding shall not affect the enforceability of any of the other restrictions contained herein.

19. Entire Agreement. This Agreement and the Plans set forth the entire agreement and understanding of the parties hereto with respect to the issuance and sale of the Restricted Shares and Restricted Mutual Fund Shares and the administration of the Plans, and supersede all prior agreements, arrangements, plans, and understandings relating to the issuance and sale of the Restricted Shares and Restricted Mutual Fund Shares and the administration of the Plans.

20. Amendment and Waiver. Except as provided in the Plans or in Section 7 above, this Agreement may be amended, modified, or canceled only by a written instrument executed by the parties. No term or condition of this Agreement shall be deemed to have been waived, nor shall there be any estoppel to enforce any provision of this Agreement, except by a statement in writing signed by the party against whom enforcement of the waiver or estoppel is sought. Any written waiver shall not be deemed a continuing waiver unless specifically stated, shall operate only as to the specific term or condition waived, and shall not constitute a waiver of such term or condition for the future or as to any other act other than that specifically waived.

21. Acknowledgment of Receipt of Copy. By execution hereof, the Employee acknowledges having received a copy of the prospectus related to the 2003 Plan and instructions on how to access a copy of each of the Plans.

22. Acknowledgement of Voluntary Election; Fairness. By executing this Agreement, the Employee acknowledges his or her voluntary election to receive and accept the Restricted Shares and any Restricted Mutual Fund Shares subject to all of the terms and conditions set forth in this Agreement, and agrees to be bound thereby, including, without limitation, the terms and conditions specifying the circumstances under which the unvested Restricted Shares and Restricted Mutual Fund Shares shall cease to vest and be forfeited. Employee further acknowledges and agrees that such terms and conditions are fair and reasonable in light of the circumstances under which the award of Restricted Shares and any award of Restricted Mutual Fund Shares is being made.

Exhibit 10.38

RESTRICTED STOCK AND MUTUAL FUND RESTRICTED SHARE AGREEMENT

(2016 Annual Grant – California-based employees)

Under the

PIPER JAFFRAY COMPANIES
AMENDED AND RESTATED 2003 ANNUAL AND LONG-TERM INCENTIVE PLAN
AND
MUTUAL FUND RESTRICTED SHARE INVESTMENT PLAN

Notice of Grant

Piper Jaffray Companies, a Delaware corporation (the "Company"), hereby grants to the below-named employee of the Company or an Affiliate of the Company (the "Employee") (i) a Restricted Stock Award pursuant to the Company's Amended and Restated 2003 Annual and Long-Term Incentive Plan, as amended from time to time (the "2003 Plan"), and (ii) to the extent the Employee has so elected for this award cycle, a Mutual Fund Restricted Share Award (the "MFRS Award") pursuant to the Company's Mutual Fund Restricted Share Investment Plan, as amended from time to time (the "MFRS Plan" and together with the Restricted Stock Plan, the "Plans"). The terms and conditions of the Restricted Stock Award and any MFRS Award that has been elected (collectively, the "Awards") are set forth in this Restricted Stock and Mutual Fund Restricted Share Agreement (the "Agreement"), consisting of this Notice of Grant and the Terms and Conditions on the following pages. This Agreement and the Awards are subject to all of the provisions of the applicable Plans. Any capitalized term that is not defined in this Agreement shall have the meaning set forth in the Plans as they currently exist or as they are amended in the future.

Name of Employee: _____

Date of Issuance: _____, 2016

Restricted Stock Award

No. of Shares Covered:	
Vesting Schedule pursuant to Section 3:	
Vesting Date(s)	No. of Restricted Shares Which Become Vested as of Such Date

Mutual Fund Restricted Share Award

Restricted Mutual Fund Shares Covered:*

Advisory Research All Cap Value Fund (ADVGX)	
Advisory Research Global Value Fund (ADVWX)	
Advisory Research MLP & Energy Income Fund (Class I: INFIX)	
Vanguard 500 Index Fund Investor Shares (VFINX)	
JP Morgan Short Duration Bond Fund (JSDUX)	

Vesting Schedule pursuant to Section 3:

	No. of Restricted Mutual Fund Shares Vested as of Each Date		
Vesting Date(s)	Advisory Research All Cap Value Fund	Advisory Research Global Value Fund	Advisory Research MLP & Energy Income Fund
_____, 2017			
_____, 2018			
_____, 2019			

* Subject to adjustment in accordance with the terms of this Agreement.

IMPORTANT ACKNOWLEDGEMENT: *By signing this Agreement, Employee voluntarily elects to receive and accept the Restricted Stock Award and any MFRS Award subject to all of the terms and conditions set forth in this Agreement, and specifically acknowledges and agrees that under certain circumstances, as specified in Section 5(a), the unvested Restricted Shares and Restricted Mutual Fund Shares may cease to vest and be forfeited to the Company. Employee also acknowledges and agrees that such terms and conditions are fair and reasonable under the circumstances.*

EMPLOYEE

_____

PIPER JAFFRAY COMPANIES

By_____

Its _____

Terms and Conditions

1. Restricted Shares.

(a) The Shares subject to the Restricted Stock Award are subject to the restrictions provided for in this Agreement and are referred to collectively as the "Restricted Shares" and each as a "Restricted Share."

(b) The Restricted Shares will be evidenced by a book entry made in the records of the Company's transfer agent in the name of the Employee (unless the Employee requests a certificate evidencing the Restricted Shares). All restrictions provided for in this Agreement will apply to each Restricted Share and to any other securities distributed with respect to that Restricted Share. Unless otherwise permitted by the Committee in accordance with the terms of the Plan, the Restricted Shares may not (until such Restricted Shares have vested in the Employee in accordance with all terms and conditions of this Agreement) be assigned or transferred other than by will or the laws of descent and distribution and shall not be subject to pledge, hypothecation, execution, attachment or similar process. Each Restricted Share will remain restricted and subject to forfeiture to the Company unless and until that Restricted Share has vested in the Employee in accordance with all of the terms and conditions of this Agreement and the 2003 Plan. Each book entry (or stock certificate if requested by the Employee) evidencing any Restricted Share may contain such notations or legends and stock transfer instructions or limitations as may be determined or authorized by the Company in its sole discretion. If a certificate evidencing any Restricted Share is requested by the Employee, the Company may, in its sole discretion, retain custody of the certificate throughout the period during which any restrictions are in effect and require, as a condition to issuing a certificate, that the Employee tender to the Company a stock power duly executed in blank relating to such custody.

2. Restricted Mutual Fund Shares.

(a) The MFRS Plan allows the Employee to elect to receive a portion (not less than ten percent (10%) or more than fifty percent (50%)) of a Restricted Stock Award that would otherwise have been granted to the Employee under the 2003 Plan in the form of Restricted Mutual Fund Shares of selected mutual funds managed by Affiliates of the Company. The Mutual Fund Restricted Share Award section of the Notice of Grant reflects the election, if any, made by the Employee to receive Restricted Mutual Fund Shares. The deadline for submitting an election form for this award cycle having passed, no reallocation among selected mutual funds shall be permitted and the Employee's election is irrevocable.

(b) All vesting contingencies and restrictions provided for in this Agreement will apply to each Restricted Mutual Fund Share. The Restricted Mutual Fund Shares may not (until such Restricted Mutual Fund Shares have vested in the Employee in accordance with all terms and conditions of this Agreement) be assigned or transferred other than by will or the laws of descent and distribution and shall not be subject to pledge, hypothecation, execution, attachment or similar process. Each Restricted Mutual Fund Share will remain restricted, and its unvested

portion subject to forfeiture to the Company, unless and until that Restricted Mutual Fund Share has vested in the Employee in accordance with all of the terms and conditions of this Agreement and the MFRS Plan. The Employee shall execute such pledge or other agreement that the Company may require at any time to perfect such restriction.

3. Vesting.

(a) Continuous Employment: So long as the Employee remains continuously employed (including during the continuance of any leave of absence as approved by the Company or an Affiliate) by the Company or an Affiliate, then the Restricted Shares and Restricted Mutual Fund Shares will vest in the numbers and on the dates specified in their respective Vesting Schedules in the Notice of Grant. Except as otherwise provided herein, if and when the Employee's employment with the Company or an Affiliate terminates, whether by the Employee or by the Company (or an Affiliate), voluntarily or involuntarily, for any reason, then, in accordance with Section 5 of this Agreement, the Restricted Shares and Restricted Mutual Fund Shares shall cease vesting, the unvested Restricted Shares and Restricted Mutual Fund Shares as of the termination date shall be forfeited to the Company.

(b) Vesting in Event of Death: If the Employee's employment by the Company or an Affiliate terminates because of the Employee's death, then the unvested Restricted Shares and Restricted Mutual Fund Shares will immediately vest in full.

(c) Vesting in Event of Long-Term Disability: If the Employee's employment by the Company or an Affiliate terminates because of the Employee's long-term disability (as defined in the Company's long-term disability plan, a "Disability"), then the unvested Restricted Shares and Restricted Mutual Fund Shares will continue vesting during the Employee's long-term disability period in accordance with their respective Vesting Schedules set forth in the Notice of Grant. If, however, the Employee recovers from the Disability, and returns to gainful employment with any employer other than the Company or an Affiliate, the Employee's entitlement to the unvested Restricted Shares and Restricted Mutual Fund Shares will be subject to the requirements of subparagraph 3(f) below.

(d) Vesting in Event of Severance Event: If the Employee's employment by the Company or an Affiliate is involuntarily terminated as a result of a Company-determined severance event (i.e., an event specifically designated as a severance event by the Company in a written notice to the Employee that he or she is eligible for severance benefits under the Company's Severance Plan, as may be amended from time to time), then the unvested Restricted Shares and Restricted Mutual Fund Shares will, as set forth in writing in a severance agreement, vest in full upon the expiration of a thirty-day period commencing upon the Employee's execution of a general release of all claims against the Company and its Affiliates, on a form provided by the Company for this purpose and within the timeframe designated by the Company; provided that, no such vesting will occur unless (i) the Employee has not revoked the general release and it remains effective and enforceable upon expiration of the thirty-day period following its execution, and (ii) the Employee has complied with the terms and conditions of the Company's Severance Plan and the applicable severance agreement.

(e) Vesting in Event of For Cause Discharge: If the Employee's employment with the Company or an Affiliate terminates because the Employee was discharged for "Cause" (as that term is defined in subparagraph 5(b)) below, then the unvested Restricted Shares and Restricted Mutual Fund Shares shall cease vesting and be forfeited to the Company.

(f) Vesting in the Event of Any Other Type of Separation: If the Employee's employment with the Company or an Affiliate terminates for any reason other than the Employee's death, Disability, termination in a Company-determined severance event, or for Cause (all as described above), then the unvested Restricted Shares and Restricted Mutual Fund Shares shall cease vesting and be forfeited to the Company, unless, at or around the time of such termination: (a) the Employee voluntarily elects to sign a Post-Termination Agreement with the Company; and (b) the Employee executes a general release of all claims against the Company and its Affiliates on a form provided by the Company for this purpose and within the timeframe designated by the Company, and takes no action to revoke the general release in whole or in part.

If the Employee signs a Post-Termination Agreement, and thereafter complies with the Employee's obligations under such Post-Termination Agreement, including the obligation to refrain from engaging in any Post-Termination Restricted Activities (as defined below) for the shorter of the remaining vesting period of the unvested Restricted Shares and Restricted Mutual Fund Shares, or the restricted period identified in the Post-Termination Agreement (which may be up to two years following the date of termination), and the Employee signs and does not rescind the general release as described above, then the unvested Restricted Shares and Restricted Mutual Fund Shares shall not cease to vest and shall not be forfeited, but rather, as set forth in the Post-Termination Agreement, shall continue to vest in the numbers and on the dates specified in their respective Vesting Schedules in the Notice of Grant for so long as the Employee continuously refrains from engaging in all Post-Termination Restricted Activities for the shorter of the remaining vesting period of the unvested Restricted Shares and Restricted Mutual Fund Shares, or the restricted period identified in the Post-Termination Agreement.

"Post-Termination Restricted Activites" shall include the following restrictive covenants:

(i) the Employee will not at any time during the period set forth in the Post-Termination Agreement engage in a Restricted Activity as defined in Section 5 below;

(ii) the Employee will not during the period set forth in the Post-Termination Agreement, on behalf of the Employee or any other person (including but not limited to any Talent Competitor (as defined below)), hire, retain or employ in any capacity any person then employed, or employed within the 180-day period preceding the Employee's termination, by the Company or an Affiliate;

(iii) the Employee will not at any time during the period set forth in the Post Termination Agreement, directly or indirectly, on behalf of the Employee

or any other person (including but not limited to any Talent Competitor), solicit any customer, client or account of the Company or an Affiliate, or otherwise otherwise seek to divert any customer, client or account of the Company or an Affiliate away from engaging in business with the Company or an Affiliate. For purposes of this subparagraph, "customer, client or account" shall include the following: then-current customers, clients, or accounts of the Company or an Affiliate; any customers, clients or accounts that had been represented by or had a business relationship with the Company or an Affiliate within the 365-day period preceding the Employee's termination; and any individual, company or other form of legal entity that had been solicited or pitched for business by the Company or an Affiliate within the 365-day period preceding the Employee's termination, if the Employee was involved in any capacity in the solicitation or pitch; and

(iv) the Employee will not during the period set forth in the Post-Termination Agreement , without the prior written consent of the Company or an Affiliate, (x) become a director, officer, employee, partner, consultant or independent contractor of, or otherwise work or provide services for, a Talent Competitor doing business in the same geographic or market area(s) in which the Company or an Affiliate is also doing business, or (y) acquire any material ownership or similar financial interest in any such Talent Competitor.

For purposes of this Section 3, a "Talent Competitor" means any corporation, partnership, limited liability company or other business association, organization or entity that engages in the investment banking, securities brokerage or investment management business, including, but not limited to, investment banks, sell-side broker dealers, mergers and acquisitions or strategic advisory firms, merchant banks, hedge funds, private equity firms, venture capital firms, asset managers and investment advisory firms.

For clarity of understanding, Employee acknowledges and agrees that this Section 3(f) is not intended, and shall not operate, to prevent Employee from working or providing services for a Talent Competitor upon termination of employment. Rather, this Section 3(f) specifies the circumstances under which Employee has the opportunity to choose to forestall the cancellation of the unvested Restricted Mutual Fund Shares under this Section 3(f) by voluntarily electing to sign a Post-Termination Agreement and complying with the obligations thereunder (including the obligation to refrain from engaging in the specified Post-Termination Restricted Activities during the period set forth in the specified Post-Termination Agreement). Employee need not so choose, however, and is free to elect not to sign a Post-Termination Agreement, in which case the unvested Restricted Shares and Restricted Mutual Fund Shares shall cease vesting and be forfeited to the Company as described above.

(g) Notwithstanding any other provisions of this Agreement to the contrary, the Committee may, in its sole discretion, declare at any time that the unvested Restricted Shares or Restricted Mutual Fund Shares, or any portion of either thereof, shall vest immediately or, to the extent they otherwise would be forfeited, shall vest in the numbers and on such dates as are determined by the Committee to be in the interests of the Company as determined by the Committee in its sole discretion.

4. Effect of Vesting. Upon the vesting of any Restricted Shares or Restricted Mutual Fund Shares, such vested Restricted Shares and Restricted Mutual Fund Shares will no longer be subject to forfeiture; provided, however, that such vested Restricted Shares and Restricted Mutual Fund Shares shall remain subject to potential recovery by the Company pursuant to Section 7 of this Agreement.

5. Forfeiture of Unvested Restricted Shares and Restricted Mutual Fund Shares.

(a) If (i) the Employee attempts to pledge, encumber, assign, transfer or otherwise dispose of any of the Restricted Shares (except as permitted by Section 1(b) of these Terms and Conditions) or the Employee's interest in or rights to any of the Restricted Mutual Fund Shares (except as permitted by Section 2(b) of these Terms and Conditions), or the Restricted Shares or Restricted Mutual Fund Shares become subject to attachment or any similar involuntary process in violation of this Agreement, or (ii) the Employee's employment with the Company or an Affiliate (A) is terminated for Cause or (B) terminates under the circumstances covered by Section 3(d) or Section 3(f) (including as Section 3(f) applies with respect to Section 3(c)) of this Agreement and either (1) the conditions or restrictions of such Section, as applicable, are not satisfied or (2) the conditions or restrictions of such Section, as applicable, are satisfied but the Employee subsequently violates any of them, then any Restricted Shares and Restricted Mutual Fund Shares that have not previously vested shall cease to vest and shall be forfeited to the Company immediately, the Employee shall thereafter have no right, title or interest whatsoever in such unvested Restricted Shares and Restricted Mutual Fund Shares, and, if the Company does not have custody of any and all certificates representing Restricted Shares so forfeited, the Employee shall immediately return to the Company any and all certificates representing Restricted Shares so forfeited. Additionally, the Employee will deliver to the Company a stock power duly executed in blank relating to any and all certificates representing such forfeited Restricted Shares to the Company in accordance with the previous sentence or, if such stock power has previously been tendered to the Company, the Company will be authorized to deem such previously tendered stock power delivered, and the Company will be authorized to cancel any and all certificates representing Restricted Shares so forfeited and to cause a book entry to be made in the records of the Company's transfer agent in the name of the Employee (or a new stock certificate to be issued, if requested by the Employee) evidencing any Restricted Shares that vested prior to the forfeiture of unvested Restricted Shares under this Section 5. If the Restricted Shares are evidenced by a book entry made in the records of the Company's transfer agent, then the Company will be authorized to cause such book entry to be adjusted to reflect the number of Restricted Shares so forfeited.

(b) For purposes of this Agreement, "Cause" means (i) the Employee's continued failure to substantially perform his or her duties with the Company or an Affiliate after written demand for substantial performance is delivered to the Employee; the Employee shall be provided thirty (30) days to attempt to remedy the deficiencies identified by the Company or an Affiliate in its written demand; (ii) the Employee's conviction of a felony; (iii) the Employee committing a felony or engaging in other misconduct that the Company determines in its sole discretion impairs the Employee's ability to perform his or her duties with the Company or an Affiliate, and/or results in negative or otherwise adverse publicity for the Company or an Affiliate; (iv) the Employee's violation of any policy of the Company or an Affiliate that the Company, in its sole discretion, deems material; (v) the Employee's violation of any securities law, rule or regulation that the Company, in its sole discretion, deems material; (vi) the Employee's engagement in conduct that, in the Company's sole discretion, exposes the Company or an Affiliate to civil or regulatory liability or injury to its reputation; (vii) the Employee's engagement in conduct that would subject the Employee to statutory disqualification pursuant to Section 15(b) of the Exchange Act and the regulations promulgated thereunder; or (viii) the Employee's gross or willful misconduct that the Company, in its sole discretion, deems material.

6. Restricted Activities. In consideration of the grant of this Award, the Employee agrees to comply with and be bound by the following restrictive covenants (each a "Restricted Activity" and together the "Restricted Activities"):

(a) the Employee will not, either during the Employee's employment by the Company or an Affiliate or at any time thereafter, except in connection with the performance of the Employee's job duties for the benefit of the Company, use, disclose or misappropriate any Company-Confidential Information (as defined below) unless the Company or an Affiliate consents otherwise in writing. "Company-Confidential Information" shall have the same meaning as provided in the Company's Code of Ethics and Business Conduct, and shall include without limitation any confidential, secret or proprietary knowledge or information of the Company or an Affiliate that the Employee has acquired or become acquainted with during the Employee's employment with the Company or an Affiliate.

(b) the Employee will not, either during the Employee's employment by the Company or an Affiliate or at any time thereafter, make disparaging, derogatory, or defamatory statements about the Company or an Affiliate in any public forum or media; and

(c) the Employee will not, either during the Employee's employment by the Company or an Affiliate or at any time thereafter, fail to cooperate fully with and provide full and accurate information to the Company and its counsel with respect to any matter (including any audit, tax proceeding, litigation, investigation or governmental proceeding) with respect to which the Employee may have knowledge or information, subject to reimbursement for actual, appropriate and reasonable expenses incurred by the Employee.

7. Potential Clawback. The Employee acknowledges that he or she has been provided a copy of the Company's Incentive Compensation Recovery Policy, dated February 4, 2014 (the

"Recovery Policy"), and understands, accepts and agrees that this grant in this Agreement of Restricted Shares and Restricted Mutual Fund Shares, and any other outstanding Award he or she may have been granted under the Plans after May 8, 2013 (a "Prior Award") are subject to the terms and conditions of the Recovery Policy as it currently exists and as it may be amended from time to time, which include the potential forfeiture to or recovery by the Company of the Restricted Stock Award or the MFRS Award, any Prior Award, any Shares issued or mutual fund shares vested pursuant to this Agreement or any Prior Award, any proceeds received by the Employee upon the sale of any such Shares or mutual fund shares, and any other compensatory value received by Employee under the Restricted Stock Award, the MFRS Award or any Prior Award under the circumstances and to the extent set forth in the Recovery Policy. This Agreement may be unilaterally amended by the Committee at any time to comply with the Recovery Policy as it may be amended from time to time.

8. Shareholder Rights. As of the date of issuance specified at the beginning of this Agreement, the Employee shall have all of the rights of a shareholder of the Company with respect to the Restricted Shares, and all the rights of a mutual fund shareholder with respect to the Restricted Mutual Fund Shares, except as otherwise specifically provided in this Agreement.

9. Fees and Distributions.

(a) Management fees of the applicable mutual funds for the Restricted Mutual Fund Shares shall be the sole responsibility of the Employee.

(b) If any mutual fund in which the Employee holds an interest distributes dividends, income or earnings with respect to the Restricted Mutual Fund Shares prior to the vesting of such Restricted Mutual Fund Shares, then the following shall apply. In the event of distributions made in cash, such cash distributions shall be reinvested in the mutual fund from which the distribution occurred and the mutual fund shares representing the reinvested amounts shall be considered Restricted Mutual Fund Shares under this Agreement, and shall vest along with the other unvested Restricted Mutual Fund Shares in equal installments over the remaining vesting dates provided in the Vesting Schedule in the Notice of Grant. In the event of in-kind distributions, extraordinary distributions (whether in other securities or other property) or other adjustments, such distributions shall be held in the account of the Employee together with the Restricted Mutual Fund Shares. All Restricted Mutual Fund Shares received via distributions shall also be restricted and shall vest on the dates specified in the applicable Vesting Schedule in the Notice of Grant. For the avoidance of doubt, in the event that any unvested Restricted Mutual Fund Shares are forfeited in accordance with this Agreement, the distributions with respect to any such Restricted Mutual Fund Shares not previously paid out will also be forfeited.

10. Tax Withholding. The parties hereto recognize that the Company or an Affiliate may be obligated to withhold federal and state taxes or other taxes upon the vesting of the Restricted Shares or Restricted Mutual Fund Shares, or, in the event that the Employee elects under Code Section 83(b) to report the receipt of the Restricted Shares or Restricted Mutual Fund Shares as income in the year of receipt, upon the Employee's receipt of the Restricted Shares or Restricted Mutual Fund Shares, respectively. The Employee agrees that, at such time, if the Company or an

Affiliate is required to withhold such taxes, the Employee will promptly pay, in cash upon demand (or in any other manner permitted by the Committee in accordance with the terms of the Plans), to the Company or an Affiliate such amounts as shall be necessary to satisfy such obligation. The Employee further acknowledges that the Company has directed the Employee to seek independent advice regarding the applicable provisions of the Code, the income tax laws of any municipality, state or foreign country in which the Employee may reside, and the tax consequences of the Employee's death.

11. Injunctive Relief. In the event of a breach by the Employee of the Employee's obligations under this Agreement, including but not limited to a commission by the Employee of a Restricted Activity as described in Section 6, in addition to being entitled to exercise all rights granted by law, including recovery of damages, the Company will be entitled to specific performance of its rights under this Agreement. The Employee acknowledges that a violation or attempted violation of the obligations set forth herein will cause immediate and irreparable damage to the Company, and therefore agrees that the Company shall be entitled as a matter of right to an injunction, from any court of competent jurisdiction, restraining any violation or further violation of such obligations (without posting any bond or other security).

12. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. The book entry or certificate representing the Restricted Shares shall contain a notation or bear the following legend (as well as any notations or legends required by applicable state and federal corporate and securities laws) noting the existence of the restrictions and the Company's rights to reacquire the Restricted Shares set forth in this Agreement:

> "THE SHARES REPRESENTED BY THIS [BOOK ENTRY] [CERTIFICATE] MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF A RESTRICTED STOCK AND MUTUAL FUND RESTRICTED SHARE AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY."

(b) Stop-Transfer Notices. The Employee agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Restricted Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of the Restricted Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom the Restricted Shares shall have been so transferred.

13. Interpretation of This Agreement. All decisions and interpretations made by the Committee with regard to any question arising hereunder or under the Plans shall be binding and conclusive upon the Company and the Employee. If there is any inconsistency between the provisions of this Agreement and the Plans, the provisions of the Plans shall govern.

14. No Promise of Future Awards or Continued Employment. The Employee acknowledges that this Agreement awards restricted stock and/or property to the Employee, but does not impose any obligation on the Company to make any future grants or issue any future restricted shares or restricted mutual fund shares to the Employee or otherwise continue the participation of the Employee under either of the Plans. This Agreement shall not give the Employee a right to continued employment with the Company or any Affiliate, and the Company or Affiliate employing the Employee may terminate his or her employment at will, and otherwise deal with the Employee without regard to this Agreement.

15. Binding Effect. This Agreement shall be binding in all respects on the heirs, administrators, representatives, executors and successors of the Employee, and on the Company and its successors and assigns.

16. Agreement to Arbitrate. The Company and the Employee each agrees (i) that any dispute, claim or controversy arising out of or relating directly or indirectly to the construction, performance or breach of this Agreement (including, without limitation, the grant, issuance or forfeiture of Restricted Shares and Restricted Mutual Fund Shares) shall be settled by arbitration conducted before and in accordance with the rules of the Financial Industry Regulatory Authority; and (ii) that judgment upon any award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Accordingly, the Company and the Employee each waive their right (if any) to a trial before a court judge and/or jury to resolve any such disputes; provided, this Section 16 shall not be construed to limit the Company's right to obtain equitable relief under Section 11 with respect to any matter or controversy subject to Section 11, and pending a final determination by the arbitrators with respect to any such matter or controversy, the Company shall be entitled to obtain any such relief by direct application to state, federal, or other applicable court, without being required to first arbitrate such matter or controversy.

17. Choice of Law. The Company is incorporated in the State of Delaware, and by their terms the Plans are governed by the laws of the State of Delaware. Accordingly, this Agreement is entered into under the laws of the State of Delaware and shall be construed and interpreted thereunder (without regard to its conflict-of-law principles).

18. Termination; Modification. In the event that any one or more of the Post-Termination Restricted Activities described in Section 3(f) above shall be held to be unenforceable, invalid or illegal for any reason including, but not limited to, being excessively broad as to duration, geographical scope, activity or subject, such restriction shall be construed or modified by limiting and reducing it, so as to provide the Company with the maximum protection of its business interests and the intent of the parties as set forth herein and yet be valid and enforceable under the applicable law as it shall then exist. If any such restriction held to be unenforceable, invalid or illegal cannot be so construed or modified, then this Agreement shall terminate in its

entirety, and at the time of such termination, vesting of the Restricted Shares and Restricted Mutual Fund Shares that are the subject of this Agreement shall cease immediately and automatically and unvested Restricted Shares and Restricted Mutual Fund Shares shall be forfeited and shall be cancelled in accordance with Section 4 above.

19. **Entire Agreement**. This Agreement and the Plans set forth the entire agreement and understanding of the parties hereto with respect to the issuance and sale of the Restricted Shares and Restricted Mutual Fund Shares and the administration of the Plans, and supersede all prior agreements, arrangements, plans, and understandings relating to the issuance and sale of the Restricted Shares and Restricted Mutual Fund Shares and the administration of the Plans.

20. **Amendment and Waiver**. Except as provided in the Plans or in Section 7 above, this Agreement may be amended, modified, or canceled only by a written instrument executed by the parties. No term or condition of this Agreement shall be deemed to have been waived, nor shall there be any estoppel to enforce any provision of this Agreement, except by a statement in writing signed by the party against whom enforcement of the waiver or estoppel is sought. Any written waiver shall not be deemed a continuing waiver unless specifically stated, shall operate only as to the specific term or condition waived, and shall not constitute a waiver of such term or condition for the future or as to any other act other than that specifically waived.

21. **Acknowledgment of Receipt of Copy**. By execution hereof, the Employee acknowledges having received a copy of the prospectus related to the 2003 Plan and instructions on how to access a copy of each of the Plans.

22. **Acknowledgment of Voluntary Election; Fairness.** By executing this Agreement, the Employee acknowledges his or her voluntary election to receive and accept the Restricted Shares and any Restricted Mutual Fund Shares subject to all of the terms and conditions set forth in this Agreement, and agrees to be bound thereby, including, without limitation, the terms and conditions specifying the circumstances under which the unvested Restricted Shares and Restricted Mutual Fund Shares shall cease to vest and be forfeited. Employee further acknowledges and agrees that such terms and conditions are fair and reasonable in light of the circumstances under which the award of Restricted Shares and any award of Restricted Mutual Fund Shares is being made.

Exhibit 21.1

SUBSIDIARIES OF PIPER JAFFRAY COMPANIES
(as of January 10, 2016)

Name*	State or Jurisdiction of Entity
Piper Jaffray & Co.	Delaware
Piper Jaffray EVP, LLC	Delaware
Piper Jaffray Ltd.	United Kingdom
Edgeview Partners, L.P.	Delaware
Piper Jaffray Financial Products Inc.	Delaware
Piper Jaffray Financial Products II Inc.	Delaware
Piper Jaffray Financial Products III Inc.	Delaware
Piper Jaffray Foundation	Delaware
Piper Jaffray Lending Inc.	Delaware
Piper Jaffray Lending LLC	Delaware
Piper Jaffray Private Capital Inc.	Delaware
Piper Jaffray Ventures Inc.	Delaware
Piper Ventures Capital Inc.	Delaware
PJC Capital LLC	Delaware
PJC Consumer Partners Acquisition I, LLC	Delaware
Piper Jaffray Asset Management Inc.	Delaware
Advisory Research, Inc.	Delaware
Piper Jaffray Investment Group Inc.	Delaware
Piper Jaffray Investment Management LLC	Delaware
Piper Jaffray Municipal Opportunities Fund, L.P.	Delaware
Piper Jaffray Funds Management LLC	Delaware
Piper Jaffray Municipal Opportunities Fund II, L.P.	Delaware
Piper Jaffray Senior Living, LLC	Delaware
Piper Jaffray Senior Living Fund I, L.P.	Delaware
PJC Capital Management LLC	Delaware
Piper Jaffray Merchant Banking Fund I, L.P.	Delaware
PJC Merchant Banking Partners I, LLC	Delaware
PJC Merchant Banking Partners II, LLC	Delaware
PJC Merchant Banking Partners III, LLC	Delaware
PJC Merchant Banking Partners IV, LLC	Delaware
PJC Capital Partners LLC	Delaware
Piper Jaffray Hong Kong Limited	Hong Kong

* Indentation indicates the principal parent of each subsidiary.

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

1. Registration Statement (Form S-8 No. 333-111665) of the Company dated December 31, 2003
2. Registration Statement (Form S-8 No. 333-122494) of the Company dated February 2, 2005
3. Registration Statement (Form S-8 No. 333-142699) of the Company dated May 8, 2007
4. Registration Statement (Form S-8 No. 333-150962) of the Company dated May 16, 2008
5. Registration Statement (Form S-8 No. 333-159360) of the Company dated May 20, 2009
6. Registration Statement (Form S-8 No. 333-165094) of the Company dated February 26, 2010
7. Registration Statement (Form S-8 No. 333-205229) of the Company dated June 25, 2015

of our reports dated February 25, 2016, with respect to the consolidated financial statements of Piper Jaffray Companies ("the Company") and the effectiveness of internal control over financial reporting of the Company, included in this Annual Report (Form 10-K) of the Company for the year ended December 31, 2015.

/s/ Ernst & Young LLP

Minneapolis, Minnesota
February 25, 2016

Exhibit 24.1

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Andrew S. Duff, Debbra L. Schoneman and John W. Geelan, and each of them, his or her true and lawful attorneys-in-fact and agents, each acting alone, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign the Annual Report on Form 10-K of Piper Jaffray Companies (the "Company") for the Company's fiscal year ended December 31, 2015, and any or all amendments to said Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, and to file the same with such other authorities as necessary, granting unto each such attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each such attorney-in-fact and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

Dated and effective as of the 25th of February, 2016.

/s/ Andrew S. Duff	/s/ Lisa K. Polsky
Andrew S. Duff, Chairman and Chief Executive Officer	Lisa K. Polsky, Director
/s/ Debbra L. Schoneman	/s/ Sherry M. Smith
Debbra L. Schoneman, Chief Financial Officer	Sherry M. Smith, Director
/s/ William R. Fitzgerald	/s/ Philip E. Soran
William R. Fitzgerald, Director	Philip E. Soran, Director
/s/ B. Kristine Johnson	/s/ Scott C. Taylor
B. Kristine Johnson, Director	Scott C. Taylor, Director
/s/ Addison L. Piper	/s/ Michele Volpi
Addison L. Piper, Director	Michele Volpi, Director

Exhibit 31.1

CERTIFICATIONS

I, Andrew S. Duff, certify that:

1. I have reviewed this annual report on Form 10-K of Piper Jaffray Companies;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 25, 2016

/s/ Andrew S. Duff

Andrew S. Duff
Chairman and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Debbra L. Schoneman, certify that:

1. I have reviewed this annual report on Form 10-K of Piper Jaffray Companies;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 25, 2016

/s/ Debbra L. Schoneman

Debbra L. Schoneman
Chief Financial Officer

Exhibit 32.1

Certification Under Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, each of the undersigned certifies that this periodic report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in this periodic report fairly presents, in all material respects, the financial condition and results of operations of Piper Jaffray Companies.

Dated: February 25, 2016

/s/ Andrew S. Duff

Andrew S. Duff
Chairman and Chief Executive Officer

/s/ Debbra L. Schoneman

Debbra L. Schoneman
Chief Financial Officer

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-100928

Date Filed:
08/17/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Piper Jaffray & Co.
Minneapolis, MN United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Underwriters/Investment Banking Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Edwards, Kim (Employee)	Austin, TX United States		X
Rivard, Brent (Employee)	Minneapolis, MN United States		X
Piper Jaffray Companies	Minneapolis, MN United States	X	
Duff, Andrew	Minneapolis, MN United States	X	
Piper, Addison	Minneapolis, MN United States	X	
Fitzgerald, William	Minneapolis, MN United States	X	
Frazier, Michael	Minneapolis, MN United States	X	
Johnson, B. Kristine	Minneapolis, MN United States	X	
Smith, Sherry	Minneapolis, MN United States	X	
Soran, Philip	Minneapolis, MN United States	X	
Taylor, Scott	Minneapolis, MN United States	X	
Volpi, Michele	Minneapolis, MN United States	X	

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
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Certificate Number:
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1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Piper Jaffray & Co.
Minneapolis, MN United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Underwriters/Investment Banking Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

KRISTI GRUBER
Notary Public, State of Texas
Comm. Expires 01-06-2020
Notary ID 2538551

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Danielle Bradford, this the 17th day of August, 20 16, to certify which, witness my hand and seal of office.

Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath
Kristi Gruber	Kristi Gruber	Investment Banking Asst/Notary

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Raymond James & Associates, Inc. ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Raymond James & Associates, Inc. having offices at 5847 San Felipe, Suite 4125, Houston, TX 77057 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Raymond James & Associates, Inc. Offer, dated 3/8/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

RAYMOND JAMES & ASSOCIATES, INC.

Deborah S. Jones
Printed Name of Authorized Person

Signature

Managing Director
Title:

6/23/16
Date:

CITY OF AUSTIN

Terry V. Nicholson
Printed Name of Authorized Person

Signature

Senior Buyer Supervisor
Title:

6/24/16
Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Raymond James & Associates, Inc.

Company Address: 5847 San Felipe, Suite 4125

City, State, Zip: Houston, Texas 77057

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Deborah S. Jones

Title: Managing Director

Signature of Officer or Authorized Representative:

Date: 3/8/2016

Email Address: debi.jones@raymondjames.com

Phone Number: (713) 840-3602

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. **Questions:**

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16

Terry V. Nicholson, Sr. Buyer Specialist
Purchasing Office, 512-974-2995

Date

ACKNOWLEDGED BY:

Deborah S. Jones, Managing Director _____ 3/8/2016

Name Authorized Signature Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

City of Austin, Texas

CITY OF AUSTIN, TEXAS

RESPONSE TO REQUEST FOR QUALIFICATION STATEMENTS UNDERWRITER/INVESTMENT BANKING SERVICES SOLICITATION # RFQS - TVN0103REBID

DUE DATE: MARCH 8, 2016

RAYMOND JAMES®

Deborah S. Jones
Managing Director
5847 San Felipe, Suite 4125
Houston, Texas 77057
(713) 840-3602
debi.jones@raymondjames.com

Thomas K. Oppenheim
Senior Managing Director
5956 Sherry Lane, Suite 1900
Dallas, Texas 75225
(214) 365-5505
tom.oppenheim@raymondjames.com

RAYMOND JAMES®

March 8, 2016

City of Austin
Purchasing Office
124 W. 8th Street, Room 310
Austin, Texas 78701
Re: Response for Solicitation #TVN0103REBID

On behalf of Raymond James & Associates, Inc. ("Raymond James" or "the Firm"), we are pleased to submit our response to the City of Austin, Texas (the "City") Request for Qualification Statements ("RFQS") Solicitation No. TVN0103REBID. Raymond James proposes to provide the City with the public finance expertise, distribution capabilities and capital strength of a national firm, and the market knowledge and agility of a regional firm. The following is an executive summary highlighting the key components of Raymond James' qualifications.

✓ **EXPERIENCE WITH THE CITY:** Raymond James has been fortunate to serve as an underwriter on 21 negotiated issues for the City totaling over $2.555 billion in par amount, generating more than $798 million of "bona fide" orders, and selling over $499 million to "going away" investors. The Firm is also an active market maker for the City's bonds in the secondary market, having executed over 4,600 trades totaling more than $2.2 billion in par amount since 2006.

✓ **A LEADING UNDERWRITER NATIONALLY AND IN TEXAS:** Raymond James is consistently a top 10 ranked underwriter nationally (ranked 7th as of year-end 2015), and is the leading underwriter (senior and co-manager combined) in the State of Texas amongst all firms nationwide. **For the year ended December 31, 2015, Raymond James is the top ranked underwriting firm for all negotiated municipal new issues in the State of Texas by par amount and number of issues, having served as senior or co-manager on 322 issues, totaling more than $15.513 billion in par amount.**

✓ **BANKING AND UNDERWRITING COMMITMENT TO THE CITY:** Our banking and underwriting team assigned to the City's account is highly seasoned and has extensive knowledge of the City's programs and credit. The City will have top level banking and underwriting coverage at all times. Tom Oppenheim and Debi Jones will serve as co-lead bankers to the City's account, and Buddy Kempf will serve as the lead underwriter, all of whom are based in Texas. As such, the City will have senior level banking and underwriting coverage at all times.

✓ **COMMITMENT TO PUBLIC FINANCE:** Raymond James maintains a significant commitment to the municipal market. Consisting of 186 professionals in 26 locations nationwide, our Public Finance platform is one of the largest commitments in the industry amongst all firms nationwide.

✓ **TEXAS AND AUSTIN PRESENCE:** Raymond James is one of the largest financial institutions in the State of Texas with 196 locations and 877 employees. Raymond James has 16 public finance bankers, analysts and support staff, located in Dallas, Houston and San Antonio and a **fully staffed municipal trading and underwriting desk located in Dallas that covers Texas issuers. Raymond James has 12 offices located in the City of Austin with 74 employees, which includes 45 retail sales professionals who would be utilized to enhance the sale of the City's bonds.**

✓ **RAYMOND JAMES UNDERWRITING DESK IN TEXAS:** Being one of the few firms that has an underwriting desk in Texas (Dallas) that focuses on local credits provides our lead underwriters the platform to fully understand Texas credits and the City's credit specifically. Raymond James has a reputation among the Texas underwriting community as a fair, responsive and aggressive underwriter, specifically when serving as senior

manager. We believe our Texas underwriting desk, in concert with our national underwriting desk, will provide the City with the best execution when pricing the City's bond issues.

✓ **EXTENSIVE DISTRIBUTION CAPABILITIES:** Raymond James' distribution network covers both institutional and retail accounts. Raymond James has one of the largest fixed income institutional sales, trading and underwriting forces in the nation with 522 professionals, including 211 institutional sales professionals who have access to 30,000 institutional accounts with municipal debt holdings, of which approximately 5,000 are actively buying and selling municipal bonds. As part of this institutional sales force, Raymond James maintains a **24 member institutional Dedicated Municipal Group ("DMG") that sells only municipal bonds to the largest 1st Tier institutional buyers, as well as the top 2nd/3rd Tier buyers, which is significantly larger than the dedicated muni sales force maintained by other firms.** Further, Raymond James' retail distribution network is one of the largest in the country with 2,580 locations and approximately 7,635 retail sales professionals. Raymond James' extensive institutional and retail investor coverage will help bring a broad group of investors to the City's bond issues to help achieve the lowest possible interest rates.

✓ **FINANCIAL STABILITY:** Raymond James currently has more than $4.6 billion in equity capital, including over $390 million in excess net capital. Unlike many firms that have suffered instability, Raymond James, because of our conservative nature, has continued to prosper even in turbulent financial markets. Our strong capital position gives us maximum flexibility to aggressively price and support the City's bonds in difficult markets. This capital strength and commitment will help ensure that the City achieves the lowest cost of funds over the life of the transaction. By selecting Raymond James, the City will receive long-term support that it can count on.

✓ **WILLINGNESS TO COMMIT CAPITAL:** Not only is Raymond James one of the strongest capitalized firms in the industry, but we put this capital to work for our clients. As the leading investment banking firm in Texas, Raymond James has been in the position of managing numerous transactions where our liability was significant. Each time our firm was prepared to commit its capital for the benefit of the issuer's. In 2016 alone, during exceptionally volatile market conditions, our Texas underwriting desk has committed more than $60.6 million of capital on 12 senior managed transactions.

Raymond James has all of the necessary resources, skills and capabilities to successfully execute the City's future contemplated financings. We very much look forward to working with the City and its financial management team, and we thank you for the opportunity to provide our investment banking qualifications. Should you have any questions about our proposal or credentials, or require any additional information, please do not hesitate to contact me at the number listed below.

Respectfully submitted,

Deborah S. Jones
Managing Director
(713) 840-3602

Thomas K. Oppenheim
Senior Managing Director
(214) 356-5505

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SECTION 1

Response Content

A. Part I – Business Organization:

State full name and address of your organization and indentify parent company if you are a subsidiary. Specify the branch office or other subordinate element which will perform, or assist in performing, work herein. Indicate whether you operate as a partnership, corporation, or individual. Include the State in which incorporated or licensed to operate.

Raymond James & Associates, Inc. ("Raymond James"), a wholly-owned subsidiary of Raymond James Financial, Inc. ("RJF"), is a full-service regional investment banking and securities brokerage firm providing both retail and institutional distribution capabilities. The Firm's corporate headquarters are located in St. Petersburg, Florida, while the Fixed Income Capital Markets Division, which includes Public Finance, and municipal sales, trading and underwriting, is based in Memphis, Tennessee. The finance team assigned to the City's engagement is based out of the Firm's Houston and Dallas branch locations.

Corporate Headquarters	Public Finance Headquarters	City's Finance Team
880 Carillon Parkway St. Petersburg, Florida 33716	50 North Front Street Memphis, Tennessee 38103	5847 San Felipe, Suite 4125 Houston, Texas 77057 5956 Sherry Lane, Suite 1900 Dallas, Texas 75225

This section should include at a minimum the following:

i. Management/Ownership: Provide any recent or proposed changes in the firm's management or ownership.

There have been no recent or proposed changes in the Firm's management or ownership.

ii. Confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response.

Raymond James confirms our adherence to the City's non-discriminiation requirement by signing the Offer Sheet which is included as an **Appendix behind Tab A** along with the other required forms.

iii. Confirm an understanding that the firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.

Raymond James confirms that the Firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the Firm's proposal response; directly or indirectly, through any contact with the City Council Members or other City officials between the proposal submission date and award by the City Council.

iv. Municipal Sales offices in the United States.
v. Account Executives employed selling municipal bonds in the United States.

Municipal Salesforce: As a top-tier investment banking and securities brokerage firm, Raymond James has developed and maintains a fully integrated, multi-channel, nationwide institutional and retail distribution network. Raymond James has a three-tiered sales force for municipal bonds: municipal institutional sales, municipal fixed income generalists and retail brokers. Raymond James' unsurpassed coverage of middle market institutional accounts gives us a competitive advantage in assisting the City in distributing tax-exempt and taxable bonds to buyers who historically may have had limited access to the City's bonds in the primary market.

Raymond James' distribution network, covering both institutional and retail accounts, is one of the largest in the country with 2,580 locations and approximately 7,635 retail sales professionals. Raymond James has one of the largest fixed income institutional sales, trading and underwriting forces in the nation with 522 professionals. Raymond James' sales force of 211 institutional sales professionals includes 187 fixed income institutional sales generalists, as well as an extensive 24 member institutional Dedicated Municipal Group ("DMG") that sells only

municipal bonds to the largest 1st Tier institutional buyers, as well as the top 2nd/3rd Tier buyers. This assembled DMG is one of the largest nationally both in terms of number of professionals and volume. The table below details the breakdown of Raymond James' national municipal fixed income employees, municipal institutional sales associates, and retail sales associates as well as our Texas infrastructure who are involved in the sale of municipal bonds.

	# of Offices	Underwriters	Traders	Institutional Sales	Retail Sales
National	2,580	14	37	211	7,635
Texas	196	3	5	13	605

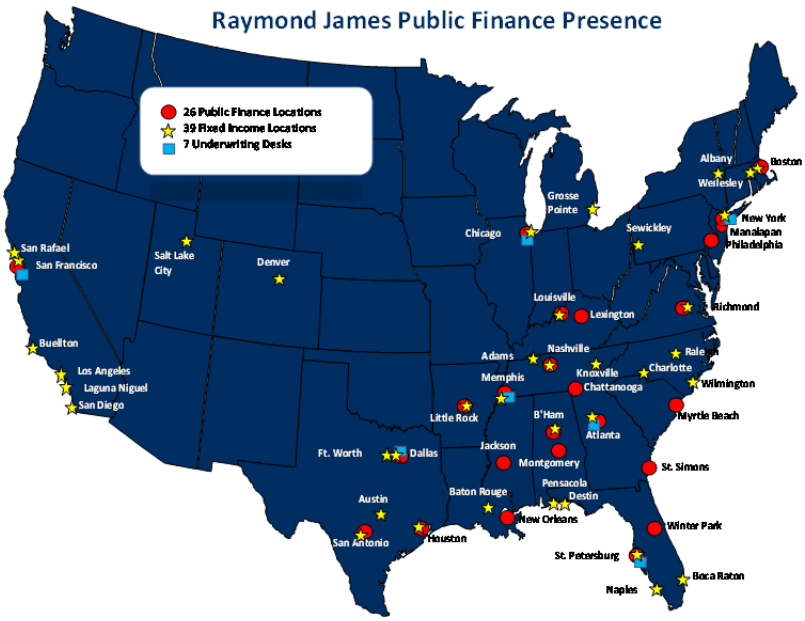
National Institutional Sales: Raymond James has 211 institutional sales professionals, which includes the 24 member DMG that sells only municipal bonds, both tax-exempt and taxable, to all institutional buyers including the largest 1st Tier institutional buyers, as well as the top 2nd/3rd Tier buyers. Raymond James' 187 fixed income institutional sales generalists sell municipal bonds, among other fixed income products, to middle-market, regional and local 2nd and 3rd Tier buyers that are often overlooked by Wall Street firms. This municipal institutional sales and trading force is among the largest in the nation, while the DMG group is also one of the largest assembled sales teams amongst all firms nationwide. In total, the firm has access to 30,000 institutional accounts with municipal debt holdings, of which approximately 5,000 are actively buying and selling on a frequent basis. These professionals have well established relationships with the major institutional investors as well as coverage of many smaller regional and local investors often overlooked by other firms. Access to these 2nd and 3rd Tier institutional investors will allow Raymond James to maximize the distribution and pricing efficiency of the City's bonds.

Texas Institutional Sales: Raymond James has 13 fixed income institutional sales professionals in Texas, that actively sell municipal bonds to middle tier institutional accounts throughout the State, including over 200 professional retail investor accounts, such as banks, trust departments, and money managers that buy on behalf of retail investors.

National Individual Retail Sales: Raymond James covers the entire spectrum of retail investors, not only high net worth individuals, but also small businesses across the country, to allow for increased retail participation, many incorporating municipal securities as a core holding in their portfolio investment strategies. **The Firm has one of the largest retail distribution networks in the country with 2,580 office locations and 7,635 financial advisors serving more than 2.5 million accounts totaling assets of over $407 billion under management.**

Texas Individual Retail Sales: Raymond James has 196 offices in Texas with 605 retail brokers covering 176,598 accounts with over $35 billion in assets under management, focusing specifically on individual Texas retail investors. **The Firm has 12 offices with 45 retail brokers located in the City of Austin who would be utilized to enhance the sale of the City's bonds.**

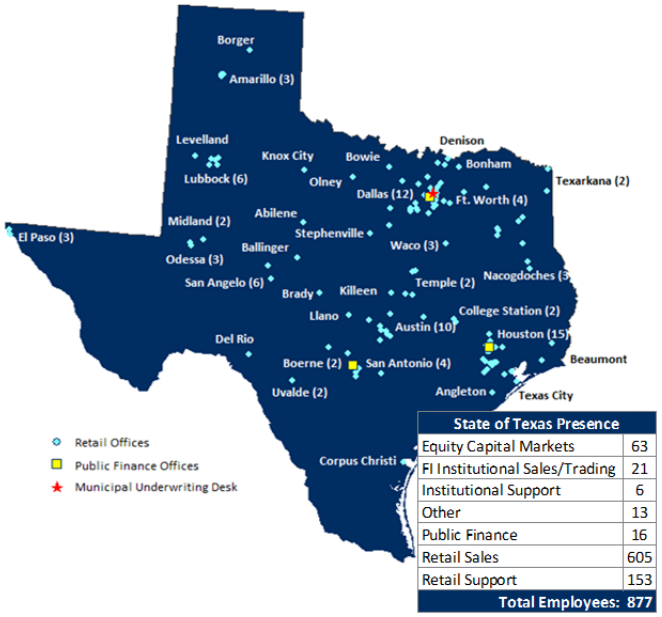
Commitment to Municipal Finance: A key component to our success and longevity in the public finance industry is Raymond James' exceptional banking services with a focus on detail, and personal service only found through regional and locally-based bankers who understand each unique marketplace served throughout the country. Raymond James is committed to serving the municipal market, and the needs of our clients, to consistently achieve excellent results. Raymond James' team of 186 seasoned municipal finance banking professionals covers the country from 26 public finance office locations nationally, which ensures that our clients work with bankers who know their market and



understand their financing goals. This approach has made us one of the highest-ranked public finance firms in each of the regions that we serve. As a result of our extensive underwriting experience, issuers value our expertise and market knowledge. The map included on the previous page highlights Raymond James' public finance office locations as well as our fixed income sales offices and municipal underwriting desk locations.

vi. Texas offices and locations, if any, along with the number of Account Executives selling municipal bonds in each Texas office identified.

In the State of Texas, Raymond James has 196 locations with a total of 877 employees. Raymond James has 605 retail sales professionals, 13 fixed income institutional sales professionals and 8 fixed income traders and underwriters throughout the State of Texas. Raymond James' Texas municipal operation is comprised of 3 public finance offices located in Dallas, Houston and San Antonio with 16 public finance bankers and support staff that are committed to the financing needs of municipal bond issuers throughout the entire State of Texas. Within the City of Austin, Raymond James has 12 offices, with a total of 74 employees, 49 of which are retail or institutional sales professionals who would be utilized to enhance the sale of the City's bond issue(s). Provided as an **Appendix behind Tab B** is a detailed listing of all of Raymond James' Texas office locations, along with the number of account executives selling municipal bonds in each office.



State of Texas Presence	
Equity Capital Markets	63
FI Institutional Sales/Trading	21
Institutional Support	6
Other	13
Public Finance	16
Retail Sales	605
Retail Support	153
Total Employees:	877

B. Part II – Authorized Negotiator:

Include name, address, and telephone number of person in your organization authorized to negotiate Contract terms and render binding decisions on Contract matters.

The following individuals are authorized to negotiate Contract terms and render binding decisions on Contract matters.

Ms. Debi Jones, Managing Director 5847 San Felipe, Suite 4125 Houston, Texas 77057 Phone: (713) 840-3602 Fax: (713) 840-3694 debi.jones@raymondjames.com	Mr. Tom Oppenheim, Senior Managing Director 5956 Sherry Lane, Suite 1900 Dallas, Texas 75225 Phone: (214) 365-5505 Fax: (214) 365-5563 tom.oppenheim@raymondjames.com

C. Part III – Background and Prior Experience:

Describe only relevant corporate experience and individual experience for personnel who will be actively engaged in the contract. Do not include corporate experience unless personnel assigned to this project actively participated. Do not include experience prior to 2000. Supply the project title, year, and reference name, title, present address, and phone number of principal person for whom prior projects were accomplished.

Raymond James is a leading underwriter of municipal bonds nationally, and our rankings are a testament to our ability to successfully market and underwrite municipal issues nationwide. Raymond James is consistently a top 10 ranked underwriter nationally (ranked 7th as of year-end 2015), and is the leading underwriter in the State of Texas amongst all firms nationwide. **As of December 31, 2015, Raymond James was the top ranked underwriting firm for all negotiated municipal new issues in the State of Texas by par amount and number of issues, having served as senior or co-manager on 322 issues, totaling more than $15.513 billion in par amount.** These rankings are a tribute to our ability to underwrite Texas credits and speak to the level of trust that issuers and investors alike place in Raymond James' ability to do so. Furthermore, by having a local presence with a Dallas-based underwriting desk, Raymond James has garnered a unique understanding of Texas credits.

National Negotiated Municipal New Issues
Full Credit to Each Manager
In Terms of Volume
Year End 2015

Rank	Underwriter	Par Amount (US$ mil)	Mkt. Share	Number of Issues
1	Bank of America Merrill Lynch	111,318.5	38.3	695
2	J P Morgan Securities LLC	98,235.1	33.8	597
3	Citi	97,693.4	33.6	657
4	Morgan Stanley	93,314.4	32.1	614
5	Wells Fargo & Co	91,291.4	31.4	589
6	RBC Capital Markets	84,857.1	29.2	1,062
7	**Raymond James**	**75,367.0**	**26.0**	**941**
8	Siebert Brandford Shank & Co	63,778.3	22.0	297
9	Loop Capital Markets	62,780.6	21.6	324
10	Barclays	60,089.8	20.7	303
11	Ramirez & Co Inc	57,535.3	19.8	275
12	Goldman Sachs & Co	57,141.9	19.7	246
13	Piper Jaffray & Co	56,369.6	19.4	757
14	Stifel Nicolaus & Co Inc	54,461.9	18.8	1,069
15	Jefferies LLC	42,495.0	14.6	202

Texas Negotiated Municipal New Issues
Full Credit to Each Manager
In Terms of Volume
Year End 2015

Rank	Underwriter	Par Amount (US$ mil)	Mkt. Share	Number of Issues
1	**Raymond James**	**15,513.7**	**39.7**	**322**
2	RBC Capital Markets	13,676.3	35.0	264
3	J P Morgan Securities LLC	12,354.3	31.6	76
4	Citi	10,399.8	26.6	88
5	Piper Jaffray & Co	10,176.0	26.1	83
6	Morgan Stanley	9,687.2	24.8	64
7	Wells Fargo & Co	9,306.3	23.8	86
8	Siebert Brandford Shank & Co	8,795.1	22.5	45
9	Frost National Bank	8,274.0	21.2	95
10	Ramirez & Co Inc	6,372.9	16.3	48
11	BOK Financial Corp	6,346.6	16.3	172
12	Barclays	6,129.2	15.7	25
13	Loop Capital Markets	5,727.3	14.7	34
14	Bank of America Merrill Lynch	5,387.3	13.8	31
15	Stifel Nicolaus & Co Inc	5,320.9	13.6	98

Since 2000, Raymond James has served as underwriter on 2,763 negotiated transactions totaling more than $166 billion for a multitude of issuers throughout the State of Texas, of which 1,123 transactions totaling over nearly $30 billion represents Senior Managed business. Attached as an **Appendix behind Tab C** is a representative sampling of the transactions that Raymond James has participated on over the past 15 years. This experience illustrates the depth of our knowledge of the Texas market place and provides the City with confidence that our underwriting team has the experience and ability to structure and market each and every transaction for the City to provide the most efficient pricing and lowest cost of funds, coupled with desired flexibility.

This section should include at a minimum the following:
i. Provide the year the firm was founded.
ii. Provide a brief history of the firm.
iii. Provide the location of the firm's headquarters and municipal trading desks.

RJF, Raymond James' parent company, is a Florida-based diversified holding company providing financial services to individuals, corporations and municipalities through its subsidiary companies. RJF was founded in 1962 with the objective of providing a comprehensive range of investment opportunities to investors, while maintaining a policy of professional integrity. Since its modest beginnings, the firm has grown into one of the largest financial services firms in the United States. A public company since 1983, RJF is listed on the New York Stock Exchange under the symbol "RJF" and its shares are currently owned by more than 18,000 individual and institutional investors. Raymond James began its Texas public finance practice in Dallas in 1995 and has grown to three locations with 16 public finance personnel.

Raymond James' services cover retail brokerage, institutional equity and fixed income sales, fixed income trading and underwriting, public finance, investment banking, operations, and administration. Raymond James works closely with RJF's other banking services and investment subsidiaries, Raymond James Financial Services, Inc. and Raymond James Ltd., as well as with its asset management subsidiaries, including Eagle Asset Management, Inc. and the Eagle Family of Mutual Funds, to provide a full range of comprehensive financial services to its clients. The Firm's primary business services include securities brokerage, investment banking, asset management and banking services. The Firm has grown to its present size and organization by adhering to what has been its primary philosophy for over 50 years, that of keeping the client's financial well-being foremost. Over this time, Raymond James has become a respected, multinational company with distinct business units that serve a variety of clients, from individuals and small business owners to municipalities and major corporations. RJF and its subsidiaries have a total of 15,497 employees, including approximately 7,635 financial advisors serving more than 2.5 million accounts in 2,576 locations throughout the United States. Total client assets are in excess of $471 billion, which includes approximately $407 billion of assets held for retail investors.

Raymond James Underwriting and Trading: Raymond James has a significant municipal underwriting and trading operation with 7 underwriting desks located in Atlanta, Chicago, Dallas, Memphis, New York, San Francisco, and St. Petersburg. These 7 committing centers are staffed with 51 municipal traders, underwriters and support staff that monitor the national, regional, and local credit markets to ensure that the firm is an aggressive bidder and

underwriter of municipal securities nationwide. Raymond James is committed to serving the municipal market, and the needs of our clients, to consistently achieve excellent results.

Municipal Trading and Underwriting Desks						
Atlanta GA	Chicago IL	**Dallas TX**	Memphis TN	New York NY	San Francisco CA	St. Petersburg FL

National Taxable Underwriting: Raymond James has a Dedicated Taxable Municipal Underwriting Desk. Within the public finance industry, most firms do not sell taxable municipal bonds from their municipal underwriting desk, but rather utilize their corporate underwriting desks. However, Raymond James is one of the few leading national firms that has maintained an underwriting desk dedicated to taxable municipal bonds for over 25 years. By thoroughly understanding the securities being sold, our taxable underwriting desk can ensure that the City has access to all available investor markets, providing maximum diversification among investor classes and continued liquidity in the secondary market.

Texas Underwriting and Trading: Whether selected as Senior or Co-Managing Underwriter, the City's bonds will be underwritten by Buddy Kempf from our Raymond James Texas trading and underwriting desk located in Dallas, augmented by our national underwriting desk located in Chicago. Our Texas underwriting professionals focus on Texas municipal credits in both the primary and secondary markets and are in constant communication with the Texas underwriting community, which enables our professionals to possess a heightened knowledge of the Texas market. This translates into more aggressive pricing for our Texas clients, an unmatched willingness to commit capital, and an ability to uncover 2nd and 3rd Tier institutional buyers that otherwise are often overlooked by the national firms. Our Texas municipal operation has worked hard and diligently over the years to gain the reputation it now holds – that of being a very knowledgeable leader for placing Texas bonds to "going away" investors at aggressive interest rate levels that benefit our Texas municipal clientele. Buddy Kempf will be responsible for all facets of underwriting the City's bond issue(s) and will lead the City in pre-marketing sales efforts and pricing of the City's bond issue(s) with particular focus on developing maximum demand from national, regional and Texas investors. We believe that having a Texas underwriting desk that is focused solely on Texas credits and the City's credit specifically, enables us to aggressively price bonds for our clients. This is particularly true for the City as it moves forward with its financing needs. Investors respect the views of an underwriter that knows Texas credits, and it is this type of relationship and understanding of an issue and issuer that provides the best execution in terms of marketing Texas bonds and achieving the lowest interest cost.

Raymond James' Secondary Market Support: In addition to underwriting well over $170 billion in aggregate par amount historically for Texas issuers in the primary market, Raymond James' underwriting team and trading professionals are very active in the secondary market providing liquidity and making a market for every issue we underwrite. Raymond James' secondary market traders are located in six of the firms seven underwriting locations: Atlanta, Chicago, Dallas, Memphis, San Francisco, and St. Petersburg. These secondary market traders reside alongside our primary market underwriters and salesforce. Secondary market support and trading of the City's bonds is vital to understanding the value of the bonds as well as investor interest in the City. **Raymond James' trading and underwriting professionals have executed over 4,688 trades, totaling more than $2.285 billion of the City's bonds in the secondary market, with individual trades ranging from $4,000 to $53.620 million.** This level of secondary market trading volume provides our underwriting desk with invaluable insight into the investor demand and preferences, which can be used to structure bonds in the primary market to achieve the lowest cost of capital for the City.

D. Part IV – Personnel:

Include names, titles, and qualifications of key professional personnel who will be assigned to this contract. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

As recognized leaders in all aspects of municipal finance, Raymond James is uniquely qualified to serve the City as a senior or co-managing underwriter. In order to ensure that the City receives the Firm's full commitment, we utilize a "team approach" in serving our clients. This team concept represents the core of Raymond James' comprehensive approach to underwriting engagements. The underwriting team is composed of seasoned

veterans with many years of experience and knowledge who are well versed in modern practices in the public finance arena, and have the full resources and support of Raymond James at their disposal. This will ensure that the City receives the highest priority and service to assure the most effective engagement is realized. **All of the individuals assigned to the proposed underwriting team for the City will be available on a full-time basis to provide the highest quality of service necessary to ensure the best possible outcome for every transaction.** If Raymond James is selected to serve as an underwriter for the City's financing team, the commitment and exceptional level of service we provide to our Texas clients will continue to be our highest priorities. The following table outlines the Firm's banking and underwriting team that will be assigned to the City's engagement and indicates the role each team member will play.

	Title	Role	Location	Experience
Banking				
Debi Jones	Managing Director	Co-Lead Banker	Houston	31 Years
Tom Oppenheim	Senior Managing Director	Co-Lead Banker	Dallas	32 Years
Nick Papan	Managing Director	Chief Financial Analyst	Little Rock/Dallas	27 Years
Ashley Lundberg	Vice President	Banking & Quantitative Support	Houston	6 Years
Underwriting				
Buddy Kempf	Managing Director	Lead Texas Underwriter	Dallas	19 Years
Casy O'Brien	Managing Director	National Municipal Underwriter	Chicago	26 Years
Municipal Institutional Sales				
Chris Boudreau	Managing Director	Co-Head of Dedicated Muni Group	Atlanta	28 Years
Ted Hynes	Managing Director	Co-Head of Dedicated Muni Group	New York	30 Years

Ms. Debi Jones, Managing Director and Manager of Raymond James' Houston Public Finance operation along with Mr. Tom Oppenheim, Senior Managing Director and Head of the Firm's Southwest Public Finance operation, will serve as the co-lead bankers for the City's transactions. Ms. Jones and Mr. Oppenheim will jointly be the key contact persons responsible for the management of the account, coordination of the bond sales with the underwriting/trading desk and have day-to-day responsibilities of the engagement with the City. Both of these individuals have been covering the City for numerous years and have been involved in 21 of the City's negotiated transactions aggregating over $2.555 billion. Ms. Jones and Mr. Oppenheim have worked together for many years serving as co-lead bankers for our clients. This working relationship is an excellent combination of non-duplicative talent and expertise which will best serve the City. Mr. Nick Papan, Chief Financial Analyst for Raymond James' Texas Public Finance group, along with Ms. Ashley Lundberg, a Vice President with the Houston practice, will both provide quantitative support to the City's account. As such, they will provide quantitative analyses, technical review for any financing plan and structuring of bonds as well as banking documentation assistance. Mr. Buddy Kempf will be responsible for all facets of underwriting the City's bond issue(s). Mr. Casy O'Brien, the Firm's national municipal underwriter located in Chicago, will augment Mr. Kempf in the pricing of the City's transaction(s). Resumes highlighting the experience and expertise of each of the professionals assigned to the City's engagement are provided as an **Appendix behind Tab D.**

E. Part V – Innovative Financing Techniques:

Provide two innovative financing techniques, suggestions or ideas which would be relevant, or of interest to, the City of Austin. This can also include derivatives, debt restructuring, and self-liquidity ideas. If the idea(s) was(were) used in actual transaction(s), this section should include the following:

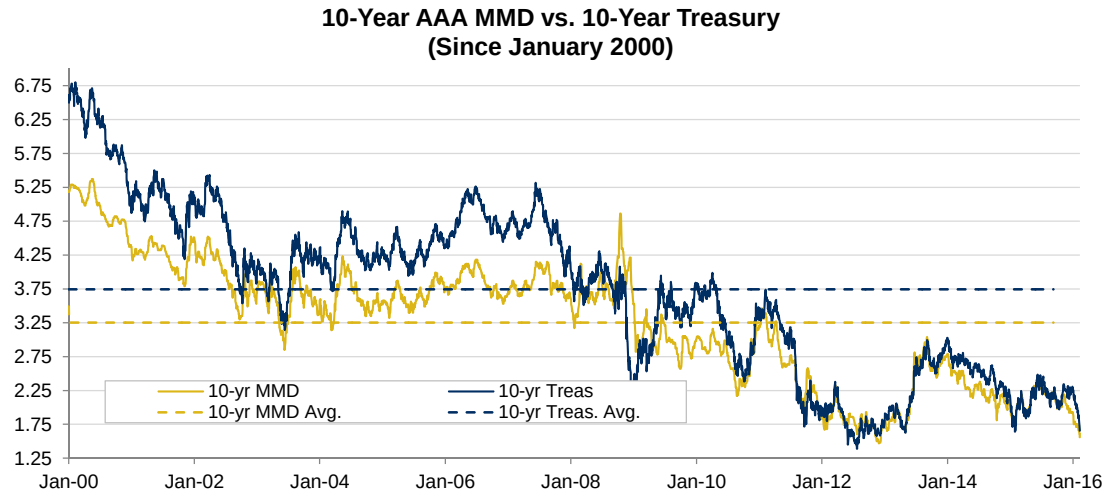
i. Indicate the individuals referenced in Part IV above who were involved in the transaction.
ii. Provide the name, title, organization, address and telephone number of the issuer.

Below are two financing techniques which can provide the City additional opportunities to lower debt service and/or reduce escrow costs for advance refunding transactions.

Refundings for Debt Service Savings: The interest rates in today's market continue to remain at historically low levels, as shown by the chart in Exhibit A on the following page, which has created an incredibly attractive environment for issuers to issue tax-exempt and taxable debt. Raymond James continuously monitors the City's outstanding debt for opportunities to reduce debt service. In addition to the bonds that the City intends to refund with its Water & Wastewater Revenue Refunding Bonds, Series 2016, it can also refund $241.630 million of its Water & Wastewater Revenue Bonds, Series 2009 and Series 2009A, for $18.193 million of present value savings, or 7.53% of the bonds refunded. Additionally, a refunding of $96.430 million the City's Electric Utility System

Bonds, Series 2008A, produces $8.710 million of present value savings, or 9.03% of the bonds refunded. Full refunding analyses for both scenarios are included as an **Appendix behind Tab E** .

Exhibit A



Based on our analysis of the City's current taxable assessed valuations and tax-supported debt, the City would need to draw down on its General Obligation Debt Service Fund Balance to meet its debt service payments from FY2017 through 2019, assuming the debt tax rate remains unchanged. Under current market conditions there are opportunities on both a tax-exempt and taxable basis to generate significant present value savings and decrease the required draw downs. The chart below shows the impact of these refundings on the City's debt service and fund balance.

Fiscal Year 9/30	Debt Service Capacity [1]	Current Net Debt Service [2]	G.O. D/S Fund Draws [3]	G.O. D/S Fund Balance [3]	Less Refunded Debt Service	Plus Refunding Debt Service	Pro Forma Debt Service	Debt Tax Rate	Excess Funding Capacity	Pro Forma G.O. D/S Fund Draws [3]	Pro Forma G.O. D/S Fund Balance [3]	Required Tax Rate to Cover Debt Service
2017	$ 125,610,951	$ 129,636,399	$ (4,025,448)	$ 12,266,983	$ (5,111,800)	$ 4,696,106	$ 129,220,705	0.1062	($3,609,753)	($3,609,753)	$12,682,678	0.1169
2018	131,891,499	138,759,143	(6,867,644)	5,399,339	(22,911,800)	22,495,884	138,343,227	0.1062	(6,451,728)	(6,451,728)	6,230,949	0.1170
2019	138,486,074	139,697,841	(1,211,767)	4,187,571	(14,211,800)	13,318,598	138,804,639	0.1062	(318,566)	(318,566)	5,912,383	0.1118
2020	145,410,377	140,913,018	-	4,187,571	(16,977,150)	16,081,437	140,017,305	0.1062	5,393,072	-	5,912,383	0.1074
2021	152,680,896	138,887,000	-	4,187,571	(14,584,475)	13,685,519	137,988,044	0.1062	14,692,852	-	5,912,383	0.1008
2022	160,314,941	134,696,088	-	4,187,571	(8,275,975)	7,721,250	134,141,363	0.1062	26,173,578	-	5,912,383	0.0933
2023	168,330,688	131,934,779	-	4,187,571	(8,312,794)	7,759,500	131,381,485	0.1062	36,949,203	-	5,912,383	0.0870
2024	176,747,222	131,092,003	-	4,187,571	(6,249,106)	5,697,750	130,540,647	0.1062	46,206,576	-	5,912,383	0.0824
2025	185,584,583	127,913,103	-	4,187,571	(6,408,631)	5,855,250	127,359,722	0.1062	58,224,862	-	5,912,383	0.0765
2026	194,863,813	131,727,068	-	4,187,571	(7,232,206)	6,680,500	131,175,362	0.1062	63,688,451	-	5,912,383	0.0751
2027	204,607,003	153,126,162	-	4,187,571	(12,733,425)	12,179,250	152,571,987	0.1062	52,035,016	-	5,912,383	0.0832

[1] *Assumes $111,095,413,257 TAV for 2016 (taken from Official Statement dated September 10, 2015) with a 99.5% collection rate and annual growth assumptions from the City's FY 2015-2016 Five-Year Financial Forecast and Economic Outlook*

[2] *Assumes net debt service as provided in the City's Official Statement dated September 10, 2015*

[3] *Assumes $16,292,431 G.O. Debt Service Fund Balance based on the 2015-2016 Budget approved September 12, 2015*

On a tax-exempt basis, the City can refund $71.065 million of its Public Improvement Bonds, Series 2008, and Certificates of Obligation, Series 2008 and Series 2009, for $8.062 million of present value savings, or 11.34% of the bonds refunded. On a taxable basis, the City can advance refund $37.525 million of its tax-exempt Public Improvement Refunding Bonds, Series 2008, for $1.981 million of present value savings, or 5.28% of the bonds refunded. Full refunding analyses for both scenarios are included as an **Appendix behind Tab E**.

We have successfully executed taxable advance refundings of non-advance refundable tax-exempt debt for numerous issuers, including the City, McLennan County Public Facilities Corporation and Hurst-Euless-Bedford ISD, and have been selected to serve as senior manager on an upcoming $92.630 million taxable refunding of tax-exempt debt for Texas A&M University System. Raymond James is uniquely positioned to senior manage such transactions because of our dedicated taxable municipal desk and the strength of our municipal sales force and underwriting team within the State of Texas. Client references for these issuers are provided on the following page.

Issuer	Contact				RJ Personnel Involved
	Name	Title	Address	Phone	
City of Austin	Art Alfaro	Treasurer	700 Lavaca Street, Ste 940 Austin, TX 78701	(512) 974-7882	Tom Oppenheim, Debi Jones, Nick Papan, Ashley Lundberg, Buddy Kempf, Ted Hynes
McLennan County PFC	Scott Felton	County Judge	501 Washington Ave Waco, TX 76701	(254) 757-5049	Tom Oppenheim, Nick Papan, Buddy Kempf, Ted Hynes
Hurst-Euless-Bedford ISD	Debra Roesler	Deputy Superintendent	1849A Central Drive Bedford, TX 76022	(817) 399-2030	Tom Oppenheim, Debi Jones, Nick Papan, Ashley Lundberg, Buddy Kempf, Ted Hynes
Texas A&M University System	Maria Robinson	Chief Investment Officer & Treasurer	301 Tarrow, 5th Floor College Station, TX 77840	(979) 458-6330	Tom Oppenheim, Nick Papan, Buddy Kempf, Casy O'Brien, Ted Hynes

Reinvestment of Bond Proceeds: Raymond James has a dedicated Public Finance Structured Investment Strategies Group ("PFSISG") that is well versed in working with clients, their financial advisors and Bond Counsel to create custom investment strategies. Our group is an industry leader in developing these solutions, having invested over $20 billion in assets since 2004 for all types of funds, including escrow, project, capitalized interest, debt service reserve and bond funds. Our team is product agnostic and will utilize the entire available product suite of permitted investments within the bond documents and/or the investment policy in our strategy development. The team seeks to develop solutions designed to help clients minimize negative arbitrage given today's steep yield curve environment and devise solutions that optimize results given the IRS rebate regulations.

This is especially important in today's market because of the rise in short-term rates that occurred after the Fed raised the fed funds target rate to 0.25%-0.50% from 0.00%-0.25%. The use of investment vehicles other than SLGS could significantly increase the earnings on construction and project funds as well as provide a higher escrow return. Additionally, as a frequent solicitor of bids, Raymond James is acutely aware of the active bidding participants and can garner the required three bids for tax purposes in difficult environments where other providers may fail to do so.

PFSISG recently executed a competitive bid for a laddered portfolio for a Georgia Issuer's Project Fund and Capitalized Interest Fund. PFSISG and the lead bankers began conversations with the Issuer in October, 2015; and despite the volatility in yields experienced since that time, the execution of the competitive bid lead to substantial earnings relative to the local government investment pool ("LGIP") under consideration by the Issuer. Prior to execution, PFSISG presented a multitude of investment structures to the Issuer including REPOs, laddered portfolios and various permutations of the aforementioned structures. PFSISG worked through the draw schedule with the Issuer in determining the appropriate liquidity hold-back to mitigate any variations in draws over the life of the project. The executed competitive bid resulted in six bids with the Issuer realizing an overall yield of 0.55% which is well in excess of the LGIP currently yielding 0.31% as of the end of January. PFSISG executed the subject transaction as an RIA registered under the Investment Company Act of 1940. As a result, we are unable to reveal the Issuer name and contact information. For further inquiries with regards to the subject transaction, please contact our PFSISG team members David Sutton at (615) 665-6917 or Joseph Birdsong at (615) 665-6923.

In addition to the two techniques above, the following discussion regarding recent trends may be of interest to the City.

Socially Responsible Investment Vehicles: In recent years, socially responsible investing has been on the minds of both issuers and investors. As investors have begun setting aside monies that are to be invested in certain areas that meet specific socially responsible guidelines, two trends have taken hold on the issuer side that provides such investment vehicles for those monies.

The more popular of these trends has been Green Bonds, a designation assigned by the issuer for transactions that fund projects such as renewable energy, sustainable land use, or clean water. The Green Bond Principles provide voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market. This helps guide issuers and investors through what can be expected both prior to issuance and on an on-going basis after the bonds have been issued. In the current market, the Green Bond designation does not provide any pricing benefit; however, it does expand the potential investor base and makes the bonds eligible for certain funds that would otherwise not be able to invest. In December 2014, the Raymond James Northeast Practice senior managed a $91,375,000 Project Revenue Bonds, Series 2014B (Green Bonds), for the Massachusetts State College Building Authority. The contact person at MSCBA is Ed

Adelman, Executive Director, who can be reached via phone at (617) 933-8337 or vial mail at 253 Summer Street, Suite 300, Boston, MA 02210.

Additionally, Social Impact Bonds ("SIBs") are beginning to gain traction in the United States. On federal, state and local levels, a push is being made to support social reforms that lack proper funding through a form of a public-private partnership. SIBs, also known as Pay for Success contracts, are not actually bonds. It is a contractual agreement that involves four parties. First, there is a governmental entity, such as the City, which selects a specific social need that has both a measurable outcome and measurable costs associated with it. Second, there are investors in the form of grants, CRA investments, impact investors, philanthropists, corporations and private investors. Third, there is a service provider, generally an existing organization that has designed an effective and scalable solution for the chosen social problem. Lastly, an intermediary, either an outside firm or a commission created by the governmental entity, negotiates the contract between the government entity and the investors, solicits investments and manages the service provider. In certain cases, there may also be a guarantor to attract additional investors by providing a floor for the amount of money the investor stands to lose should the project not meet the desired outcome.

The negotiated contract will include, among other items, the terms of payment, the length of the contract, and, most importantly, the desired outcome of the program. SIBs are unique in that the government is only responsible for paying the investors if the desired outcome, as judged by an independent evaluator, is met. If the outcome is not met, the government is not required to pay anything and the tax payers are not responsible for an unsuccessful venture.

The desired benefit of this product is to provide up-front capital to organizations that can enact measurable change on a preventative basis to provide cost savings for the government entity. It also shifts the risk from the governmental entity to the investor and service provider, which creates an environment in which all parties are vested in ensuring a successful outcome. There are significant implementation costs, so it is important to ensure the savings generated by a successful program exceed those costs. However, in a time where budgetary constraints tend to minimize or completely eliminate funding for such programs, SIBs allow for an entity such as the City to access sources of funding for the benefit of the entire community that are not available through a traditional bond offering.

F. Part VI – Financial Viability:

Provide the most recent audited annual Audit Report and most recent interim financial report as an attachment or appendix item. Hard copies must be included in the original submittal.

i. Provide the current equity capital positions (total equity capital, net equity capital and excess net equity capital) in accordance with GAAP, or corresponding equity information if a bank. **Do not refer to the annual audit as a response to this question.**

Raymond James is one of the strongest capitalized securities firms in the country with over $4.6 billion in equity capital as of December 31, 2015. Our strong capital position gives us maximum flexibility to aggressively price and support the City's bonds, especially in difficult markets. **Our municipal traders and underwriters currently have access to more than $390 million in excess net capital. Based on this excess net capital, Raymond James' legal underwriting capacity for municipal bonds pursuant to SEC regulations is over $5.5 billion, allowing us to hold municipal bond inventory at significant levels at any moment in time.** Because of the Firm's internal approval process required before a POS can be posted, the underwriters have the ability to commit the Firms' capital with no additional approvals on the day of a pricing, which allows for a smooth and efficient transaction, especially in volatile market conditions. This capital strength and commitment will help ensure that the City achieves the lowest cost of funds over the life of the transaction. The table below summarizes the Firm's capital position for the Firm's two most recent reporting periods. Additionally as requested, attached as an **Appendix behind Tab F** are Raymond James' annual 10k Audited Financials dated September 30, 2015, and the Firms' most recent FOCUS Report dated December 31, 2015. Updates on Raymond James' financial condition, as well as additional financial information regarding the Firm can be found at the following website: www.raymondjames.com/about/financial_reports.htm.

	12/31/2015	FYE 9/30/2015
Total Firm Capital	$17,323,503,000	$16,467,872,000
Total Equity Capital	$4,646,814,000	$4,511,031,000
Net Capital	$427,688,945	$411,221,578
Excess Net Capital	$390,741,271	$371,769,502

G. Part VII – Austin Bond Experience:

In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

Per the RFQS instructions, nothing is required to be submited to the City for this section.

H. Part VIII – References:

Provide exactly three (3) government client references, at least two of which are covered by individuals listed in Part IV above. For each reference, provide a name, title, and organization, address and telephone number. In addition to the list provided, the City may independently solicit other references.

Raymond James' public finance team assigned to the the City's engagement has long standing relationships with each of the following entities that we have provided below for the City to contact to obtain more detailed information regarding the Firm's underwriting capabilities and performance on prior bond transactions.

City of Houston, TX

Ms. Jennifer Olenick
Public Finance Division Manager
611 Walker, 11th Floor
Houston, Texas 77002
Phone: (832) 393-9112
Email: jennifer.olenick@houstontx.gov

Ms. Charisse Mosely
Deputy City Controller
901 Bagby Street, 10th Floor
Houston, Texas 77002
Phone: (832) 393-3529
Email: charisse.mosely@houstontx.gov

Fort Bend County

Mr. Ed Sturdivant
County Auditor
301 Jackson Street, Suite 701
Richmond, Texas 77469
Phone: (281) 341-3769
Email: ed.sturdivant@fortbendcountytx.gov
Banker: Debi Jones

Northside ISD

Mr. David Rastellini
Deputy Superintendent, Business & Finance
5900 Evers Road
San Antonio, Texas 78238
Phone: (210) 706-8912
Email: david.rastellini@nisd.net

APPENDIX A

Required Completed Forms

CITY OF AUSTIN, TEXAS
SECTION 0810
NON-COLLUSION,
NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING CERTIFICATION

The term **"Offeror"**, as used in this document, includes the individual or business entity submitting the Offer. For the purpose of this Affidavit, an Offeror includes the directors, officers, partners, managers, members, principals, owners, agents, representatives, employees, other parties in interest of the Offeror, and any person or any entity acting for or on behalf of the Offeror, including a subcontractor in connection with this Offer.

1. **Anti-Collusion Statement.** The Offeror has not in any way directly or indirectly:

   a. colluded, conspired, or agreed with any other person, firm, corporation, Offeror or potential Offeror to the amount of this Offer or the terms or conditions of this Offer.

   b. paid or agreed to pay any other person, firm, corporation Offeror or potential Offeror any money or anything of value in return for assistance in procuring or attempting to procure a contract or in return for establishing the prices in the attached Offer or the Offer of any other Offeror.

2. **Preparation of Solicitation and Contract Documents**. The Offeror has not received any compensation or a promise of compensation for participating in the preparation or development of the underlying Solicitation or Contract documents. In addition, the Offeror has not otherwise participated in the preparation or development of the underlying Solicitation or Contract documents, except to the extent of any comments or questions and responses in the solicitation process, which are available to all Offerors, so as to have an unfair advantage over other Offerors, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

3. **Participation in Decision Making Process.** The Offeror has not participated in the evaluation of Offers or other decision making process for this Solicitation, and, if Offeror is awarded a Contract no individual, agent, representative, consultant, subcontractor, or sub-consultant associated with Offeror, who may have been involved in the evaluation or other decision making process for this Solicitation, will have any direct or indirect financial interest in the Contract, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

4, **Present Knowledge.** Offeror is not presently aware of any potential or actual conflicts of interest regarding this Solicitation, which either enabled Offeror to obtain an advantage over other Offerors or would prevent Offeror from advancing the best interests of the City in the course of the performance of the Contract.

5. **City Code.** As provided in Sections 2-7-61 through 2-7-65 of the City Code, no individual with a substantial interest in Offeror is a City official or employee or is related to any City official or employee within the first or second degree of consanguinity or affinity.

6. **Chapter 176 Conflict of Interest Disclosure.** In accordance with Chapter 176 of the Texas Local Government Code, the Offeror:

   a. does not have an employment or other business relationship with any local government officer of the City or a family member of that officer that results in the officer or family member receiving taxable income;

b. has not given a local government officer of the City one or more gifts, other than gifts of food, lodging, transportation, or entertainment accepted as a guest, that have an aggregate value of more than $100 in the twelve month period preceding the date the officer becomes aware of the execution of the Contract or that City is considering doing business with the Offeror. and

c. does not have a family relationship with a local government officer of the City in the third degree of consanguinity or the second degree of affinity.

7. As required by Chapter 176 of the Texas Local Government Code, Offeror must file a Conflict of Interest Questionnaire with the Office of the City Clerk no later than 5:00 P.M. on the seventh (7th) business day after the commencement of contract discussions or negotiations with the City or the submission of an Offer, or other writing related to a potential Contract with the City. The questionnaire is available on line at the following website for the City Clerk:

   http://www.austintexas.gov/department/conflict-interest-questionnaire

   There are statutory penalties for failure to comply with Chapter 176.

   If the Offeror cannot affirmatively swear and subscribe to the forgoing statements, the Offeror shall provide a detailed written explanation with any solicitation responses on separate pages to be annexed hereto.

8. **Anti-Lobbying Ordinance.** As set forth in the Solicitation Instructions, Section 0200, paragraph 7N, between the date that the Solicitation was issued and the date of full execution of the Contract, Offeror has not made and will not make a representation to a City official or to a City employee, other than the Authorized Contact Person for the Solicitation, except as permitted by the Ordinance.

Managing Director

3/8/16

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

NONE

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

N/A

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

Signature of vendor doing business with the governmental entity

3/8/2016

Date

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	✓	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes		**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Raymond James & Associates, Inc.

Company Name

Deborah S. Jones, Managing Director

Name and Title of Authorized Representative (Print or Type)

Signature

3/8/2016

Date

Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Utilization Plan
(Please duplicate as needed)

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

PRIME CONTRACTOR / CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant	***NOT APPLICABLE***		
Address			
City, State Zip			
Phone Number		Fax Number	
Name of Contact Person			
Is Company City certified?	Yes ☐ No ☐ MBE ☐ WBE ☐ MBE/WBE Joint Venture		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

Deborah S. Jones, Managing Director

Name and Title of Authorized Representative (Print or Type)

Signature

3/8/2016

Date

Provide a list of all proposed subcontractors / sub-consultants / suppliers that will be used in the performance of this Contract. **Attach Good Faith Effort documentation if non MBE/WBE firms will be used.**

Sub-Contractor / Sub-Consultant	***NOT APPLICABLE***		
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code:		Non-Certified
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

Sub-Contractor / Sub-Consultant	***NOT APPLICABLE***		
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code:		Non-Certified
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor_____ **Date**_____ **Director/Deputy Director**_____ **Date** _____

APPENDIX B

Texas Office Locations with Employee Totals

Raymond James Texas Locations & Employee Breakdown

			Employee Breakdown							
Office Address	City	County	Equity Capital Markets	Fixed Income*	Fixed Income Support*	Retail Sales	Retail Support	Public Finance	Other	Total # Employees
3444 N. 1st Street, Ste 504	Abilene	Taylor				3				3
15851 Dallas Parkway, Ste 600	Addison	Dallas				2				2
4560 Beltline, Ste 100	Addison	Dallas				1				1
225 South Custer Road	Allen	Collin				1				1
1800 S. Washington, Ste 302	Amarillo	Potter				5				5
410 S. Taylor Street, Plza One	Amarillo	Potter				3				3
113 North Velasco, Ste B	Angleton	Brazoria				1				1
1504 W. Abram Street	Arlington	Tarrant				2				2
1615 West Abram Street, Ste 104	Arlington	Tarrant				1				1
102 W. Hiram Street, Unit A	Atlanta	Cass				1				1
100 Congress Avenue, Ste 2100	Austin	Travis				1				1
1200 Lakeway Drive, Ste 12	Austin	Travis				1				1
1301 South MOPAC Expressway, Ste 300	Austin	Travis				1				1
14101 West Highway 290, Bldg 800	Austin	Hays				5				5
221 West 6th Street, Ste 1210	Austin	Travis				10	11			21
2600 Via Fortuna Drive, Ste 215	Austin	Travis				2				2
2801 Via Fortuna, Ste 650	Austin	Travis		4	2	9	6			21
3345 Bee Caves Road, Ste 208	Austin	Travis				1				1
3600 N. Capital of TX Hwy, Bldg B/Ste 200	Austin	Travis				2				2
5000 Plaza on the Lake, Ste 175	Austin	Travis				5				5
6034 West Courtyard Drive, Ste 305	Austin	Travis				5	6			11
98 San Jacinto Blvd., Ste 200	Austin	Travis				3				3
719 Strong Avenue	Ballinger	Runnels				1				1
911 Hutchings Avenue	Ballinger	Runnels				1				1
407 F. West Baker Road	Baytown	Harris				1				1
2925 Toccoa Road	Beaumont	Jefferson				6				6
4545 Bissonnet, Ste 288	Bellaire	Harris				1				1
4800 Bissonnet Street	Bellaire	Harris				1				1
306 East Central Avenue	Belton	Bell				2				2
124 E Bandera Road, Ste 202	Boerne	Kendall				3	3			6
31007 IH - 10 West, Ste 109	Boerne	Kendall				1				1
1210 North Center	Bonham	Fannin				1				1
1000 N. Main	Borger	Hutchinson				2				2
2700 Wood Court	Bryan	Brazos							1	1
1409 University Drive East	College Station	Brazos				1				1
526 University Drive East, Ste A102	College Station	Brazos				2				2
547 William D. Fitch, Ste 116	College Station	Brazos				1				1
3101 West Davis	Conroe	Montgomery				1				1
555 N. Carancahua Street, Ste 880	Corpus Christi	Nueces				2				2
122 South 12th Street, Ste 101	Corsicana	Navarro				3				3
12300 Dundee Court, Ste 105	Cypress	Harris				1				1
10440 N. Central Expwy	Dallas	Dallas				1				1
12001 N. Central Expwy, Ste 700	Dallas	Dallas				5				5
12222 Merit Drive, Ste 1800	Dallas	Dallas				13				13
13155 Noel Road, Ste 2500	Dallas	Dallas				6	9			15
14180 Dallas Parkway, Ste 530	Dallas	Dallas				6				6
15150 Preston Road, Ste 300	Dallas	Dallas				1				1
16250 Knoll Trail Drive, Ste 207	Dallas	Dallas				1				1
2000 McKinney Avenue, Ste 1800	Dallas	Dallas				8				8
2001 Ross Avenue, Ste 4500	Dallas	Dallas				21	17		2	40
2001 Ross Avenue, Ste 4550	Dallas	Dallas	7							7
4849 Greenville Avenue, Ste 1520	Dallas	Dallas				1				1
5005 LBJ Freeway, Ste 720	Dallas	Tarrant				3				3
5949 Sherry Lane, Ste 700	Dallas	Dallas				4				4
5956 Sherry Lane, Ste 1900	Dallas	Dallas	1	9	2	15	10	12	1	50
8111 Preston Road, Ste 525	Dallas	Dallas				1	1			2
8117 Preston Road, Ste 700	Dallas	Dallas				15				15
1200 Veterans Blvd.	Del Rio	Val Verde				2				2
101 East Main, Ste 127	Denison	Grayson				1				1
2820 West FM 120 Road	Denison	Grayson				2				2
115 West College	Denton	Denton				2				2
519 S Carroll Blvd., Ste 107	Denton	Denton				1				1
222 E. Wheatland Road	Duncanville	Dallas				2	3			5
1201 N. Mesa, Ste H/Floor 2	El Paso	El Paso				2				2
4510 N. Mesa	El Paso	El Paso				3	7		1	11
6701 N. Mesa, Ste D	El Paso	El Paso				2				2
2311 W. Euless Blvd.	Euless	Tarrant				1				1
1037 C Street, Suite A	Floresville	Wilson				2				2
1501 Cross Timbers Road, Ste 100	Flower Mound	Denton				2				2
1320 S. University Drive, Ste 116	Fort Worth	Tarrant				4				4

* Includes Fixed Income Institutional Sales, Trading, and Underwriting

			Employee Breakdown							
Office Address	City	County	Equity Capital Markets	Fixed Income*	Fixed Income Support*	Retail Sales	Retail Support	Public Finance	Other	Total # Employees
2201 Dottie Lynn Parkway, Ste 139	Fort Worth	Tarrant				2				2
2601 S. Hulen Street	Fort Worth	Tarrant				1				1
2605 S. Adams	Fort Worth	Tarrant				1				1
420 Throckmorton Street, Ste 830	Fort Worth	Tarrant		1		13	8			22
6001 Bryant Irving Road	Fort Worth	Tarrant				1				1
8024 Denton Highway	Fort Worth	Tarrant				2				2
907 S. Friendswood Drive, Ste 101	Friendswood	Galveston				2				2
2591 Dallas Parkway, Ste 505	Frisco	Denton				2				2
2601 Network Blvd., Ste 101	Frisco	Denton				11				11
8910 Preston Road	Frisco	Denton				3				3
103 E. 8th Street	Georgetown	Williamson				4	2			6
202 Bobby's Cove	Georgetown	Williamson				1				1
920 Whitehead Drive	Granbury	Hood				3				3
6609 Wesley Street	Greenville	Hunt				1				1
304 S. Main Street	Henderson	Rusk				2				2
1220 Augusta Drive, Ste 140	Houston	Harris				3				3
13810 Champion Forest Drive, Ste 148	Houston	Harris				4				4
13910 Champion Forest Drive, Ste 101	Houston	Harris				3				3
19500 State Highway 249	Houston	Harris				4				4
3104 Edloe Street, Ste 310	Houston	Harris				3				3
333 Cypress Run, Ste 290	Houston	Harris				5				5
500 Dallas Street, Ste 3400	Houston	Harris				11	9			20
550 Post Oak Blvd., Ste 410	Houston	Harris				3				3
550 Westcott, Ste 460	Houston	Harris				6				6
580 Westlake Park Blvd., Ste 500	Houston	Harris				12	7			19
5847 San Felipe Road, Ste 1250	Houston	Harris	25							25
5847 San Felipe Road, Ste 1400	Houston	Harris				33	22		1	56
5847 San Felipe Road, Ste 1550	Houston	Harris				1	2			3
5847 San Felipe Road, Ste 1800	Houston	Harris	30							30
5847 San Felipe Road, Ste 4125	Houston	Harris						3		3
5847 San Felipe Road, Ste 4300	Houston	Harris		3	1	19	9		3	35
6363 Woodway Drive, Ste 625	Houston	Harris				4				4
9 Greenway Plaza, Ste 3112	Houston	Harris				5	3			8
647 E. Royal Lane, Ste 3017	Irving	Dallas							1	1
18666 Highway 1431	Jonestown	Travis				1				1
23501 Cinco Ranch Blvd, Ste H120-609	Katy	Fort Bend				4				4
500 Main Street, Ste M	Kerrville	Kerr				1				1
2100 Trimmier Road, Ste 105	Killeen	Bell				2				2
800 Rockmead Drive, Ste 120	Kingwood	Harris				4				4
801 Avenue F	Levelland	Hockley				1				1
806 Stony Passage Lane	Lewisville	Denton							1	1
110 East Burnet Street	Llano	Llano County				1				1
1903 South Ford Street, Unit 1	Llano	Llano				1				1
1800 West Loop 281, Ste 100	Longview	Gregg				6				6
1801 Lakeshore Drive	Longview	Gregg				1				1
2001 Broadway	Lubbock	Lubbock				2				2
4010 82nd Street, Ste 215	Lubbock	Lubbock				4				4
4811 50th Street	Lubbock	Lubbock				1				1
5219 City Bank Parkway, Ste 120	Lubbock	Lubbock				5				5
6502 Slide Road, Ste 203	Lubbock	Lubbock				3				3
1609 S. Chestnut Street, Ste 103	Lufkin	Angelina				3				3
107 A Ave North	Marble Falls	Burnet				1				1
132 S. Tennessee	McKinney	Collin				1				1
5900 S Lake Forest Drive, Ste 270	McKinney	Collin				1				1
2020 West Cuthbert Avenue	Midland	Midland				7				7
808 W Wall Street	Midland	Midland				2				2
201 East Main Street	Nacogdoches	Nacogdoches				2				2
2610 North University Drive, Ste 101	Nacogdoches	Nacogdoches				2	1			3
3556 NE Stallings Drive, Ste 101	Nacogdoches	Nacogdoches				2				2
4635 NE Stallings Drive, Ste 101	Nacogdoches	Nacogdoches				5				5
648 S. Castell Avenue	New Braunfels	Comal				2				2
5592 Davis Blvd., Ste 400	North Richland Hills	Tarrant				1				1
1921 E. 37th Street, Ste B	Odessa	Ector				5				5
2626 John Ben Shepperd Pk, Ste A104	Odessa	Ector				1				1
5050 E. University, Ste 4	Odessa	Ector				1				1
210 East Main	Olney	Young				1				1
10852 Osburn Road	Pilot Point	Denton				1				1
5400 Independence Parkway	Plano	Collin				1				1
5601 Granite Parkway, Ste 100	Plano	Collin				1				1
5700 Granite Parkway, Ste 320	Plano	Collin				3				3
5800 Granite Parkway, Ste 250	Plano	Collin				2				2
401 West George Bush Freeway, Ste 101	Richardson	Dallas				1				1

* Includes Fixed Income Institutional Sales, Trading, and Underwriting

			Employee Breakdown							
Office Address	City	County	Equity Capital Markets	Fixed Income*	Fixed Income Support*	Retail Sales	Retail Support	Public Finance	Other	Total # Employees
4303 Pasada Lane	Round Rock	Williamson		1						1
4113 Main Street, Ste 200	Rowlett	Dallas				3				3
1420 Knickerbocker Road	San Angelo	Tom Green				4				4
2909 Sherwood Way, Ste 100	San Angelo	Tom Green				2				2
4180 S. Jackson	San Angelo	Tom Green				2				2
4810 Southland Blvd.	San Angelo	Tom Green				1				1
12707 IH-10 West	San Antonio	Bexar				1				1
1421 N. Loop 1604 East	San Antonio	Bexar				1				1
14414 Blanco, Ste 220	San Antonio	Bexar				3				3
1507 Goliad Road	San Antonio	Bexar				1				1
17806 West IH-10	San Antonio	Bexar				3				3
18402 US HWY 281N, Ste 213	San Antonio	Bexar				1				1
401 E. Sonterra Blvd., Ste 100	San Antonio	Bexar				6	5			11
5750 W. Loop 1604 N.	San Antonio	Bexar				1				1
5757 N.W. Loop 1604 East	San Antonio	Bexar				1				1
610 East Market, Unit 2809	San Antonio	Bexar				1				1
7323 Highway 90 W.	San Antonio	Bexar				1				1
745 East Mulberry Avenue, Ste 210	San Antonio	Bexar		2	1	10	8	1		22
201 S. River	Seguin	Guadalupe				2				2
123 N. Rusk Street	Sherman	Grayson				4				4
1700 N. Travis, Ste A	Sherman	Grayson				2				2
1130 North Carroll Avenue, Ste 100	Southlake	Tarrant		1		2	1			4
819 Crossbridge Drive	Spring	Harris				2				2
9830 Friesian Estates Drive	Spring	Harris							1	1
4800 Sugar Grove Blvd., Ste 100	Stafford	Fort Bend				4				4
154 N. Graham Street	Stephenville	Erath				2				2
19901 Southwest Freeway	Sugar Land	Fort Bend				1				1
2245 Texas Drive, Ste 170	Sugar Land	Fort Bend				11				11
77 Sugar Creek Ctr Blvd., Ste 405	Sugar Land	Fort Bend				2	2		1	5
100 West Jefferson Street	Sulphur Springs	Hopkins				3				3
19 North Main Street, Ste 2768	Temple	Bell				1				1
3615 S. 31st Street	Temple	Bell				2				2
2315 Moores Lane	Texarkana	Bowie				2	1			3
5524 Christus Drive	Texarkana	Bowie				3				3
908 6th Street N	Texas City	Galveston				2				2
10200 Grogan's Mill Road, Ste 345	The Woodlands	Montgomery				4				4
1599 Lake Robbins Drive, Ste 200	The Woodlands	Montgomery				9				9
25511 Budde Road, Ste 2301	The Woodlands	Montgomery				4				4
14235 FM 2920	Tomball	Harris				2				2
1201 S. Beckham Avenue	Tyler	Smith				3				3
2104 Grande Blvd., Ste 200	Tyler	Smith				1				1
2323 W Grande Blvd.	Tyler	Smith				1				1
605 Chase Drive, Ste 7	Tyler	Smith				1				1
6201 S. Broadway Avenue	Tyler	Smith				2				2
426 East Nopal	Uvalde	Uvalde				3				3
547 South US Highway 83	Uvalde	Uvalde				1				1
1000 West Hwy 6, Ste 110	Waco	McLennan				2				2
1700 N Valley Mills Drive	Waco	Mclennan				2				2
345 Owen Lane, Ste 134	Waco	Mclennan				1				1
4830 Lakewood Drive, Ste 6	Waco	Mclennan				3				3
5400 Bosque Blvd., Ste 690	Waco	Mclennan				1				1
925 Santa Fe Drive, Ste 106	Weatherford	Parker				2				2
139 E. Main Street	Whitesboro	Grayson				1				1
304 Fifth Street	Winnie	Chambers				4				4
196 Texas Office Locations		**Total:**	**63**	**21**	**6**	**605**	**153**	**16**	**13**	**877**

* Includes Fixed Income Institutional Sales, Trading, and Underwriting

APPENDIX C

Representative Sample of Relevant Experience

Raymond James Experience Since 2000
Representative Sample of Relevant Transactions

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
03/02/16	62.235	New Braunfels City-Texas	Utility Sys Revenue & Ref Bonds	CO-MGR
03/01/16	6.470	Harker Heights City-Texas	GO Refunding Bonds	CO-MGR
02/25/16	146.530	Collin Co (Allen) ISD	Refunding Bonds	CO-MGR
02/24/16	199.950	Collin Co (Plano) ISD	Refunding Bonds	CO-MGR
02/24/16	103.410	Collin Co (Plano) ISD	Refunding Bonds	CO-MGR
02/23/16	63.030	Hays Co-Texas	Limited Tax Refunding Bonds	CO-MGR
02/10/16	955.105	Houston City-Texas	Comb Util Sys 1st Lien Rev Bonds	CO-MGR
02/09/16	114.620	Fort Bend Co (Lamar) CISD	Unlimited Tax Refunding Bonds	SR
02/01/16	19.095	Friendswood City-Texas	GO Permanent Imp & Ref Bonds	CO-MGR
02/01/16	5.735	Friendswood City-Texas	Waterworks & Sewer Sys Rev Bonds	CO-MGR
01/28/16	78.355	Rockwall City-Texas	GO Refunding & Improvement Bonds	CO-MGR
01/28/16	5.570	Rockwall City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
01/27/16	268.610	Fort Bend Co (Katy) ISD	Unltd Tax School Bldg & Ref Bonds	CO-MGR
01/26/16	18.285	Temple City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
01/26/16	9.500	Temple City-Texas	GO Refunding Bonds	CO-MGR
01/20/16	107.960	Rockwall ISD	Unltd Tax School Building Bonds	SR
01/15/16	5.005	Sterling City ISD	School Building Bonds	CO-MGR
01/14/16	138.015	Montgomery Co (Conroe) ISD	School Building & Refunding Bonds	CO-MGR
01/13/16	53.995	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
01/13/16	23.059	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
01/13/16	21.690	Frisco Community Dev Corp	Sales Tax Revenue Bonds	SR
01/13/16	17.365	Galveston City-Texas	GO Refunding Bonds	SR
01/13/16	15.180	Frisco Community Dev Corp	Sales Tax Revenue Bonds	SR
01/13/16	11.480	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
01/11/16	2.410	Bonham City-Texas	GO Refunding Bonds	SOLE
01/07/16	215.600	El Paso Co (Ysleta) ISD	Unltd Tax School Building Bonds	CO-MGR
01/05/16	146.660	Collin Co (Allen) ISD	Unltd Tax School Building Bonds	CO-MGR
12/14/15	24.510	Mansfield City-Texas	Water and Swr Rev Ref & Imp Bonds	SR
12/14/15	14.885	Mansfield City-Texas	GO Refunding & Improvement Bonds	CO-MGR
12/14/15	13.705	Mansfield City-Texas	Comb Tax & Rev Cert of Oblig	CO-MGR
12/14/15	4.365	Mansfield City-Texas	GO Refunding Bonds	CO-MGR
12/01/15	9.660	Longview City-Texas	GO Refunding Bonds	SR
11/23/15	195.075	Dallas City-Texas	GO Refunding & Improvement Bonds	CO-MGR
11/10/15	298.790	Ctl Texas Reg Mobility Au (CTRMA)	Senior Lien Revenue Bonds	CO-MGR
11/03/15	74.825	Grand Prairie City-Texas	Sales Tax Revenue Bonds	CO-MGR
10/28/15	16.175	Williamson Co-Texas	Limited Tax Refunding Bonds	SR
10/20/15	49.350	Hays Co (San Marcos) CISD	Unlimited Tax Refunding Bonds	CO-MGR
09/29/15	5.305	Wills Point City-Texas	GO Refunding Bonds	SOLE
09/24/15	36.780	Temple City-Texas	GO Refunding & Improvement Bonds	CO-MGR
09/24/15	23.685	Temple City-Texas	Utility System Revenue Bonds	CO-MGR
09/16/15	911.360	Texas Transportation Commission	GO Mobility Fund Refunding Bonds	CO-MGR
07/20/15	21.085	Lewisville City-Texas	GO Refunding Bonds	SR
07/20/15	11.750	Lewisville City-Texas	Waterworks & Sewer Sys Rev Bonds	SR
07/15/15	338.915	New Hope Cultural Ed Facs Fin Corp	Student Housing Revenue Bonds	SOLE
07/15/15	320.530	San Antonio City-Texas	Electric & Gas Sys Rev Ref Bonds	CO-MGR

Source: Thomson Reuters Date: 3/3/2016

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
07/15/15	25.995	Travis Co (Manor) ISD	Unlimited Tax Refunding Bonds	CO-MGR
07/14/15	249.660	Montgomery Co ISD	Unltd Tax School Bldg & Ref Bonds	CO-MGR
07/14/15	116.415	El Paso City-Texas	GO Refunding & Improvement Bonds	CO-MGR
07/14/15	57.710	El Paso City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
07/14/15	41.565	Weatherford City-Texas	Utility Sys Rev Ref & Imp Bonds	SR
07/14/15	4.915	Hurst City-Texas	GO Refunding Bonds	SOLE
07/14/15	3.750	Hurst City-Texas	Wtrwrks & Swr Sys Rev Cert Oblig	SOLE
07/01/15	2.905	South Padre Island-Texas	Tax Notes	SOLE
06/30/15	62.660	Travis Co (Eanes) ISD	Unltd Tax School Bldg & Ref Bonds	CO-MGR
06/30/15	18.600	El Paso City-Texas	Water & Sewer Revenue Bonds	CO-MGR
06/30/15	9.425	Travis Co (Eanes) ISD	Unlimited Tax School Bldg Bonds	CO-MGR
06/25/15	7.700	Edinburg City-Texas	Utility System Revenue Ref Bonds	SR
06/25/15	5.270	Edinburg City-Texas	GO Refunding Bonds	SR
06/23/15	45.715	McKinney City-Texas	General Obligation Bonds	CO-MGR
06/23/15	12.725	McKinney City-Texas	Wtr & Swr Sys Rev Ref & Imp Bonds	CO-MGR
06/18/15	41.935	Beaumont City-Texas	GO Refunding Bonds	CO-MGR
06/09/15	25.310	Baytown City-Texas	GO & Refunding Bonds	SR
06/09/15	9.540	White Settlement City-Texas	Comb Tax&Ltd Surplus Rev Cert Ob	SOLE
06/09/15	6.600	Baytown City-Texas	Comb Tax Rev Certs of Oblig	SR
06/09/15	2.980	White Settlement City-Texas	GO Refunding Bonds	SOLE
06/04/15	240.000	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
06/04/15	39.000	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
06/04/15	12.803	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
06/04/15	6.360	Georgetown City-Texas	GO Refunding Bonds	SOLE
06/04/15	0.799	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
06/02/15	8.585	Forney City-Texas	GO Refunding Bonds	SR
05/28/15	55.565	Odessa City-Texas	GO Refunding Bonds	CO-MGR
05/19/15	17.605	League City-Texas	GO Refunding Bonds	SR
05/18/15	14.835	Mesquite City-Texas	Comb Tax&Surplus Rev Cert Oblig	SR
05/18/15	10.325	Mesquite City-Texas	Wtr & Swr Sys Rev Ref & Imp Bonds	SR
05/18/15	2.935	Mesquite City-Texas	GO Refunding Bonds	SR
05/14/15	75.685	Plano City-Texas	GO Refunding & Improvement Bonds	SR
05/14/15	7.105	Plano City-Texas	Muni Drain Util Sys Rev Ref Bonds	SR
05/14/15	5.745	Plano City-Texas	Tax Notes	SR
05/13/15	327.845	Austin City-Texas	Elec Utility Sys Rev Ref Bonds	CO-MGR
05/13/15	81.045	Austin City-Texas	Elec Utility Sys Rev Ref Bonds	CO-MGR
04/30/15	8.490	Lewisville City-Texas	Comb Rev & Spec Assess Ref Bonds	SOLE
04/28/15	25.150	Pflugerville City-Texas	Comb Tax & Ltd Rev Certs of Oblig	CO-MGR
04/28/15	24.295	Pflugerville City-Texas	Limited Tax & Refunding Bonds	CO-MGR
04/27/15	34.655	New Braunfels City-Texas	Rev Certs of Oblig & GO Ref Bonds	SR
04/23/15	4.970	Lufkin City-Texas	GO Refunding Bonds	SOLE
04/22/15	44.080	Carrollton City-Texas	GO Improvement & Ref Bonds	SR
04/21/15	28.305	Lubbock City-Texas	GO Refunding Bonds	CO-MGR
04/20/15	22.880	Burleson City-Texas	GO Refunding & Improvement Bonds	CO-MGR
04/20/15	11.420	Burleson City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
04/16/15	0.995	Annetta Town-Texas	Comb Tax & Rev Certs of Oblig	SOLE
04/15/15	6.040	Frisco City-Texas	GO Refunding Bonds	SOLE
04/14/15	32.245	Allen City-Texas	GO Ref & Improvement Bonds	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
04/14/15	8.480	Sweetwater City-Texas	Comb Tax and Revenue Ref Bonds	CO-MGR
04/09/15	21.240	Wylie City-Texas	GO Refunding Bonds	CO-MGR
04/07/15	19.535	Lewisville City-Texas	Comb Rev & Spcl Assess Ref Bonds	SOLE
04/01/15	129.665	Lubbock City-Texas	GO Refunding Bonds	CO-MGR
04/01/15	102.490	Lubbock City-Texas	Tax Wtr Sys Rev Certs of Oblig	CO-MGR
04/01/15	47.165	Pearland City-Texas	Permanent Improvement Ref Bonds	CO-MGR
03/30/15	27.410	Hays Co-Texas	Pass Through Toll Rev & Tax Bonds	CO-MGR
03/27/15	93.600	Corpus Christi City-Texas	Utility Sys Jr Lien Rev Imp Bonds	CO-MGR
03/27/15	49.585	Corpus Christi City-Texas	Utility Sys Jr Lien Rev Imp Bonds	CO-MGR
03/24/15	270.540	Tarrant Co (Fort Worth) ISD	Refunding & School Building Bonds	CO-MGR
03/23/15	41.665	Richardson City-Texas	GO Refunding Bonds	CO-MGR
03/23/15	6.850	Richardson City-Texas	Comb Tax Rev Certs of Oblig	CO-MGR
03/23/15	2.150	Richardson City-Texas	Comb Tax Rev Certs of Oblig	CO-MGR
03/17/15	245.315	Texas Tech Univ Board of Regents	Rev Financing Sys Ref & Imp Bonds	CO-MGR
03/11/15	453.630	Dallas City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	CO-MGR
03/11/15	150.630	Dallas City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	CO-MGR
03/11/15	42.595	Hays Co-Texas	Limited Tax Refunding Bonds	SR
03/03/15	308.045	Harris Co (Cypress-Fairbanks) ISD	Unlimited Tax Refunding Bonds	SR
02/25/15	6.155	Hays Co MUD #5	Unlimited Tax Refunding Bonds	CO-MGR
02/24/15	8.400	Harker Heights City-Texas	GO Refunding Bonds	SR
01/28/15	86.545	Waco City-Texas	GO Ref & Comb Tax Rev Certs Oblig	CO-MGR
01/28/15	64.910	Travis Co (Del Valle) ISD	Unltd Tax School Building Bonds	SR
01/27/15	2.090	McLendon-Chisolm City-Texas	Comb Tax & Surplus Rev Cert Oblig	SOLE
01/26/15	16.720	McAllen City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	CO-MGR
01/08/15	31.905	Longview City-Texas	Wtrwrks & Sewer Sys Rev Ref Bonds	SR
12/18/14	32.465	Round Rock City-Texas	GO Refunding Bonds	CO-MGR
12/10/14	40.690	San Marcos City-Texas	GO Refunding Bonds	SR
12/10/14	6.210	San Marcos City-Texas	GO Refunding Bonds	SR
12/09/14	6.380	Midlothian City-Texas	Comb Tax & Certs of Oblig Bonds	SR
12/04/14	4.580	Lewisville City-Texas	Contract Rev & Spcl Assess Bonds	SOLE
12/03/14	1,580.160	Texas Transportation Commission	GO Mobility Fund & Ref Bonds	CO-MGR
12/01/14	379.480	Dallas Area Rapid Transit Auth	Sr Lien Sales Tax Rev Ref Bonds	CO-MGR
11/18/14	365.395	Harris Co (Houston) ISD	Limited Tax Refunding Bonds	CO-MGR
11/17/14	15.110	Williamson Co (Liberty Hill) ISD	Unlimited Tax Refunding Bonds	SR
11/17/14	0.608	Williamson Co (Liberty Hill) ISD	Unlimited Tax Refunding Bonds	SR
11/12/14	7.650	San Angelo City-Texas	GO Refunding Bonds	SOLE
10/22/14	9.185	Pasadena City-Texas	GO Refunding Bonds	SR
10/02/14	1,260.000	Texas Transportation Commission	Highway Improvement GO Bonds	CO-MGR
09/24/14	500.000	Texas Public Finance Auth (TPFA)	Revenue Bonds	CO-MGR
09/18/14	1.420	Schertz-Cibolo-Universal City ISD	Unltd Tax School Bldg & Ref Bonds	CO-MGR
09/10/14	4.910	McKinney City-Texas	Limited Tax Notes	CO-MGR
09/10/14	2.795	McKinney City-Texas	Hotel Occupancy Tax Rev Certs	CO-MGR
09/10/14	1.050	McKinney City-Texas	Airport Rev Certs of Oblig	CO-MGR
08/14/14	69.870	College Station City-Texas	Imp & Ref Bonds & Certs of Oblig	SR
08/13/14	40.405	Frisco City-Texas	GO Refunding & Improvement Bonds	CO-MGR
08/13/14	13.810	Frisco City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
08/06/14	116.095	Travis Co (Manor) ISD	Unltd Tax School Building Bonds	CO-MGR
08/05/14	163.475	Hays Co (Dripping Springs) ISD	Unltd Tax School Bldg & Ref Bonds	SR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
08/01/14	24.790	McKinney City-Texas	GO & Refunding Bonds	CO-MGR
08/01/14	5.120	McKinney City-Texas	GO Refunding Bonds	CO-MGR
07/31/14	89.595	Travis Co (Austin) ISD	Unlimited Tax Refunding Bonds	CO-MGR
07/31/14	54.815	Travis Co (Austin) ISD	Unlimited Tax Refunding Bonds	CO-MGR
07/30/14	64.605	El Paso City-Texas	Combination Tax & Rev Cert Oblig	CO-MGR
07/30/14	49.360	El Paso City-Texas	GO Refunding Bonds	CO-MGR
07/21/14	10.045	Ennis City-Texas	GO Refunding Bonds	CO-MGR
06/24/14	13.060	Killeen City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
06/24/14	11.620	Killeen City-Texas	GO Refunding & Improvement Bonds	CO-MGR
06/11/14	3.680	Lewisville City-Texas	Rev & Spcl Assess Util Sys Bonds	SOLE
06/10/14	43.585	Travis Co (Manor) ISD	Unlimited Tax Refunding Bonds	CO-MGR
06/09/14	20.815	New Braunfels City-Texas	GO & Comb Tax Rev Cert of Oblig	SR
06/09/14	3.280	New Braunfels City-Texas	Comb Tax & Ltd Pledge Rev Crt Ob	SR
06/02/14	22.565	Burleson City-Texas	GO Refunding & Improvement Bonds	CO-MGR
06/02/14	10.165	Burleson City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
05/21/14	222.910	Dallas & Fort Worth Cities-Texas	Joint Revenue Improvement Bonds	SR
05/20/14	32.955	Borger City-Texas	Tax & Wtrwrks Swr Cert of Oblig	SR
05/20/14	12.225	Cedar Park City-Texas	Pass Thru Toll Rev& Ltd Tax Bonds	CO-MGR
05/19/14	11.655	Mesquite City-Texas	Wtrwrks&Swr Sys Rev Ref&Imp Bonds	CO-MGR
05/19/14	9.715	Mesquite City-Texas	Comb Tax & Ltd Surplus Rev Certs	CO-MGR
05/19/14	9.080	Mesquite City-Texas	GO Refunding Bonds	CO-MGR
05/14/14	11.855	Georgetown City-Texas	Utility System Rev Ref Bonds	SR
04/30/14	62.900	Lubbock City-Texas	Tax & Wtrwrks Sys Surp Rev Certs	SR
04/30/14	44.920	Lubbock City-Texas	GO Refunding Bonds	SR
04/24/14	497.640	Texas Public Finance Auth (TPFA)	Unemploy Comp Oblig Assess Bonds	CO-MGR
04/08/14	88.515	El Paso City-Texas	GO Refunding & Imp Bonds	CO-MGR
03/19/14	15.015	Midlothian City-Texas	GO Refunding Bonds	CO-MGR
03/19/14	12.990	Temple City-Texas	Utility System Revenue Bonds	SR
03/18/14	40.235	Baytown City-Texas	GO & Ref & Comb Tax Cert of Oblig	CO-MGR
03/13/14	692.890	Houston City-Texas	First Lien Revenue Ref Bonds	CO-MGR
03/13/14	605.195	Houston City-Texas	First Lien Revenue Ref Bonds	CO-MGR
03/07/14	1,157.795	Texas Transportation Commission	State Highway Fd Rev & Ref Bonds	CO-MGR
03/04/14	12.175	Terrell City-Texas	Revenue Certs of Obligation	SR
02/20/14	221.580	Univ of Texas Sys Bd of Regents	Permanent University Fund Bonds	SR
02/12/14	66.885	Round Rock City-Texas	General Obligation Bonds	CO-MGR
02/12/14	10.465	Round Rock City-Texas	GO Refunding Bonds	CO-MGR
02/05/14	171.415	Fort Worth City-Texas	Water&Swr Sys Rev Ref&Imp Bonds	CO-MGR
02/04/14	733.465	Grand Parkway Transport Corp	Sub Tier Toll Revenue Ref BANs	CO-MGR
02/03/14	16.770	Travis Co (Del Valle) ISD	Unlimited Tax Refunding Bonds	CO-MGR
01/28/14	26.180	Midland City-Texas	Tax & Ltd Pledge Rev Cert Oblig	CO-MGR
01/28/14	3.800	Midland City-Texas	GO Refunding Bonds	CO-MGR
01/23/14	187.519	Williamson Co (Leander) ISD	Unlimited Tax Sch Building Bonds	CO-MGR
01/23/14	17.145	Williamson Co (Leander) ISD	Unlimited Tax Sch Building Bonds	CO-MGR
01/14/14	64.900	El Paso City-Texas	Water & Sewer Revenue Ref Bonds	SR
12/06/13	97.930	Corpus Christi City-Texas	Utility Sys Jr Lien Rev Imp Bonds	CO-MGR
12/06/13	7.120	Clyde City-Texas	Comb Tax & Surplus Rev Cert Oblig	SOLE
12/06/13	3.815	Clyde City-Texas	Comb Tax & Rev Cert Oblig Bonds	SOLE
11/20/13	25.920	Hays Co-Texas	Pass-Through Toll Rev Bonds	SR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
11/19/13	5.245	Borger City-Texas	Tax & Wtrwrks & Swr Sys Surp Rev	SR
10/09/13	79.350	San Antonio City-Texas	Water Sys Jr Lien Rev & Ref Bonds	CO-MGR
09/20/13	71.455	Austin City-Texas	Public Improvement Ref Bonds	SR
09/20/13	43.250	Austin City-Texas	Public Improvement Ref Bonds	SR
09/09/13	131.670	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
09/09/13	72.656	Williamson Co (Leander) ISD	Unlimited Tax Refunding CABs	CO-MGR
09/04/13	239.965	Texas A&M University System	Revenue Financing System Bonds	CO-MGR
08/23/13	156.540	Dallas City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	CO-MGR
08/06/13	4.665	Cuero City-Texas	GO Ref & Comb Tax & Rev Oblig	SOLE
07/31/13	836.440	Grand Parkway Transport Corp	Sub Tier Toll Rev Tender Bonds	CO-MGR
07/30/13	41.080	Beaumont City-Texas	Certificates of Obligation	CO-MGR
07/23/13	30.990	College Station City-Texas	GO Imp & Ref & Certs of Oblig	SR
07/23/13	9.465	Carrollton City-Texas	GO Improvement Bonds	SR
07/17/13	1,337.935	Grand Parkway Transport Corp	First & Sub Tier Toll Rev Bonds	CO-MGR
07/17/13	361.810	Grand Parkway Transport Corp	Subordinated Tier Toll Rev Bonds	CO-MGR
07/17/13	276.999	Grand Parkway Transport Corp	Sub Tier Toll Rev Convert CABs	CO-MGR
07/15/13	33.925	Paris City-Texas	General Obligation Bonds	CO-MGR
06/28/13	70.795	Hays Co (San Marcos) CISD	Unltd Tax School Building Bonds	CO-MGR
06/12/13	10.735	Denton City-Texas	GO Refunding & Improvement Bonds	SR
06/07/13	8.490	Travis Co (Eanes) ISD	Unlimited Tax Refunding Bonds	CO-MGR
06/07/13	0.100	Travis Co (Eanes) ISD	Unlimited Tax Refunding Bonds	CO-MGR
05/15/13	11.005	Georgetown City-Texas	GO Refunding Bonds	CO-MGR
05/06/13	4.530	Denison City-Texas	GO Refunding Bonds	SR
05/06/13	2.240	Denison City-Texas	Comb Tax Surplus Rev Certs Oblig	SR
05/02/13	16.570	Lubbock City-Texas	Elc Light Power Sys Ref Imp Bond	CO-MGR
04/25/13	49.440	Lubbock City-Texas	Tax & Wtrwrks Sys Certs of Oblig	CO-MGR
04/25/13	42.075	Lubbock City-Texas	GO Refunding & Improvement Bonds	CO-MGR
04/25/13	39.705	Lubbock City-Texas	Limited Tax GO Refunding Bonds	CO-MGR
04/23/13	155.810	Ctl Texas Reg Mobility Au (CTRMA)	Senior Lien Revenue Ref Bonds	CO-MGR
04/18/13	372.240	Dallas & Fort Worth Cities-Texas	Joint Revenue Improvement Bonds	CO-MGR
04/18/13	79.955	Frisco City-Texas	GO Refunding & Improvement Bonds	SR
04/16/13	41.225	Killeen City-Texas	GO Refunding Bonds	SR
04/10/13	15.865	Cedar Park City-Texas	GO Refunding Bonds	CO-MGR
04/10/13	14.915	Cedar Park City-Texas	Utility System Rev Ref Bonds	CO-MGR
04/09/13	16.360	West University Place City-Texas	Permanent Imp Refunding Bonds	SR
04/08/13	2.830	Hico City-Texas	Comb Tax & Surplus Rev Ref Bonds	SOLE
03/25/13	20.720	Richardson City-Texas	GO Refunding Bonds	CO-MGR
03/25/13	8.315	Richardson City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
02/26/13	398.775	Houston Community College (HCC)	Ltd Tax General Obligation Bonds	CO-MGR
02/20/13	48.240	Travis Co (Manor) ISD	Unlimited Tax Refunding Bonds	CO-MGR
02/06/13	104.600	Travis Co (Lake Travis) ISD	Unlimited Tax Refunding Bonds	CO-MGR
02/05/13	226.360	Harris Co (Pasadena) ISD	Unlimited Tax Sch Bldg &Ref Bonds	CO-MGR
01/31/13	6.295	Travis Co (Del Valle) ISD	Unltd Tax School Building Bonds	SR
01/31/13	5.525	Rusk City-Texas	Tax & Wtrwks & Swr Certs of Oblig	CO-MGR
01/31/13	1.775	Rusk City-Texas	GO Refunding Bonds	CO-MGR
01/28/13	3.030	Travis Co Emergency Svc Dt #3	Limited Tax Refunding Bonds	SOLE
01/24/13	55.540	Waco City-Texas	GO Ref & Comb Tax & Rev Oblig	CO-MGR
01/24/13	14.300	Lewisville City-Texas	Contract & Spcl Assess Ref Bonds	SOLE

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
01/23/13	209.640	Harris Co (Houston) ISD	Ltd Tax Schoolhouse & Ref Bonds	CO-MGR
12/18/12	4.775	Stephenville City-Texas	GO Refunding Bonds	SOLE
12/13/12	107.660	Corpus Christi City-Texas	General Improvement Ref Bonds	CO-MGR
11/29/12	116.065	Houston City-Texas	Comb Util First Lien Rev Ref Bond	SR
11/26/12	225.000	Texas Transportation Commission	First Tier Revenue Ref Bonds	CO-MGR
11/15/12	585.330	Texas Transportation Commission	First Tier Revenue Ref Bonds	CO-MGR
11/15/12	6.095	San Angelo City-Texas	GO Refunding Bonds	SR
11/14/12	480.000	Dallas & Fort Worth Cities-Texas	Joint Revenue Improvement Bonds	CO-MGR
11/08/12	390.235	Dallas ISD	Unlimited Tax Refunding Bonds	CO-MGR
10/24/12	205.215	Montgomery Co (Conroe) ISD	Unltd Tax School Bldg & Ref Bonds	CO-MGR
10/09/12	9.905	Sugar Land City-Texas	GO Refunding Bonds	SOLE
10/03/12	214.495	Dallas City-Texas	GO Refunding Bonds	CO-MGR
09/24/12	23.915	Travis Co Water Ctl & Imp Dt #17	Water & Sewer System Rev Bonds	CO-MGR
09/20/12	5.000	Hutto City-Texas	GO Improvement Bonds	SR
09/20/12	4.545	Hutto City-Texas	GO Improvement & Refunding Bonds	SR
08/23/12	46.970	League City-Texas	GO Ref & Comb Tax Rev Cert Oblig	CO-MGR
08/23/12	19.635	League City-Texas	Comb Tax Wtrwrks Cert of Oblig	SR
08/21/12	149.735	Houston City-Texas	Comb Util Sys 1st Lien Ref Bonds	CO-MGR
08/21/12	9.210	Commerce City-Texas	GO Refunding & Improvement Bonds	SR
08/16/12	25.715	Killeen City-Texas	GO Improvement & Refunding Bonds	SR
08/01/12	3.165	South Padre Island-Texas	Ltd Tax GO Refunding Bonds	SOLE
07/10/12	11.725	Big Spring City-Texas	Tax & Surplus Rev Cert of Oblig	SR
07/09/12	19.470	New Braunfels City-Texas	Comb Tax Ltd Pledge Cert of Oblig	CO-MGR
06/25/12	7.730	Watauga City-Texas	Comb Tax&Ltd Pledge Cert of Oblig	CO-MGR
06/05/12	11.465	Keller City-Texas	GO Refunding Bonds	SR
06/05/12	6.000	Keller City-Texas	Comb Tax&Ltd Surplus Rev Cert Ob	SR
05/24/12	24.700	Temple City-Texas	Pass-Through Agreement Rev Bonds	SR
05/23/12	655.370	San Antonio City-Texas	Electric & Gas Sys Rev Ref Bonds	CO-MGR
05/23/12	29.475	Cedar Park City-Texas	GO Refunding & Improvement Bonds	SR
05/23/12	25.943	Williamson Co (Leander) ISD	Unlimirted Tax Refunding Bonds	CO-MGR
05/14/12	52.500	Corpus Christi City-Texas	Utility System Revenue Imp Bonds	CO-MGR
05/14/12	7.715	Georgetown City-Texas	Utility System Revenue Ref Bonds	SR
05/10/12	37.500	College Station City-Texas	GO Imp Ref Bonds & Certs of Oblig	SR
05/08/12	62.425	Pflugerville City-Texas	Limited Tax Refunding Bonds	CO-MGR
05/08/12	25.375	Temple City-Texas	GO Refunding Bonds	SR
04/30/12	11.695	Murphy City-Texas	GO Refunding Bonds	SR
04/26/12	274.925	Dallas & Fort Worth Cities-Texas	Joint Revenue Ref & Imp Bonds	CO-MGR
04/19/12	19.165	Leander City-Texas	GO Refunding Bonds	SR
04/18/12	20.100	Carrollton City-Texas	GO Refunding Bonds	SR
04/18/12	10.535	Carrollton City-Texas	Wtr and Swr Sys Rev Ref Bonds	SR
04/12/12	39.480	Nacogdoches City-Texas	GO Refunding Bonds	CO-MGR
04/11/12	9.745	Hays Co-Texas	Limited Tax Refunding Bonds	CO-MGR
04/09/12	3.525	Lampasas City-Texas	GO Refunding Bonds	CO-MGR
04/03/12	8.780	Travis Co (Manor) ISD	Refunding Bonds	SR
03/30/12	13.920	Williamson Co (Hutto) ISD	Refunding Bonds	SR
03/30/12	10.650	Williamson Co (Hutto) ISD	Unlimited Tax Refunding Bonds	SR
03/26/12	14.845	Richardson City-Texas	GO Refunding Bonds	CO-MGR
03/26/12	6.640	Richardson City-Texas	Comb Tax & Rev Cert of Oblig	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
03/26/12	0.275	Richardson City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
03/22/12	66.075	Lubbock City-Texas	Wtrwrks Sys Surplus Rev Crt Ob	CO-MGR
03/22/12	15.200	Lubbock City-Texas	GO Refunding Bonds	CO-MGR
03/22/12	12.395	Lubbock City-Texas	General Obligation Bonds	CO-MGR
03/13/12	31.890	San Antonio City-Texas	Wtr Sys Junior Lien Rev Ref Bonds	CO-MGR
03/08/12	5.065	Marshall City-Texas	Wtrworks & Swr Sys Rev Ref Bonds	SOLE
02/22/12	238.135	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	CO-MGR
02/17/12	143.120	Travis Co (Lake Travis) ISD	Unltd Tax School Building Bonds	CO-MGR
02/13/12	17.095	Williamson Co (Georgetown) ISD	Refunding Bonds	SOLE
02/09/12	30.225	Baytown City-Texas	GO & Refunding Bonds	CO-MGR
02/01/12	195.850	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Ref Bonds	CO-MGR
01/31/12	7.715	Round Rock City-Texas	Venue Tax & Hotel Occupancy Rev	SR
01/30/12	0.030	Williamson Co (Georgetown) ISD	Refunding Bonds	SOLE
01/26/12	52.780	El Paso City-Texas	Water & Sewer Rev Ref Bonds	SR
01/24/12	29.445	Midland City-Texas	Tax & Pledge Rev Certs of Oblig	CO-MGR
01/13/12	44.695	Corpus Christi City-Texas	General Improvement Bonds	CO-MGR
12/22/11	9.550	Travis Co (Lago Vista) ISD	Unlimited Tax School Bldg Bonds	CO-MGR
12/14/11	32.290	League City-Texas	Comb Tax & Wtrwks & Swr Sys Rev	CO-MGR
12/14/11	17.755	League City-Texas	GO Refunding Bonds	CO-MGR
12/07/11	3.675	Bunker Hill Village-Texas	GO Refunding Bonds	SOLE
12/06/11	9.440	Sugar Land City-Texas	GO Refunding Bonds	SOLE
12/05/11	9.820	McAllen City-Texas	Comb Tax & Rev Certs of Oblig	SR
12/01/11	50.580	Leander City-Texas	GO Ref & Comb & Tax Rev Crt Oblig	CO-MGR
11/30/11	197.935	Dallas ISD	Unlimited Tax Refunding Bonds	CO-MGR
11/22/11	6.345	Boerne City-Texas	GO Refunding Bonds	CO-MGR
11/16/11	28.170	Travis Co (Pflugerville) ISD	Refunding Bonds	CO-MGR
11/09/11	36.565	Williamson Co-Texas	Limited Tax Refunding Bonds	CO-MGR
11/09/11	10.000	Williamson Co-Texas	Pass-Through Toll Rev & Ltd Tax	CO-MGR
11/09/11	8.650	Bellaire City-Texas	GO Refunding Bonds	CO-MGR
11/08/11	2.840	Lewisville City-Texas	Comb Contr &Spl Asmt Imp Bonds	SOLE
11/03/11	13.450	Temple City-Texas	GO Refunding Bonds	CO-MGR
11/03/11	5.745	Temple City-Texas	Limited Tax Notes	CO-MGR
11/01/11	41.360	Garland City-Texas	GO Refunding Bonds	CO-MGR
11/01/11	30.150	Garland City-Texas	Water & Sewer Revenue Ref Bonds	CO-MGR
11/01/11	17.995	Garland City-Texas	GO Refunding Bonds	CO-MGR
11/01/11	8.320	Lewisville City-Texas	Contract Rev & Special Asses Sys	SOLE
10/25/11	31.400	Killeen City-Texas	Pass-Through Toll Rev Bonds	SR
10/25/11	17.465	Travis Co (Manor) ISD	Unltd Tax School Building Bonds	CO-MGR
10/19/11	6.640	Bellaire City-Texas	Ltd Tax GO Refunding Bonds	CO-MGR
10/14/11	68.285	Austin City-Texas	Public Improvement Ref Bonds	CO-MGR
10/05/11	599.195	Lower Colorado River Authority (LCRA)	Transmission Contract Ref Rev	CO-MGR
09/20/11	7.360	Lake Jackson City-Texas	Limited Tax Refunding Bonds	SOLE
09/09/11	510.415	Harris Co Metro Trans Auth	Sales & Use Tax Contractual Oblig	CO-MGR
08/24/11	166.660	Houston City-Texas	Comb Util Sys First Lien Rev Ref	CO-MGR
08/22/11	2.345	Haltom City-Texas	Comb Tax & Rev Cert Oblig Bonds	SOLE
08/11/11	151.160	Fort Worth City-Texas	Wtr & Swr Sys Rev Ref & Imp Bonds	CO-MGR
08/02/11	6.675	Forney City-Texas	Tax Wtrwrks & Swr Cert of Oblig	SR
08/02/11	2.295	Forney City-Texas	Ltd Tax GO Refunding Bonds	SR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
08/02/11	1.635	Forney City-Texas	GO Refunding Bonds	SR
07/29/11	7.575	The Colony City-Texas	GO Refunding Bonds	SOLE
07/26/11	282.820	Texas Public Finance Auth (TPFA)	General Obligation & Ref Bonds	CO-MGR
07/21/11	151.840	Dallas & Fort Worth Cities-Texas	Joint Revenue Refunding Bonds	CO-MGR
07/19/11	137.725	Houston City-Texas	Hotel Occ Tx & Spec Rev Ref Bonds	CO-MGR
07/19/11	123.430	Frisco City-Texas	GO Refunding & Improvement Bonds	SR
07/19/11	116.735	Houston City-Texas	Hotel Occ Tx & Spec Rev Ref Bonds	CO-MGR
07/14/11	11.135	Killeen City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	SR
07/14/11	6.875	Killeen City-Texas	GO Refunding Bonds	CO-MGR
07/08/11	48.960	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
07/07/11	239.425	Dallas City-Texas	Wtrwks & Swr Sys Rev Ref Bonds	CO-MGR
06/28/11	449.975	Houston City-Texas	Airport System Sub Lien Rev Ref	CO-MGR
06/28/11	116.930	Houston City-Texas	Airport System Sub Lien Rev Ref	CO-MGR
06/28/11	71.035	Travis Co (Eanes) ISD	Unltd Tax School Bldg & Ref Bonds	CO-MGR
06/28/11	32.040	Killeen City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
06/28/11	18.060	Killeen City-Texas	Pass-Through Toll & Ltd Tax Bonds	SR
06/28/11	11.135	Killeen City-Texas	Water & Sewer Sys Rev Ref Bonds	SOLE
06/23/11	42.115	Hays Co-Texas	Pass Through Toll Rev & Tax Bonds	CO-MGR
06/23/11	36.835	Hays Co-Texas	Unlimited Tax Road Bonds	CO-MGR
06/23/11	9.970	Hays Co-Texas	Limited Tax Bonds	CO-MGR
06/21/11	8.725	Murphy City-Texas	GO Ref & Improvement Bonds	SR
06/20/11	111.355	Dallas & Fort Worth Cities-Texas	Joint Revenue Refunding Bonds	SR
06/20/11	10.785	Bryan City-Texas	Comb Tax & Revenue Ref Bonds	SR
06/16/11	5.725	Parker City-Texas	GO Refunding Bonds	SOLE
06/10/11	375.929	Ctl Texas Reg Mobility Au (CTRMA)	Senior & Sub Lien Revenue Bonds	CO-MGR
06/07/11	19.205	Garland City-Texas	Water & Sewer Sys Revenue Bonds	CO-MGR
06/07/11	13.780	San Angelo City-Texas	Comb Tax & Ltd Rev Certs of Oblig	SR
06/01/11	3.800	South Padre Island-Texas	General Obligation Bonds	SOLE
05/17/11	4.480	Southlake City-Texas	Wtrwks Swr Sys Rev Certs of Oblig	CO-MGR
05/17/11	3.365	Southlake City-Texas	Wtrwks Swr Sys Rev Certs of Oblig	CO-MGR
05/17/11	3.285	Southlake City-Texas	Wtrwks Swr Sys Rev Certs of Oblig	CO-MGR
05/02/11	14.240	Mesquite City-Texas	Wtrwrks Swr Sys Rev Ref Imp Bonds	SR
05/02/11	12.715	Mesquite City-Texas	GO Refunding Bonds	SR
05/02/11	11.575	Mesquite City-Texas	Comb Tax & Rev Certs of Oblig	SR
05/02/11	4.385	Mesquite City-Texas	Muni Drain Util Sys Rev Ref Bonds	SR
04/26/11	14.630	Cedar Hill City-Texas	GO Refunding Bonds	CO-MGR
04/21/11	672.833	North Texas Tollway Auth (NTTA)	Special Projects System Rev Bonds	CO-MGR
04/21/11	418.405	North Texas Tollway Auth (NTTA)	BANs	CO-MGR
04/11/11	3.035	Sunnyvale Town-Texas	Comb Tax & Rev Certs of Oblig	SOLE
04/06/11	28.030	San Angelo City-Texas	GO Refunding Bonds	SR
03/16/11	142.685	Lubbock City-Texas	GO Ref Tax Wtr Rev Certs of Oblig	SR
02/15/11	4.660	Terrell City-Texas	Tax & Wtrwrks Swr Sys Certs Oblig	SOLE
02/15/11	1.545	Terrell City-Texas	Tax & Wtrwrks Swr Sys Certs Oblig	SOLE
02/01/11	23.655	Travis Co (Pflugerville) ISD	Unlimited Tax Refunding Bonds	CO-MGR
01/27/11	88.325	Williamson Co (Georgetown) ISD	Unlimited Tax School Bldg Bonds	CO-MGR
01/24/11	10.000	Kingsville City-Texas	Certificates of Obligation	SR
01/20/11	87.565	Williamson Co (Liberty Hill) ISD	Unltd Tax School Bldg & Ref Bonds	SR
01/11/11	8.345	Weatherford City-Texas	Tax & Util Sys Rev Certs of Oblig	SR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
01/11/11	3.750	Amarillo City-Texas	Comb Tax & Revenue Certs of Oblig	CO-MGR
01/11/11	2.210	Amarillo City-Texas	Comb Tax & Tax Inc Certs of Oblig	CO-MGR
12/14/10	33.470	Austin Community College Dt	Lease Revenue Bonds	CO-MGR
12/14/10	25.130	Weatherford City-Texas	Ltd Tax GO Refunding Bonds	SR
12/09/10	79.555	San Antonio City-Texas	PFC & Airport Sys Rev Imp Ref	CO-MGR
12/09/10	20.885	San Antonio City-Texas	Airport System Revenue Ref Bonds	CO-MGR
12/07/10	849.465	Texas Public Finance Auth (TPFA)	Unemploy Comp Oblig Assess Bonds	CO-MGR
12/07/10	35.380	Beaumont City-Texas	Certificates of Obligation	CO-MGR
12/07/10	17.785	Beaumont City-Texas	GO Refunding Bonds	CO-MGR
12/07/10	3.945	Taylor City-Texas	Ltd Tax GO Refunding Bonds	SOLE
11/18/10	1,110.415	Texas Public Finance Auth (TPFA)	Unemployment Compensation Oblig	CO-MGR
11/18/10	52.632	Williamson Co (Leander) ISD	Unlimited Tax Refunding Bonds	CO-MGR
11/16/10	30.000	Boerne City-Texas	Utility System Revenue Bonds	CO-MGR
11/10/10	142.035	Dallas City-Texas	GO Refunding Bonds	CO-MGR
11/10/10	77.670	Dallas City-Texas	GO Refunding Bonds	CO-MGR
11/10/10	17.570	Dallas City-Texas	Equipment Acq Contractual Obliga	CO-MGR
11/09/10	15.780	Pflugerville City-Texas	Limited Tax Refunding Bonds	CO-MGR
11/09/10	5.105	Bryan City-Texas	Waterworks & Sewer Sys Rev Bonds	SR
11/03/10	6.920	Orange City-Texas	GO Refunding Bonds	CO-MGR
11/02/10	37.150	College Station City-Texas	GO Refunding Bonds	SR
10/28/10	300.000	San Antonio City-Texas	Elec & Gas Sys Jr Ln Rev Bonds	CO-MGR
10/28/10	200.000	San Antonio City-Texas	Elec & Gas Sys Rev Ref Bonds	CO-MGR
10/28/10	21.580	Arlington City-Texas	Permanent Improvement Ref Bonds	SR
10/28/10	12.930	Williamson Co-Texas	Ltd Tax Refunding Bonds	CO-MGR
10/27/10	304.395	Dallas & Fort Worth Cities-Texas	Joint Revenue Improvement Bonds	CO-MGR
10/21/10	373.780	Lower Colorado River Authority (LCRA)	Refunding Revenue Bonds	CO-MGR
10/20/10	73.295	Lubbock City-Texas	Elec Light & Power Sys Rev Bonds	CO-MGR
10/19/10	6.865	Duncanville City-Texas	Wtrwrks Swr Sys Rev Certificates	SOLE
10/18/10	91.560	Austin City-Texas	Public Improvement Ref Bonds	CO-MGR
10/07/10	14.180	Brenham City-Texas	Pass Through Toll Rev & Tax Bonds	SR
10/07/10	3.600	Brenham City-Texas	Ltd Tax GO Refunding Bonds	SR
10/07/10	0.760	Brenham City-Texas	Limited Tax Notes	SR
09/23/10	40.800	Woodlands Twp-Texas	Sales Tax & Hotel Occupancy Ref	CO-MGR
09/14/10	604.310	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	CO-MGR
09/13/10	14.045	Pearland City-Texas	Permanent Improvement & Ref Bonds	CO-MGR
09/01/10	33.980	Galveston Co (Texas City) ISD	School Building & Refunding Bonds	SR
08/25/10	18.575	Round Rock City-Texas	GO Limited Tax Refunding Bonds	CO-MGR
08/17/10	12.325	Corsicana City-Texas	Limited Tax GO Refunding Bonds	SOLE
08/17/10	8.110	Euless City-Texas	GO Refunding Bonds	SOLE
08/10/10	12.570	Brownsville City-Texas	GO Refunding Bonds	SR
08/05/10	27.655	Leander City-Texas	Limited Tax GO & Refunding Bonds	SR
07/28/10	9.855	Nederland City-Texas	GO Refunding Bonds	CO-MGR
07/27/10	1,500.000	Texas Transportation Commission	State Highway Fund Revenue Bonds	CO-MGR
07/27/10	10.160	Wylie City-Texas	GO Refunding Bonds	CO-MGR
07/27/10	5.795	Greenville City-Texas	Comb Tax & Rev Certs of Oblig	SR
07/27/10	0.525	Wylie City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
07/07/10	3.090	Harlingen City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
07/07/10	2.540	Harlingen City-Texas	GO Refunding Bonds	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
06/30/10	13.685	Corpus Christi City-Texas	General Improvement Bonds	SR
06/30/10	3.000	Corpus Christi City-Texas	Comb Tax & Rev Certs of Oblig	SR
06/28/10	81.445	Richardson City-Texas	GO Refunding & Improvement Bonds	CO-MGR
06/28/10	18.305	Richardson City-Texas	Comb Tax & Revenue Cert Oblig	CO-MGR
06/28/10	6.105	Richardson City-Texas	GO Refunding Bonds	CO-MGR
06/28/10	1.185	River Oaks City-Texas	Comb Tax & Surplus Rev Ref Bonds	SOLE
06/22/10	516.245	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	CO-MGR
06/22/10	333.540	Texas Public Finance Auth (TPFA)	GO Refunding Bonds	CO-MGR
06/22/10	34.480	Arlington City-Texas	Permanent Improvement & Ref Bonds	SR
06/22/10	21.515	Arlington City-Texas	Wtr & Wstwtr Sys Rev & Ref Bonds	SR
06/22/10	9.440	Roanoke City-Texas	GO Refunding Bonds	CO-MGR
06/22/10	5.755	Arlington City-Texas	Comb Tax & Revenue Certs of Oblig	SR
06/22/10	1.390	Roanoke City-Texas	Tax & Rev Certs of Obligation	CO-MGR
06/17/10	39.330	Schertz-Cibolo-Universal City ISD	Unlimited Tax Refunding Bonds	SR
06/16/10	295.850	Dallas City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	CO-MGR
06/14/10	2.265	Idalou City-Texas	Tax Wtrwrks Swr Sys Rev Cert Ob	SOLE
06/10/10	119.255	Austin City-Texas	Elc Util Sys Rev Ref Bonds	CO-MGR
06/10/10	100.990	Austin City-Texas	Elc Util Sys Rev Ref Bonds	CO-MGR
05/25/10	13.330	Killeen City-Texas	Ltd Tax GO Refunding Bonds	SR
05/25/10	6.870	Killeen City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	SR
05/25/10	1.255	Melissa City-Texas	GO Refunding Bonds	SOLE
05/17/10	12.340	Mesquite City-Texas	Comb Tax & Ltd Surplus Rev Certs	SR
05/17/10	8.270	Mesquite City-Texas	Water Works & Sewer Sys Rev Bonds	SR
05/17/10	4.800	Murphy City-Texas	General Obligation Bonds	SOLE
05/17/10	1.320	Mesquite City-Texas	GO Limited Tax Refunding Bonds	SR
05/17/10	1.075	Murphy City-Texas	Tax Notes	SOLE
05/11/10	22.290	Sugar Land City-Texas	GO Refunding Bonds	SR
05/04/10	115.230	Travis Co-Texas	Road Permanent Imp & Cert Oblig	CO-MGR
05/04/10	14.305	Travis Co-Texas	Limited Tax Certificates of Oblig	CO-MGR
04/27/10	19.555	Travis Co (Del Valle) ISD	School Building Bonds	CO-MGR
04/27/10	12.425	Greenville City-Texas	GO Ltd Tax Refunding Bonds	SR
04/21/10	15.745	Southlake City-Texas	Tax & Wtr & Swr Rev Cert of Oblig	CO-MGR
04/20/10	27.415	Carrollton City-Texas	GO Improvement & Refunding Bonds	SR
04/20/10	26.730	Southlake City-Texas	Ltd Tax GO Refunding Bonds	CO-MGR
04/20/10	20.420	Travis Co (Pflugerville) ISD	Refunding Bonds	SR
04/19/10	5.040	Richmond City-Texas	GO Refunding Bonds	SOLE
04/19/10	2.475	Burkburnett City-Texas	GO Ltd Tax Refunding Bonds	SOLE
04/13/10	0.965	Archer City ISD	Unlimited Tax Refunding Bonds	SOLE
04/06/10	8.310	Keller City-Texas	Comb Tax & Surplus Rev Cert Oblig	SR
04/06/10	6.300	Keller City-Texas	GO Refunding Bonds	SR
04/06/10	3.290	Keller City-Texas	GO Limited Tax Refunding Bonds	SR
03/25/10	87.691	Williamson Co (Leander) ISD	Unltd Tax School Bldg & Ref Bonds	SR
03/24/10	385.380	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Ref Bonds	CO-MGR
03/23/10	22.995	Lancaster City-Texas	General Obligation Bonds	CO-MGR
03/22/10	12.000	Lancaster City-Texas	Tax Wtr Swr Sys Rev Certs Oblig	CO-MGR
03/11/10	196.615	Dallas City-Texas	GO Refunding & Improvement Bonds	CO-MGR
03/11/10	85.380	Dallas City-Texas	General Obligation Bonds	CO-MGR
03/11/10	21.575	Dallas City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
03/08/10	4.200	Big Spring City-Texas	Ltd Tax Comb Tax&Rev Certs Oblig	SR
03/03/10	331.415	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	CO-MGR
03/02/10	156.255	San Antonio City-Texas	General Improvement Ref Bonds	CO-MGR
03/02/10	36.960	Travis Co (Del Valle) ISD	Refunding Bonds	CO-MGR
02/25/10	12.895	Waco City-Texas	GO Refunding Bonds	SOLE
01/25/10	17.075	Paris City-Texas	GO Refunding Bonds	CO-MGR
01/21/10	96.540	Lubbock City-Texas	Tax&Wtrwrks Sys Rev Cert Oblig	CO-MGR
01/21/10	48.955	Lubbock City-Texas	Tax&Wtrwrks Sys Rev Cert Oblig	CO-MGR
01/21/10	15.320	Lubbock City-Texas	General Obligation Bonds	CO-MGR
01/21/10	8.840	Lubbock City-Texas	General Obligation Bonds	CO-MGR
01/19/10	22.115	El Paso City-Texas	Water & Sewer Revenue Ref Bonds	SR
01/13/10	423.235	Lower Colorado River Authority (LCRA)	Refunding Revenue Bonds	CO-MGR
01/12/10	10.000	League City-Texas	Comb Tax & Rev Certs Of Oblig	SR
11/17/09	102.750	San Antonio City-Texas	Water System Revenue Bonds	CO-MGR
11/17/09	12.250	San Antonio City-Texas	Water System Revenue Bonds	CO-MGR
11/17/09	1.505	Palmer City-Texas	GO Refunding Bonds	SOLE
11/12/09	78.785	Round Rock City-Texas	Utility System Revenue Bonds	SR
11/09/09	1.395	Shiner City-Texas	Comb Tax & Ltd Rev Certs of Oblig	SOLE
11/05/09	166.575	Austin City-Texas	Wtr & Wastewtr Sys Rev Ref Bonds	CO-MGR
11/03/09	29.490	Sugar Land City-Texas	Waterworks & Sewer Sys Rev Bonds	SR
11/03/09	17.820	Sugar Land City-Texas	Comb Tax & Rev Certs of Oblig	SR
11/02/09	7.570	Missouri City-Texas	GO Refunding Bonds	CO-MGR
11/02/09	5.260	Missouri City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
10/27/09	8.565	Sugar Land City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	SR
10/27/09	4.520	Sugar Land City-Texas	GO Refunding Bonds	SR
10/26/09	19.405	Travis Co (Eanes) ISD	GO Refunding Bonds	CO-MGR
10/14/09	320.760	Texas A&M University System	Revenue Financing System Bonds	CO-MGR
09/21/09	46.595	Missouri City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
09/17/09	281.005	Dallas & Fort Worth Cities-Texas	Joint Revenue Refunding Bonds	CO-MGR
09/15/09	10.000	Farmers Branch City-Texas	Comb Tax & Rev Certs of Oblig	SOLE
08/26/09	6.395	Shenandoah City-Texas	General Improvement Bonds	CO-MGR
08/26/09	2.405	Shenandoah City-Texas	Combination Tax & Rev Cert Oblig	CO-MGR
08/18/09	49.575	Hays Co-Texas	Pass-Through Toll Rev Bonds	CO-MGR
08/18/09	9.990	Hays Co-Texas	Unltd Tax Road Bonds	CO-MGR
08/18/09	7.970	Hays Co-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
08/11/09	270.920	Texas Public Finance Auth (TPFA)	GO Refunding Bonds	CO-MGR
08/06/09	660.000	North Texas Tollway Auth (NTTA)	First Tier System Revenue Bonds	CO-MGR
08/04/09	16.140	Amarillo City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
08/04/09	4.825	Amarillo City-Texas	GO Refunding Bonds	CO-MGR
07/29/09	257.740	Texas Water Development Board	St Revolv Rev & Rev Ref Bonds	CO-MGR
07/14/09	37.200	League City-Texas	Waterworks & Sewer Sys Rev Bonds	CO-MGR
07/13/09	264.650	Fort Bend ISD	School Building & Refunding Bonds	CO-MGR
06/30/09	1.550	Howe City-Texas	Comb Tax & Revenue Certs of Oblig	SOLE
06/25/09	260.005	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	CO-MGR
06/22/09	99.495	Travis Co (Austin) ISD	School Building & Refunding Bonds	CO-MGR
06/18/09	27.575	Williamson Co (Leander) ISD	School Building Bonds	CO-MGR
06/16/09	829.615	Dallas Area Rapid Transit Auth	Sr Lien Sales Tax Revenue Bonds	CO-MGR
06/16/09	23.455	San Marcos City-Texas	Comb Tax & Rev Cert of Oblig Bns	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
06/16/09	12.020	San Marcos City-Texas	Tax & Revenue Refunding Bonds	CO-MGR
06/16/09	9.745	San Marcos City-Texas	GO Refunding Bonds	CO-MGR
06/16/09	4.495	San Marcos City-Texas	General Obligation Bonds	CO-MGR
06/15/09	5.630	Missouri City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
06/10/09	330.545	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	CO-MGR
06/09/09	10.750	Cibolo City-Texas	General Obligation Bonds	CO-MGR
06/09/09	6.100	Hurst City-Texas	Tax & Wtrwrks Rev Certs of Oblig	CO-MGR
06/09/09	5.035	Hurst City-Texas	GO Refunding Bonds	CO-MGR
06/02/09	375.000	San Antonio City-Texas	Electric & Gas Sys Revenue Bonds	CO-MGR
05/19/09	46.805	Williamson Co (Taylor) ISD	School Building & Refunding Bonds	CO-MGR
05/18/09	9.500	Murphy City-Texas	Tax & Wtrwrks Swr Sys Rev Certs	SOLE
05/18/09	1.890	Kingsville City-Texas	GO Refunding Bonds	SR
04/28/09	8.170	Midland City-Texas	GO Refunding Bonds	CO-MGR
04/28/09	5.950	Georgetown City-Texas	Limited Tax Notes	CO-MGR
04/28/09	5.400	Georgetown City-Texas	Combined Tax & Rev Cert of Oblig	SR
04/28/09	3.550	Georgetown City-Texas	GO Refunding Bonds	CO-MGR
04/23/09	62.820	Arlington City-Texas	Special Tax Revenue Bonds	CO-MGR
04/21/09	38.855	Carrollton City-Texas	GO Improvement & Refunding Bonds	SR
04/02/09	2.970	Kirby City-Texas	Comb Tax & Rev Certs of Oblig	SR
04/02/09	0.715	Kirby City-Texas	GO Refunding Bonds	SR
03/19/09	7.595	Travis Co (Manor) ISD	Unlimited Tax Refunding Bonds	SR
03/16/09	7.915	Murphy City-Texas	GO Refunding & Improvement Bonds	SOLE
03/13/09	58.705	Lubbock City-Texas	Tax & Wtrwrks Rev Certs of Oblig	SR
03/13/09	23.185	Lubbock City-Texas	GO Refunding & Improvement Bonds	SR
03/10/09	9.100	Pampa City-Texas	Tax&Wtrwrks & Swr Rev Cert Oblig	CO-MGR
03/10/09	6.110	Post City-Texas	Combined Tax Revenue Ref Bonds	SOLE
02/26/09	10.220	Waxahachie City-Texas	Combined Tax Rev Cert of Oblig	CO-MGR
02/25/09	89.235	Williamson Co-Texas	Pass-Through Toll Rev&Ltd Tax Bns	SR
02/25/09	8.000	Williamson Co-Texas	Limited Tax Bonds	SR
02/10/09	9.840	Melissa City-Texas	Comb Tax & Rev Certs of Oblig	SR
02/02/09	34.560	Sachse City-Texas	GO Refunding & Improvement Bonds	CO-MGR
01/27/09	9.855	Midland City-Texas	Tax & Revenue Certs of Obligation	CO-MGR
01/26/09	137.530	Williamson Co (Round Rock) ISD	Unltd Tax School Building Bonds	CO-MGR
01/26/09	4.270	Kingsville City-Texas	Certificates of Obligation	SR
01/21/09	125.940	Irving City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
01/08/09	175.000	Austin City-Texas	Wtr & Wstewater Sys Rev Ref Bonds	CO-MGR
01/06/09	12.000	Corpus Christi City-Texas	Comb Tax & Rev Certs of Oblig	SOLE
12/11/08	3.300	Panhandle City-Texas	Comb Tax & Rev Certs of Oblig	SOLE
12/09/08	256.735	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	CO-MGR
12/03/08	393.325	Dallas ISD	Ultd Tx School Building Bonds	CO-MGR
11/25/08	112.185	Arlington City-Texas	Special Tax Revenue Bonds	CO-MGR
11/06/08	96.170	Hays Co (Dripping Springs) ISD	Unltd Tax School Building Bonds	SR
10/22/08	10.120	San Antonio City-Texas	General Improvement Ref Bonds	CO-MGR
10/14/08	20.000	Coppell City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
10/14/08	6.500	Coppell City-Texas	Comb Tax & Rev Certs of Oblig	SR
09/18/08	609.038	North Texas Tollway Auth (NTTA)	System Rev Ref First Tier Bonds	CO-MGR
09/16/08	10.300	Lake Worth City-Texas	Comb Tax & Rev Certs of Oblig	SOLE
09/02/08	21.085	Missouri City-Texas	General Obligation Bonds	SR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
09/02/08	14.515	Missouri City-Texas	Comb Tax & Rev Certs of Oblig	SR
08/18/08	25.000	Travis Co (Manor) ISD	School Building Bonds	SR
08/13/08	62.640	Austin City-Texas	Hotel Occupancy Tx Sub Rev Ref Bn	SOLE
08/12/08	5.230	Melissa City-Texas	General Obligation Bonds	CO-MGR
08/12/08	2.250	Melissa City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
07/21/08	1,000.000	North Texas Tollway Auth (NTTA)	Second Tier Rev Refunding Bonds	CO-MGR
07/16/08	253.170	Harris Co (Cypress-Fairbanks) ISD	Unltd Tax Schoolhouse & Ref Bonds	CO-MGR
07/15/08	39.605	Forney City-Texas	Toll Revenue & Limited Tax Bonds	CO-MGR
07/08/08	15.030	Temple City-Texas	Utility System Revenue Bonds	CO-MGR
07/08/08	13.520	Temple City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
07/08/08	9.660	Temple City-Texas	General Obligation Bonds	CO-MGR
07/01/08	30.000	Beaumont City-Texas	Certificates of Obligations	CO-MGR
07/01/08	20.730	Beaumont City-Texas	Wtrwrks and Swr Sys Revenue Bonds	CO-MGR
06/25/08	5.660	Shenandoah City-Texas	General Improvement Bonds	CO-MGR
06/25/08	2.225	Shenandoah City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
06/24/08	261.425	Texas Water Development Board	St Revolv Fund Sub Lien Rev Bonds	SR
06/17/08	57.760	Garland City-Texas	GO Refunding Bonds	CO-MGR
06/17/08	50.015	Garland City-Texas	Elc Util & Wtr & Swr Sys Revenue	CO-MGR
06/17/08	15.965	Garland City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
05/15/08	121.715	Travis Co (Pflugerville) ISD	Unltd Tax School Building Bonds	CO-MGR
05/15/08	43.905	Cedar Park City-Texas	Comb Tax & Rev Certs of Oblig	SR
04/30/08	80.485	Lubbock City-Texas	Tax & Wtr Sys Rev Certs of Oblig	CO-MGR
04/30/08	2.035	Lubbock City-Texas	General Obligation Bonds	CO-MGR
04/22/08	16.470	Georgetown City-Texas	Utility System Rev and Ref Bonds	CO-MGR
04/17/08	12.115	Irving City-Texas	Wtr & Swr New Lien Rev Imp Bonds	CO-MGR
04/10/08	19.615	Cedar Park City-Texas	General Obligation Bonds	CO-MGR
04/01/08	17.305	Brownsville City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
04/01/08	12.930	Brownsville City-Texas	GO Public Imp & Refunding Bonds	CO-MGR
04/01/08	6.000	Brownsville City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
03/31/08	600.000	North Texas Tollway Auth (NTTA)	System Revenue Refunding Bonds	CO-MGR
03/10/08	389.825	Harris Co (Houston) ISD	Limited Tax Schoolhouse Bonds	CO-MGR
03/06/08	2,407.679	North Texas Tollway Auth (NTTA)	System Revenue Refunding Bonds	CO-MGR
02/27/08	5.120	Tyler City-Texas	Water & Sewer Sys Revenue Bonds	SOLE
02/19/08	28.950	Frisco City-Texas	Comb Tax and Rev Certs of Oblig	CO-MGR
02/19/08	20.520	Frisco City-Texas	Comb Tax and Rev Certs of Oblig	SR
02/12/08	119.125	Williamson Co (Round Rock) ISD	Unltd Tax School Building Bonds	CO-MGR
02/06/08	172.505	Austin City-Texas	Public Improvement Ref Bonds	CO-MGR
01/24/08	1,100.000	Texas Transportation Commission	GO Mobility Fund Bonds	CO-MGR
01/17/08	52.900	Lubbock City-Texas	Tax and Wstwtr Rev Certs of Oblig	SR
12/13/07	203.050	Texas Water Development Board	St Revolving Fund Sub Rev Bonds	CO-MGR
12/11/07	26.775	League City-Texas	Waterworks & Sewer Sys Rev Bonds	SR
12/03/07	6.130	Sachse City-Texas	General Obligation Bonds	SOLE
11/29/07	157.260	San Antonio City-Texas	Airport System Revenue Imp Bonds	CO-MGR
11/06/07	53.000	Waxahachie City-Texas	Comb Tax & Rev Certs of Oblig	SR
10/02/07	6.540	Southlake City-Texas	Tax & Wtrwrks & Swr Sys Revenue	CO-MGR
09/25/07	67.200	Odessa City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
09/17/07	28.270	Denton City-Texas	GO Refunding Bonds	CO-MGR
09/11/07	147.535	Williamson Co-Texas	Unlimited Tax Road Bonds	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
09/11/07	14.000	Williamson Co-Texas	Limited Tax Bonds	CO-MGR
08/23/07	60.820	Lubbock City-Texas	Tax & Wtrwrks Sys Sur Rev Crt Ob	CO-MGR
08/23/07	1.155	Lubbock City-Texas	General Obligation Bonds	CO-MGR
08/20/07	68.125	Travis Co (Manor) ISD	Unlimited Tax School Bldg Bonds	SR
08/06/07	11.150	Sterling City ISD	Unltd Tax School Building Bonds	SOLE
07/30/07	5.255	Italy-Texas	Comb Tax & Rev Ref Bonds	SOLE
07/27/07	488.591	Bexar Co (North East) ISD	Unltd Tax School Building Bonds	CO-MGR
07/17/07	15.925	Denton City-Texas	General Obligation Bonds	CO-MGR
07/17/07	11.445	Denton City-Texas	Certificates of Obligation	CO-MGR
07/12/07	44.770	Round Rock City-Texas	GO Refunding Bonds	SR
07/12/07	15.500	Travis Co Housing Finance Corp	Single Family Mortgage Rev Bonds	SOLE
07/12/07	14.915	Round Rock City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
06/28/07	268.630	Harris Co (Cypress-Fairbanks) ISD	Schoolhouse & Refunding Bonds	SR
06/21/07	7.850	Royse City-Texas	Comb Tax & Revenue Cert of Oblig	CO-MGR
06/21/07	4.695	Royse City-Texas	Comb Tax & Revenue Certs of Oblig	CO-MGR
06/19/07	78.615	Travis Co (Del Valle) ISD	Unlimited Tax School Bldg Bonds	CO-MGR
06/19/07	12.235	San Marcos City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
06/19/07	10.725	San Marcos City-Texas	Waterworks & Waste Wtr Rev Bonds	CO-MGR
06/19/07	1.895	San Marcos City-Texas	General Obligation Bonds	CO-MGR
06/07/07	1,006.330	Texas Transportation Commission	General Obligation Bonds	CO-MGR
04/24/07	12.090	Brownsville City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
04/24/07	7.980	Brownsville City-Texas	GO Public Imp & Refunding Bonds	CO-MGR
04/23/07	6.685	North Richland Hills City-Texas	GO Refunding & Improvement Bonds	SOLE
04/23/07	1.285	North Richland Hills City-Texas	Wtrwrks & Swr Sys Certs of Oblig	SOLE
03/28/07	678.480	Dallas City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	CO-MGR
03/27/07	7.680	Wylie City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
03/27/07	4.815	Wylie City-Texas	GO Refunding Bonds	CO-MGR
03/13/07	271.085	Alamo Community College Dt	Limited Tax Bonds	CO-MGR
03/13/07	36.315	Bryan City-Texas	Wtrwrks & Swr Sys Rev Ref & Imp	SR
03/13/07	12.000	Bryan City-Texas	Comb Tax & Rev Certs of Oblig	SR
03/01/07	279.865	Harris Co (Houston) ISD	Limited Tax Refunding Bonds	SR
02/14/07	9.045	Shenandoah City-Texas	Comb Tax & Rev Cert of Oblig	CO-MGR
02/08/07	770.270	Dallas Area Rapid Transit Auth	Sr Lien Sales Tax Rev Ref Bonds	CO-MGR
01/24/07	311.160	San Antonio City-Texas	Water System Revenue Ref Bonds	CO-MGR
01/24/07	15.575	San Marcos City-Texas	Comb Tax & Revenue Certs of Oblig	CO-MGR
01/24/07	6.905	San Marcos City-Texas	Comb Tax & Revenue Certs of Oblig	CO-MGR
01/23/07	66.755	Waco City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
01/23/07	55.505	Midland City-Texas	Tax & Pledge Rev Certs of Oblig	CO-MGR
01/23/07	16.865	Waco City-Texas	GO Refunding Bonds	CO-MGR
01/23/07	4.995	Midland City-Texas	Combination Tax & Rev Ref Bonds	CO-MGR
01/18/07	236.120	Harris Co (Cypress-Fairbanks) ISD	Unlimited Tax Refunding Bonds	CO-MGR
01/12/07	54.020	Lubbock City-Texas	GO Refunding Bonds	SR
01/12/07	25.255	Lubbock City-Texas	Tax & Wtrwrks Rev Certs of Oblig	SR
11/30/06	231.100	Univ of Texas Sys Bd of Regents	Rev Financing Sys Ref Bonds	CO-MGR
11/29/06	202.790	Texas Public Finance Auth (TPFA)	GO Refunding Bonds	CO-MGR
11/17/06	266.960	Harris Co-Texas	Unltd Tax Road & Refunding Bonds	CO-MGR
11/14/06	23.975	Beaumont City-Texas	GO Refunding Bonds	CO-MGR
10/18/06	91.365	Williamson Co-Texas	Refunding Bonds	SR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
10/17/06	16.945	Williamson Co-Texas	Limited Tax Refunding Bonds	SR
10/13/06	84.415	Corpus Christi City-Texas	Utility Sys Rev Ref & Imp Bonds	CO-MGR
10/05/06	1,040.275	Texas Transportation Commission	GO Mobility Fund Bonds	CO-MGR
10/03/06	8.915	Pasadena City-Texas	GO & Refunding Bonds	CO-MGR
09/06/06	27.000	Williamson Co-Texas	Toll Revenue & Ltd Tax Bonds	SR
08/21/06	35.555	Travis Co (Manor) ISD	Unltd Tax School Building Bonds	CO-MGR
08/03/06	243.637	Denton Co (Lewisville) ISD	Unlimited Tax Refunding Bonds	CO-MGR
08/01/06	28.840	Beaumont City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	SR
07/10/06	79.440	Richardson City-Texas	GO Refunding & Imp Bonds	CO-MGR
07/10/06	8.135	Richardson City-Texas	Comb Tax & Rev Cert of Obligation	CO-MGR
07/06/06	30.800	Irving City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	SR
06/22/06	151.580	Williamson Co (Leander) ISD	School Building & Refunding Bonds	CO-MGR
05/02/06	54.160	McKinney City-Texas	GO & Refunding Bonds	CO-MGR
05/02/06	31.510	McKinney City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	CO-MGR
05/02/06	9.855	McKinney City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
04/28/06	28.070	Travis Co (Eanes) ISD	Unlimited Tax Refunding Bonds	CO-MGR
04/20/06	560.885	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	CO-MGR
04/05/06	245.150	Alliance Airport Authority	Special Facilities Rev Ref Bonds	SR
03/23/06	90.758	Travis Co (Lake Travis) ISD	School Building & Refunding Bonds	CO-MGR
03/23/06	15.000	Travis Co Housing Finance Corp	Single Family Mtg Rev & Ref Bonds	SOLE
03/16/06	268.810	Harris Co (Cypress-Fairbanks) ISD	Schoolhouse & Refunding Bonds	SR
02/23/06	290.205	Dallas ISD	Unltd Tax School Building Bonds	CO-MGR
02/22/06	310.305	Dallas & Fort Worth Cities-Texas	Joint Revenue Refunding Bonds	CO-MGR
02/14/06	37.745	El Paso City-Texas	Water & Sewer Revenue Ref Bonds	CO-MGR
02/07/06	34.685	Sugar Land City-Texas	GO and Refunding Bonds	SR
01/26/06	38.310	Galveston City-Texas	Wtrwrks & Swr Sys Rev Ref Bonds	CO-MGR
01/24/06	46.180	Williamson Co-Texas	Comb Tax & Rev Cert of Obligation	CO-MGR
01/24/06	28.970	Midland City-Texas	GO Refunding Bonds	CO-MGR
01/24/06	13.160	Midland City-Texas	General Obligation Ref Bonds	CO-MGR
01/17/06	95.700	Williamson Co (Georgetown) ISD	Unltd Tax School Building Bonds	CO-MGR
12/13/05	53.465	Williamson Co-Texas	Unlimited Tax Road Bonds	CO-MGR
12/13/05	20.195	Bryan City-Texas	GO Refunding Bonds	SR
12/13/05	15.295	Bryan City-Texas	Comb Tax & Rev Certs of Oblig	SR
12/13/05	6.480	Bryan City-Texas	Waterworks & Sewer Sys Rev Bonds	SR
12/08/05	2.770	Cedar Park City-Texas	Tax & Rev Certs of Obligation	SOLE
11/17/05	63.100	Austin City-Texas	Water & Wastewater Rev Ref Bonds	SOLE
11/10/05	52.610	Irving City-Texas	GO Refunding & Improvement Bonds	CO-MGR
11/10/05	1.590	Irving City-Texas	Tax Notes	CO-MGR
09/29/05	197.335	San Antonio City-Texas	Electric & Gas Sys Rev Ref Bonds	CO-MGR
09/20/05	207.765	Harris Co-Texas	Toll Road Sr Lien Rev Ref Bonds	CO-MGR
08/31/05	164.265	Arlington City-Texas	Special Oblig Special Tax Bonds	CO-MGR
08/16/05	29.350	Pasadena City-Texas	GO Refunding Bonds	SR
08/16/05	17.400	Keller City-Texas	Cmb Tx&TxInc Reinvst Zn RvRf Bn	SR
08/16/05	13.370	Keller City-Texas	GO Refunding Bonds	SR
08/04/05	163.725	Brownsville City-Texas	Util Sys Rev Ref Imp Bonds	CO-MGR
08/04/05	56.855	Brownsville City-Texas	Utility Sys Rev Imp Ref Bonds	CO-MGR
07/28/05	34.965	Cedar Park City-Texas	GO Refunding & Imp Bonds	CO-MGR
07/28/05	28.725	Cedar Park City-Texas	Utlity Sys Rev & Ref Bonds	CO-MGR

Source: Thomson Reuters Date: 3/3/2016

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
07/18/05	10.350	Lewisville City-Texas	Comb Cont Rev&Sp As Cap Imp Bonds	SOLE
07/15/05	113.645	Arlington City-Texas	Special Oblig Special Tax Bonds	CO-MGR
07/15/05	20.080	Arlington City-Texas	Special Oblig Special Tax Bonds	CO-MGR
06/22/05	11.705	Webster City-Texas	GO Ref Bonds& Cert of Partcpation	SR
06/16/05	155.830	Dallas Co (Garland) ISD	School Bldg & Refunding Bonds	CO-MGR
06/14/05	86.485	Corpus Christi City-Texas	Gen Improvement & Ref Bonds	CO-MGR
06/02/05	900.000	Texas Transportation Commission	GO Mobility Fund Bonds	CO-MGR
05/24/05	103.335	Houston City-Texas	Public Imp Ref & Certs of Oblig	CO-MGR
05/24/05	29.625	Bedford City-Texas	GO Refunding & GO Bonds	SR
05/24/05	7.770	Houston City-Texas	Public Imp Refunding Bonds	CO-MGR
05/13/05	169.880	Williamson Co (Round Rock) ISD	Unltd Tax Refunding Bonds	CO-MGR
05/12/05	36.720	Austin City-Texas	Refunding Bonds	CO-MGR
04/21/05	107.952	Williamson Co (Leander) ISD	Ultd Tax School Bldg& Ref Bonds	CO-MGR
04/21/05	28.670	Travis Co (Pflugerville) ISD	Unlimited Tax Sch Building Bonds	CO-MGR
04/18/05	19.600	Pasadena City-Texas	GO Refunding Bonds	CO-MGR
04/13/05	156.850	Dallas City-Texas	GO Refunding Bonds	CO-MGR
04/12/05	17.660	Beaumont City-Texas	Waterworks & Sewer Rev Ref Bonds	CO-MGR
04/11/05	33.200	Richardson City-Texas	GO Refunding & Imp Bonds	CO-MGR
04/11/05	7.735	Richardson City-Texas	Comb Tax & Rev Certs of Ob	CO-MGR
04/08/05	79.195	Travis Co (Pflugerville) ISD	Unltd Tax Refunding Bonds	CO-MGR
03/22/05	36.515	El Paso City-Texas	Water & Sewer Revenue Bonds	CO-MGR
03/15/05	14.260	Grand Prairie City-Texas	GO Ref & Imp Bonds	CO-MGR
03/11/05	124.625	Univ of Texas Sys Bd of Regents	Permanent University Fund Bonds	CO-MGR
03/08/05	84.415	Travis Co-Texas	Limited Tax Refunding Bonds	CO-MGR
03/08/05	73.075	Fort Worth City-Texas	Water & Sewer Rev Ref Bonds	CO-MGR
03/03/05	227.370	North Texas Tollway Auth (NTTA)	Revenue Bonds	CO-MGR
03/02/05	68.000	Arlington City-Texas	Permanent Improvement Ref Bonds	CO-MGR
03/01/05	45.660	El Paso City-Texas	Water and Sewer Revenue Bonds	CO-MGR
02/21/05	8.795	Williamson Co (Georgetown) ISD	Unlimited Tax Refunding Bonds	SR
02/10/05	14.965	Burleson City-Texas	Com Tax & Revenue Cert of Oblig	CO-MGR
02/10/05	3.970	Burleson City-Texas	General Obligation Bonds	CO-MGR
02/08/05	17.345	Coppell City-Texas	GO Refunding Bonds	SR
01/27/05	145.345	Austin City-Texas	Public Improvement Ref Bonds	CO-MGR
01/27/05	19.915	Round Rock City-Texas	GO Refunding Bonds	CO-MGR
01/19/05	399.348	Dallas City-Texas	GO Pension Bonds	CO-MGR
12/07/04	9.410	Denton City-Texas	GO Refunding Bonds	CO-MGR
11/30/04	14.360	El Paso City-Texas	Water & Sewer Rev Ref Bonds	CO-MGR
11/08/04	21.375	San Marcos City-Texas	Wtr Wstwtr Sys Rev Ref Imp Bonds	CO-MGR
11/08/04	6.355	San Marcos City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
11/04/04	352.170	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	CO-MGR
11/02/04	20.640	Beaumont City-Texas	GO Refunding Bonds	CO-MGR
10/28/04	400.000	Dallas ISD	School Building & Ref Bonds	CO-MGR
10/27/04	192.730	Texas Public Finance Auth (TPFA)	Revenue Refunding Bonds	CO-MGR
09/28/04	46.230	Fort Worth City-Texas	General Purpose Refunding Bonds	CO-MGR
09/20/04	34.984	Williamson Co (Georgetown) ISD	GO Refunding Bonds	CO-MGR
09/09/04	22.587	Somerset City-Texas	GO Refunding Bonds	CO-MGR
09/07/04	24.850	Denton City-Texas	Utility System Rev Ref Bonds	CO-MGR
08/19/04	40.564	Williamson Co (Leander) ISD	School Bldg and Refunding Bonds	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
08/19/04	14.090	Travis Co (Pflugerville) ISD	Unltd Tax Refunding Bonds	SR
08/16/04	19.315	The Colony City-Texas	Water & Sewer Sys Rev Bonds	CO-MGR
07/22/04	31.945	Round Rock City-Texas	GO & Refunding Bonds	CO-MGR
07/15/04	25.915	Travis Co (Pflugerville) ISD	School Building Bonds	SR
07/13/04	34.324	Travis Co (Manor) ISD	School Building & Refunding Bonds	CO-MGR
07/13/04	14.730	Bryan City-Texas	Tax & Rev Certs of Obligation	CO-MGR
07/13/04	7.975	Bryan City-Texas	Water and Sewer Revenue Bonds	CO-MGR
07/06/04	33.695	Frisco City-Texas	GO Refunding & Improvement Bonds	CO-MGR
07/06/04	31.795	Frisco City-Texas	Comb Tax & Rev Cert of Obligation	CO-MGR
06/21/04	25.000	Lewisville City-Texas	Rev & Spec Ass Ref & Cap Imp	SOLE
06/16/04	176.800	Harris Co-Texas	Revenue Refunding Bonds	CO-MGR
06/15/04	83.230	Hays Co (San Marcos) CISD	School Building Bonds	CO-MGR
06/01/04	3.025	Southlake City-Texas	Wtr & Swr Sys Rev Cert of Oblig	CO-MGR
06/01/04	2.965	Southlake City-Texas	Wtr & Swr Sys Rev Cert of Oblig	CO-MGR
05/19/04	1,652.220	Houston City-Texas	Comb Utility Sys Rev Ref Bonds	CO-MGR
05/18/04	30.275	Southlake City-Texas	GO Refunding Bonds	CO-MGR
05/12/04	377.940	Houston City-Texas	Public Improvement Ref Bonds	CO-MGR
04/19/04	10.000	Murphy City-Texas	Water and Sewer Certs of Oblig	SR
04/13/04	1.600	Grand Saline City-Texas	Comb Tax & Rev Certs of Oblig	SOLE
04/01/04	24.565	Corpus Christi Business Job Dev	Sales Tax Revenue Bonds	SR
03/10/04	200.405	Galveston Co (Clear Creek) ISD	Schoolhouse & Ref Bonds	CO-MGR
03/04/04	31.595	Irving City-Texas	GO Refunding & Improvement Bonds	CO-MGR
03/04/04	4.050	Irving City-Texas	Tax Notes	CO-MGR
03/02/04	7.110	Grand Prairie City-Texas	Revenue Ref and Imp Bonds	CO-MGR
03/02/04	4.855	Grand Prairie City-Texas	General Obligation Bonds	CO-MGR
02/11/04	189.743	Bexar Co (North East) ISD	Unlimited Tax Refunding Bonds	CO-MGR
01/29/04	300.000	Dallas ISD	Unltd Tax School Bldg Bonds	CO-MGR
01/28/04	137.915	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	CO-MGR
01/26/04	35.360	Travis Co (Lake Travis) ISD	Unltd Tax School Building Bonds	CO-MGR
12/17/03	54.250	Austin City-Texas	Airport Sys Lein Rev Ref Bonds	CO-MGR
11/21/03	348.000	Harris Co-Texas	Refunding Bonds	CO-MGR
11/14/03	42.700	Fort Worth City-Texas	GO Refunding Bonds	CO-MGR
10/16/03	6.295	Lago Vista City-Texas	Combo Tax Rev Cert of Olibg	SOLE
09/15/03	11.295	Hays Co (San Marcos) CISD	Refunding Bonds	CO-MGR
09/10/03	520.485	Texas Public Finance Auth (TPFA)	Unemployment Comp Rev Bonds	CO-MGR
08/19/03	5.875	Grand Prairie City-Texas	GO Refunding Bonds	CO-MGR
08/19/03	4.960	Grand Prairie City-Texas	Cert of Obligation	CO-MGR
08/19/03	4.780	Grand Prairie City-Texas	Cert of Obligation	CO-MGR
08/19/03	1.030	Grand Prairie City-Texas	Cert of Obligation	CO-MGR
08/14/03	60.050	Somerset City-Texas	Unltd Tax School Building Bonds	CO-MGR
08/04/03	11.145	Farmers Branch City-Texas	GO Refunding Bonds	SOLE
07/24/03	40.135	Lubbock City-Texas	Drain Util Sys Surplus Certs Ob	CO-MGR
07/24/03	11.885	Lubbock City-Texas	General Obligation Bonds	CO-MGR
07/24/03	9.765	Lubbock City-Texas	Tax & Wtrwks Surplus Rev Certs Ob	CO-MGR
07/24/03	3.795	Lubbock City-Texas	Tax Increment Certs of Oblig	CO-MGR
07/24/03	3.590	Lubbock City-Texas	Tax & Solid Wst Surplus Certs Ob	CO-MGR
07/24/03	0.680	Lubbock City-Texas	Tax & Wtrwks Surplus Rev Certs Ob	CO-MGR
07/14/03	4.190	Jasper City-Texas	General Obligation Bonds	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
06/27/03	41.930	Arlington City-Texas	Permanent Improv Refunding Bonds	CO-MGR
06/04/03	182.485	Texas Public Finance Auth (TPFA)	GO & Refunding Bonds	CO-MGR
06/03/03	93.550	Frisco City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
06/03/03	15.035	Frisco City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
05/12/03	13.067	Texarkana City-Texas	General Obligation Bonds	SR
05/07/03	225.000	North Texas Tollway Auth (NTTA)	Revenue Bonds	CO-MGR
04/30/03	1,457.700	Dallas-Fort Worth Intl Airport	Joint Revenue Bonds	CO-MGR
04/25/03	234.275	Texas A&M University System	Revenue Financing System Bonds	CO-MGR
04/24/03	6.915	Cedar Park City-Texas	GO Refunding Bonds	SR
03/26/03	254.985	Lower Colorado River Authority (LCRA)	Transmission Contr Ref Rev Bonds	CO-MGR
03/11/03	12.610	Grand Prairie City-Texas	Water & Wstwtr Rev Ref Imp Bonds	CO-MGR
03/11/03	11.025	Grand Prairie City-Texas	GO Ref & Improv Bonds	CO-MGR
02/25/03	20.000	Travis Co (Pflugerville) ISD	Unltd Tax School Building Bonds	SR
02/07/03	182.100	Austin City-Texas	Electric Rev Refunding Bonds	CO-MGR
01/09/03	481.060	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	CO-MGR
01/08/03	82.790	Dallas City-Texas	GO Refunding Bonds	CO-MGR
01/07/03	142.209	Texas Public Property Fin Corp	GO & Refunding Bonds	CO-MGR
11/21/02	247.285	Houston City-Texas	Public Improvement Ref Bonds	CO-MGR
10/01/02	195.665	Harris Co-Texas	Permanent Improvement & Ref Bonds	CO-MGR
09/03/02	6.070	Grapevine City-Texas	Waterworks & Swr Rev Ref Bonds	SOLE
08/13/02	13.590	San Marcos City-Texas	Electric Util Sys Rev Ref Bonds	CO-MGR
08/07/02	1,149.994	Texas Turnpike Authority	First Tier Revenue Bonds	CO-MGR
08/07/02	179.350	Dallas City-Texas	Water and Sewer Revenue Bonds	CO-MGR
08/05/02	18.150	Lewisville City-Texas	Cont Rev & Assessment Ref Bonds	SOLE
07/25/02	63.548	Williamson Co (Leander) ISD	Unltd Tax School Bldg & Ref Bonds	CO-MGR
07/24/02	274.455	Houston City-Texas	Airport System Sub Lien Rev Bonds	CO-MGR
07/24/02	200.050	Houston City-Texas	Airport System Sub Lien Rev Bonds	CO-MGR
07/19/02	139.695	Austin City-Texas	Wtr Wstwtr Sys Rev Ref Bonds	CO-MGR
07/18/02	172.880	Austin City-Texas	Elect Utility Sys Rev Ref Bonds	CO-MGR
07/11/02	59.906	Somerset City-Texas	Unltd Tax Ref Bonds	SR
06/10/02	3.330	Pilot Point City-Texas	GO Refunding & Improv Bonds	SOLE
05/14/02	100.000	Travis Co-Texas	Unltd Tax Road Bonds	CO-MGR
05/13/02	28.140	West University Place City-Texas	Perm Improvement & Ref Bonds	CO-MGR
05/09/02	45.465	Round Rock City-Texas	GO & Refunding Bonds	CO-MGR
04/16/02	29.785	Carrollton City-Texas	GO Improvement & Refunding Bonds	CO-MGR
04/16/02	19.380	Carrollton City-Texas	Wtr & Swr Sys Rev Ref & Imp Bonds	CO-MGR
04/11/02	20.350	Cedar Park City-Texas	General Obligation Bonds	CO-MGR
04/11/02	9.100	Cedar Park City-Texas	Utility System Revenue Bonds	CO-MGR
03/21/02	335.594	Dallas ISD	School Building & Refunding Bonds	CO-MGR
03/21/02	10.185	Travis Co (Pflugerville) ISD	Unltd Tax Refunding Bonds	SR
02/28/02	137.820	San Antonio City-Texas	Water System Revenue Bonds	CO-MGR
02/26/02	10.865	Bedford City-Texas	GO Refunding & Improv Bonds	CO-MGR
01/29/02	25.335	Fort Worth City-Texas	Comb Tax & Rev Cert of Oblig	CO-MGR
01/29/02	23.005	Fort Worth City-Texas	General Purpose Refunding Bonds	CO-MGR
01/24/02	369.715	Texas Public Property Fin Corp	GO Refunding Bonds	CO-MGR
12/14/01	126.745	Dallas Co (Duncanville) ISD	Unltd Tax School Bldg & Ref Bonds	SR
12/13/01	650.000	Dallas-Fort Worth Intl Airport	Joint Revenue Imp and Ref Bonds	CO-MGR
12/13/01	18.620	Baytown City-Texas	GO & Refunding Bonds	CO-MGR

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
12/13/01	5.415	Baytown City-Texas	Certificates of Obligation	CO-MGR
12/13/01	3.020	Baytown City-Texas	Marina Improvement Ref Bonds	CO-MGR
12/06/01	59.560	Travis Co (Pflugerville) ISD	School Building Bonds	CO-MGR
11/27/01	60.480	Bryan City-Texas	Wtrwks & Swr Sys Rev Ref Bonds	CO-MGR
11/27/01	7.540	Bryan City-Texas	Electric Sys Rev Refunding Bonds	CO-MGR
11/16/01	98.440	Houston City-Texas	Wtr & Swr Jun Lein Rev Ref Bonds	CO-MGR
11/09/01	358.875	Lower Colorado River Authority (LCRA)	Transmission Contract Ref Bonds	CO-MGR
11/08/01	142.590	Harris Co (Cypress-Fairbanks) ISD	Unltd Tax Ref & Schoolhouse Bonds	CO-MGR
11/07/01	163.600	Lower Colorado River Authority (LCRA)	Refunding & Improv Rev Bonds	CO-MGR
09/13/01	0.700	Lago Vista City-Texas	General Obligation Bonds	SOLE
09/10/01	14.000	Lewisville City-Texas	Comb Contract Rev & Spec Asses	SOLE
09/06/01	3.875	Roanoke City-Texas	Comb Tax & Rev Cert of Oblig	SOLE
09/06/01	2.295	Roanoke City-Texas	GO Refunding Bonds	SOLE
07/26/01	400.000	Dallas Area Rapid Transit Auth	Senior Lien Sales Tax Rev Bonds	CO-MGR
07/17/01	232.440	Houston City-Texas	Water & Sewer Jr Lien Ref Bonds	CO-MGR
06/15/01	59.835	Arlington City-Texas	Permanent Improv Refunding Bonds	CO-MGR
06/14/01	123.445	Austin City-Texas	Public Impov Refunding Bonds	CO-MGR
06/11/01	151.298	Harris Co (Spring Branch) ISD	Ltd Tax Schoolhouse & Ref Bonds	SR
05/01/01	95.000	Williamson Co-Texas	Unltd Tax Road Bonds	CO-MGR
05/01/01	19.700	Williamson Co-Texas	GO & Refunding Bonds	CO-MGR
04/04/01	318.921	Texas Public Property Fin Corp	GO Refunding Bonds	CO-MGR
03/29/01	13.595	Travis Co Housing Finance Corp	Single Family Mtg Rev & Ref Bonds	SOLE
03/20/01	6.745	Grapevine City-Texas	Water and Sewer Revenue Bonds	SR
03/19/01	1.155	Murphy City-Texas	GO Refunding Bonds	SOLE
03/08/01	139.450	Bexar Co (Northside) ISD	Unltd Tax School Bldg Ref Bonds	CO-MGR
02/27/01	17.260	Fort Worth City-Texas	General Purpose Imp Ref Bonds	CO-MGR
02/27/01	5.125	Fort Worth City-Texas	Comb Tax & Rev Cert of Oblig	CO-MGR
02/20/01	20.000	Williamson Co (Georgetown) ISD	Unltd Tax School Bldg & Ref Bonds	SR
02/15/01	74.180	Williamson Co (Round Rock) ISD	Unltd Tax School Building Bonds	CO-MGR
02/08/01	2.770	Lubbock City-Texas	Tax & Solid Waste Sys Rev Cert	SR
12/20/00	10.500	Killeen City-Texas	Comb Tax & Hotel Occupancy Cert	SR
11/13/00	83.962	Tarrant Co (Keller) ISD	Unltd Tax School Bldg & Ref Bonds	SR
11/09/00	80.902	Somerset City-Texas	Unltd Tax School Bldg & Ref Bonds	SR
10/19/00	32.000	Travis Co (Pflugerville) ISD	Unlimited Tax School Bldg Bonds	SR
10/10/00	1.270	Robinson City-Texas	Waterworks System Rev Ref Bonds	SOLE
09/29/00	17.000	Bryan City-Texas	Comb Tax & Surp Util Sys Rev Cos	SR
09/28/00	3.450	Cedar Park City-Texas	Sales Tax Revenue Bonds	SR
09/28/00	3.400	Cedar Park City-Texas	Comb Tax & Rev Certs of Partic	SR
09/19/00	42.520	Corpus Christi City-Texas	Utility Sys Revenue Ref Bonds	CO-MGR
09/19/00	0.845	Aubrey City-Texas	Tax & Wtr & Sewer Sys Rev Cert	SOLE
09/13/00	114.915	Texas Dept of Hsg & Comm Affairs	Residential Mtg Rev Bonds	CO-MGR
08/29/00	60.000	Hidalgo Co (Edinburg) CISD	School Building Bonds	CO-MGR
07/25/00	100.080	Harris Co Hospital Dt	Refunding Revenue Bonds	CO-MGR
05/30/00	2.015	Travis Co Housing Finance Corp	Single Family Mtg Rev & Ref Bonds	SOLE
05/25/00	10.750	Round Rock City-Texas	Comb Tax & Rev Cert of Oblig	SOLE
05/22/00	1.730	Crockett-Texas	GO Refunding Bonds	SOLE
05/03/00	1.670	Forney City-Texas	Tax & Wtrwks & Swr Rev Certs	SOLE
05/03/00	0.720	Forney City-Texas	Tax & Wtrwks & Swr Rev Cert	SOLE

Sale Date	Par Amount ($mils)	Issuer	Issue Description	RJ Role
04/18/00	0.605	Lockhart City-Texas	Tax & Airport Surp Rev Cert Oblig	SOLE
04/13/00	72.689	Williamson Co (Leander) ISD	Unltd Tax School Bldg & Ref Bonds	CO-MGR
04/11/00	39.235	El Paso City-Texas	Tax & Rev Certs of Obligation	CO-MGR
04/11/00	4.195	El Paso City-Texas	General Obligation Bonds	CO-MGR
04/06/00	138.195	Galveston Co (Clear Creek) ISD	Unlimited Tax School Ref Bonds	CO-MGR
03/29/00	1.700	Sherman City-Texas	Tax & Hotel Tax Certs of Oblig	SOLE
03/16/00	75.000	Gregg Co Health Facs Dev Corp	Hospital Revenue Bonds	SR
03/13/00	29.640	Richardson City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
03/13/00	9.630	Richardson City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
03/13/00	8.600	Richardson City-Texas	Comb Tax & Rev Certs of Oblig	CO-MGR
03/08/00	335.000	Dallas-Fort Worth Region Airport	Joint Revenue Bonds	CO-MGR
02/08/00	0.830	Grand Saline City-Texas	Tax, Wtr & Swr Sys Rev Ref Bonds	SOLE
02/08/00	0.450	Grand Saline City-Texas	Wtr & Swr Sys Rev Certs of Oblig	SOLE
02/03/00	51.121	Denton Co (Lewisville) ISD	Unltd Tax Sch Bldg & Ref Bonds	CO-MGR
01/17/00	1.600	Krum City-Texas	Comb Tax & Rev Certs of Oblig	SOLE

APPENDIX D

Raymond James Financing Team Resumes

D. Part IV – Personnel:

Include names, titles, and qualifications of key professional personnel who will be assigned to this contract. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

Resumes highlighting the experience and expertise of each of the professionals assigned to the City's engagement are provided below:

Banking

Thomas K. Oppenheim, Senior Managing Director, Head of Southwest Public Finance – Mr. Oppenheim joined the Firm's Dallas office in 1995 to commence the Firm's Southwest municipal finance efforts. Mr. Oppenheim has extensive experience (nearly 31 years of municipal banking experience, of which 21 years are with the Firm) with a variety of municipal issuers. **Mr. Oppenheim has served as a lead or support banker representing the Firm on over $170 billion in negotiated transactions for issuers throughout the State of Texas, including the City of Austin.** *Mr. Oppenheim is a graduate of Dartmouth College with an A.B. degree in Economics and a graduate of the Massachusetts Institute of Technology ("MIT") with a Master of Science degree. Mr. Oppenheim is a member of Raymond James' Public Finance Executive Committee. Mr. Oppenheim served on The Board of the North Texas Commission ("NTC") as Treasurer and served as Chairman of the NTC's Finance & Audit Committee. He has served on the Board of the Municipal Advisory Council of Texas and was a past Co-Chair of the Texas Bond Buyer Conference. Mr. Oppenheim currently serves on the Dartmouth National Alumni Council and was part of the Super Bowl XLV Host Committee and Finance Subcommittee. He has NASD licenses in Series 7, Series 63, Series 53 (Municipal Securities Principal) and Series 79 (Investment Banking Representative).*

Deborah S. Jones, Managing Director - Ms. Jones joined the Firm in 2005 to head the Houston based Public Finance operation, with an additional focus on the Lubbock, San Antonio, and South Texas markets. She has more than 31 years of experience with municipal transactions ranging from Texas higher education finance, school district finance, State agencies, general obligation debt, revenue bonds secured by utility fees, sales taxes, hotel occupancy taxes, toll revenues and parking fees. Ms. Jones is a highly seasoned senior investment banker experienced with various municipal issuers throughout the State of Texas. **Ms. Jones has served as lead or support banker representing the Firm on over $69 billion in negotiated transactions for issuers throughout the State of Texas, including the City of Austin.** *Ms. Jones is a graduate of Valparaiso University with a Bachelor of Science degree in Business Administration, with a concentration in Finance. Ms. Jones is a founding Board Member of the Texas Chapter of Women in Public Finance. She is a past Board Member of the Greater Houston Convention and Visitors Bureau as well as a past member of the Board of Directors for The Municipal Advisory Council of Texas. She has NASD licenses in Series 7, Series 63 and Series 79 (Investment Banking Representative).*

Nicholas J. Papan, Managing Director, Chief Financial Analyst – Quantitative Specialist - Mr. Papan directs the Firm's quantitative and technical efforts in Texas and the Southwest. Mr. Papan has over 27 years of experience in the industry and is considered a leader in the field of quantitative analysis, having developed several innovative capital planning computer models for municipal issuers. Mr. Papan is a leader in innovative municipal finance, has the technical knowledge to design solutions to unique situations, as well as the experience to ensure each financing is completed successfully. **Mr. Papan has served as chief financial analyst representing the Firm on over $170 billion in negotiated transactions for issuers throughout the State of Texas, including the City of Austin.** *Mr. Papan received a Master of Business Administration degree with honors from The University of Texas Graduate School of Business in Austin. He holds the NASD license in Series 7, Series 63 and Series 79 (Investment Banking Representative).*

Ashley Lundberg, Vice President – Ms. Lundberg joined the Firm in 2010, and is primarily responsible for performing quantitative analyses, providing support for the execution of senior and co-managed assignments, and the Texas Public Finance bankers in coverage of issuers. Ms. Lundberg provides transaction and analytical support on a variety of engagements, and conducts analyses and provides financing

alternatives for many issuers throughout the State of Texas. Prior to joining the firm, she was a trader with Balyasny Asset Management in Chicago specializing in trading Metals & Mining Equities using quantitative technical strategies. **Ms. Lundberg has served as a support banker representing the Firm on more than $19 billion in negotiated transactions for issuers throughout the State of Texas, including the City of Austin.** *Ms. Lundberg received Bachelor of Science degrees in Finance and Accounting from Syracuse University. She holds NASD licenses in Series 7, Series 63 and Series 79 (Investment Banking Representative).*

Underwriting

Buddy Kempf, Managing Director, Head of Texas Municipal Underwriting and Trading - Mr. Kempf is responsible for overseeing and managing Raymond James' Texas municipal underwriting, trading, and sales operation located in Dallas. As the lead underwriter in Texas, he brings more than 19 years of municipal bond experience to serve our Texas clientele. **Mr. Kempf is nationally recognized as a leading market maker for Texas credits having underwritten over $170 billion in negotiated transactions for a variety of Texas issuers including the City of Austin, of which over $30 billion represents senior managed business.** *Mr. Kempf is a Magna Cum Laude with a B.B.A. in Finance from the University of Incarnate Word in San Antonio. Mr. Kempf has served on the Board of The Municipal Advisory Council of Texas and is a member of the Dallas Bond Club. He holds NASD licenses in Series 7, Series 53 (Municipal Securities Principal), Series 63, and Series 79 (Investment Banking Representative).*

Casy O'Brien, Managing Director, Head of National Underwriting/Taxable Underwriting - Mr. O'Brien is a Managing Director and is the Manager of New Issue Municipal Underwriting in Raymond James' Fixed Income Municipal Department. As the Head of Underwriting, he brings over 26 years of municipal bond experience to our efforts to serve our diverse clientele. Prior to his move to the Firm, Mr. O'Brien was with the Royal Bank of Canada where he worked primarily with New Issues but also Secondary Trading. *Mr. O'Brien is a member of the Chicago, Minneapolis, and Denver Bond clubs. Mr. O'Brien has a Bachelor of Science degree in economics from the University of Minnesota. He holds NASD licenses in Series 7, Series 53 (Municipal Securities Principal), Series 63, and Series 79 (Investment Banking Representative).*

Municipal Institutional Sales

Chris Boudreau, Managing Director, Co-Head of Dedicated Municipal Group - Mr. Boudreau is Managing Director of the Dedicated Municipal Group of the Firm's Fixed Income Department, a group of 24 institutional sales professionals dedicated to selling municipal bonds exclusively. He is responsible for the sales management and production arm for this business unit working directly with large institutional municipal accounts. Before Raymond James, Mr. Boudreau worked at Bear Stearns & Company, Inc. where he was a Managing Director in the Municipal Trading and Sales group. He has over 28 years of municipal institutional account experience and has spent over half of his municipal career in a combined management and production role. Mr. Boudreau has broad experience with selling municipal bonds, and specifically Texas ISD bonds, to 1st Tier and middle market municipal bond funds, Investment Advisors, Insurance Companies, and structured participants in municipal bond investments, among others. *Mr. Boudreau graduated from Princeton University with an A.B. in Economics. He holds NASD licenses in Series 7, Series 8, Series 53 (Municipal Securities Principal), and Series 63.*

Ted Hynes, Managing Director, Co-Head of Dedicated Municipal Group - Mr. Hynes is the National Sales Manager of the Dedicated Municipal Group and is located in the New York office. He joined Raymond James in 2008 as a Vice President of Municipal Institutional Sales based in New York. He has over 30 years in the bond business and his responsibilities include managing distribution of municipal products, cross marketing to taxable sales force and collaborating with Public Finance. Mr. Hynes also covers Tier 1 and Tier 2 institutional accounts for both taxable and tax-exempt municipals. He was previously with UBS Investment Bank, where for nine years he was a Managing Director and the Institutional Sales Manager. Prior to UBS, he was a Managing Director and regional sales manager at Piper Jaffrey in San Francisco. Mr. Hynes also worked with Sutro, Smith Mitchell Investment Group, Pacific Securities and Salomon Brothers in New York

City. He has worked in sales, trading and underwriting throughout his career. *Mr. Hynes graduated from Manhattanville College with a Bachelor of Arts. He holds NASD licenses in Series 7, Series 8, and Series 63.*

APPENDIX E

Refunding Schedules

City of Austin, Texas

Water and Wastewater System Revenue Refunding Analysis

Issue Description: **Advance Refunding of Various Outstanding Water and Wastewater System Revenue Bonds**

- Assumed Delivery: 06/01/2016
- Assumes Current Interest Rates
- Assumes "Aa2/AA/AA-" Underlying Ratings

Estimated Refunding Results & Rate Movement Sensitivity			
	Current Rates 3/4/2016	Rate Decrease of 50 bps	Rate Increase of 50 bps
Total Savings	$24,434,035	$35,953,089	$13,270,876
PV Savings	$18,192,850	$28,765,058	$8,656,255
% PV Savings	7.53%	11.90%	3.58%
Refunded Par	$241,630,000	$241,630,000	$241,630,000
Negative Arbitrage	($10,942,880)	($10,947,600)	($10,949,098)
"All-In" TIC	3.00%	2.50%	3.50%

Bonds to be Refunded	Principal Refunded	Maturities Refunded	Refunded Bonds Call Date	PV Savings	Negative Arbitrage
Water & Wastewater System Revenue Refunding Bonds, Series 2009A	$130,340,000	2020-2039	11/15/19 @ 100%	$8,373,651	($6,813,059)
Water & Wastewater System Revenue Refunding Bonds, Series 2009	$111,290,000	2020-2029	11/15/19 @ 100%	$9,819,199	($4,129,822)

City of Austin, Texas

Water and Wastewater System Revenue Refunding Analysis

Assumed Delivery Date: 6/1/2016

Debt Service Savings Report - Current Interest Rates

Fiscal Year Ending 9/30	Total Bonds to be Refunded			Series 2016 Refunding Bonds				Debt Service Savings
	Principal	Interest	Total	Principal	Yield	Interest	Total	
2017		11,895,850	11,895,850			$10,866,578	$10,866,578	$1,029,272
2018		11,895,850	11,895,850			11,372,000	11,372,000	523,850
2019		11,895,850	11,895,850			11,372,000	11,372,000	523,850
2020		11,895,850	11,895,850			11,372,000	11,372,000	523,850
2021	$13,850,000	11,549,600	25,399,600	$13,270,000	1.210%	11,040,250	24,310,250	1,089,350
2022	14,550,000	10,846,188	25,396,188	13,945,000	1.430%	10,359,875	24,304,875	1,091,313
2023	15,235,000	10,160,000	25,395,000	14,660,000	1.630%	9,644,750	24,304,750	1,090,250
2024	15,935,000	9,457,669	25,392,669	15,410,000	1.850%	8,893,000	24,303,000	1,089,669
2025	16,705,000	8,692,878	25,397,878	16,205,000	2.020%	8,102,625	24,307,625	1,090,253
2026	17,535,000	7,863,019	25,398,019	17,035,000	2.180%	7,271,625	24,306,625	1,091,394
2027	18,430,000	6,963,894	25,393,894	17,905,000	2.310%	6,398,125	24,303,125	1,090,769
2028	19,375,000	6,018,769	25,393,769	18,820,000	2.420%	5,480,000	24,300,000	1,093,769
2029	20,380,000	5,016,697	25,396,697	19,790,000	2.520%	4,514,750	24,304,750	1,091,947
2030	21,435,000	3,954,500	25,389,500	20,795,000	2.590%	3,500,125	24,295,125	1,094,375
2031	1,485,000	3,372,875	4,857,875	805,000	2.640%	2,960,125	3,765,125	1,092,750
2032	1,555,000	3,296,875	4,851,875	840,000	2.720%	2,919,000	3,759,000	1,092,875
2033	1,635,000	3,217,125	4,852,125	885,000	2.810%	2,875,875	3,760,875	1,091,250
2034	1,720,000	3,133,250	4,853,250	930,000	2.860%	2,830,500	3,760,500	1,092,750
2035	1,805,000	3,045,125	4,850,125	975,000	2.910%	2,782,875	3,757,875	1,092,250
2036	11,000,000	2,725,000	13,725,000	10,130,000	2.960%	2,505,250	12,635,250	1,089,750
2037	11,500,000	2,162,500	13,662,500	10,585,000	3.010%	1,987,375	12,572,375	1,090,125
2038	12,000,000	1,575,000	13,575,000	11,035,000	3.060%	1,446,875	12,481,875	1,093,125
2039	12,500,000	962,500	13,462,500	11,485,000	3.110%	883,875	12,368,875	1,093,625
2040	13,000,000	325,000	13,325,000	11,935,000	3.150%	298,375	12,233,375	1,091,625
Totals	**$241,630,000**	**$151,921,863**	**$393,551,863**	**$227,440,000**		**$141,677,828**	**$369,117,828**	**$24,434,035**

Present Value Debt Service Savings:	$ 18,192,850
PV Savings as a % of Refunded Principal:	7.53%

Negative Arbitrage in Escrow:	$ (10,942,880)

Bonds to be Refunded

	Principal Refunded	Maturities Refunded	Refunded Bonds Call Date
Water & Wastewater System Revenue Refunding Bonds, Series 2009A	$130,340,000	2020-2039	11/15/19 @ 100%
Water & Wastewater System Revenue Refunding Bonds, Series 2009	$111,290,000	2020-2029	11/15/19 @ 100%

Analysis Dated: 03/04/16

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City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

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SOURCES AND USES OF FUNDS

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Sources:	
Bond Proceeds:	
Par Amount	227,440,000.00
Premium	47,330,019.25
	274,770,019.25

Uses:	
Refunding Escrow Deposits:	
Cash Deposit	138.68
Open Market Purchases	272,945,910.39
	272,946,049.07
Delivery Date Expenses:	
Cost of Issuance	796,040.00
Underwriter's Discount	1,023,480.00
	1,819,520.00
Other Uses of Funds:	
Additional Proceeds	4,450.18
	274,770,019.25

SUMMARY OF REFUNDING RESULTS

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Dated Date	06/01/2016
Delivery Date	06/01/2016
Arbitrage yield	2.430516%
Escrow yield	1.151308%
Value of Negative Arbitrage	10,942,842.98
Bond Par Amount	227,440,000.00
True Interest Cost	2.967754%
Net Interest Cost	3.365780%
All-In TIC	2.998471%
Average Coupon	5.000000%
Average Life	12.458
Par amount of refunded bonds	241,630,000.00
Average coupon of refunded bonds	4.963253%
Average life of refunded bonds	12.624
PV of prior debt to 06/01/2016 @ 2.430516%	306,405,817.55
Net PV Savings	18,192,849.63
Percentage savings of refunded bonds	7.529218%
Percentage savings of refunding bonds	7.998967%

SAVINGS

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Date	Prior Debt Service	Refunding Debt Service	Savings	Present Value to 06/01/2016 @ 2.4305163%
09/30/2017	11,895,850.00	10,866,577.78	1,029,272.22	1,014,896.13
09/30/2018	11,895,850.00	11,372,000.00	523,850.00	502,713.13
09/30/2019	11,895,850.00	11,372,000.00	523,850.00	490,713.78
09/30/2020	11,895,850.00	11,372,000.00	523,850.00	479,000.84
09/30/2021	25,399,600.00	24,310,250.00	1,089,350.00	975,514.86
09/30/2022	25,396,187.50	24,304,875.00	1,091,312.50	954,040.13
09/30/2023	25,395,000.00	24,304,750.00	1,090,250.00	929,973.93
09/30/2024	25,392,668.75	24,303,000.00	1,089,668.75	907,171.01
09/30/2025	25,397,878.13	24,307,625.00	1,090,253.13	885,860.47
09/30/2026	25,398,018.76	24,306,625.00	1,091,393.76	865,742.83
09/30/2027	25,393,893.76	24,303,125.00	1,090,768.76	844,715.18
09/30/2028	25,393,768.76	24,300,000.00	1,093,768.76	826,953.57
09/30/2029	25,396,696.88	24,304,750.00	1,091,946.88	806,070.34
09/30/2030	25,389,500.00	24,295,125.00	1,094,375.00	788,797.97
09/30/2031	4,857,875.00	3,765,125.00	1,092,750.00	768,967.96
09/30/2032	4,851,875.00	3,759,000.00	1,092,875.00	750,847.12
09/30/2033	4,852,125.00	3,760,875.00	1,091,250.00	731,984.34
09/30/2034	4,853,250.00	3,760,500.00	1,092,750.00	715,651.91
09/30/2035	4,850,125.00	3,757,875.00	1,092,250.00	698,409.27
09/30/2036	13,725,000.00	12,635,250.00	1,089,750.00	680,339.55
09/30/2037	13,662,500.00	12,572,375.00	1,090,125.00	664,496.74
09/30/2038	13,575,000.00	12,481,875.00	1,093,125.00	650,594.77
09/30/2039	13,462,500.00	12,368,875.00	1,093,625.00	635,533.36
09/30/2040	13,325,000.00	12,233,375.00	1,091,625.00	619,410.25
	393,551,862.54	369,117,827.78	24,434,034.76	18,188,399.45

Savings Summary

PV of savings from cash flow	18,188,399.45
Plus: Refunding funds on hand	4,450.18
Net PV Savings	18,192,849.63

BOND SUMMARY STATISTICS

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Dated Date	06/01/2016
Delivery Date	06/01/2016
Last Maturity	11/15/2039
Arbitrage Yield	2.430516%
True Interest Cost (TIC)	2.967754%
Net Interest Cost (NIC)	3.365780%
All-In TIC	2.998471%
Average Coupon	5.000000%
Average Life (years)	12.458
Duration of Issue (years)	9.627
Par Amount	227,440,000.00
Bond Proceeds	274,770,019.25
Total Interest	141,677,827.78
Net Interest	95,371,288.53
Total Debt Service	369,117,827.78
Maximum Annual Debt Service	24,310,250.00
Average Annual Debt Service	15,736,904.07
Underwriter's Fees (per $1000)	
Average Takedown	3.500000
Other Fee	1.000000
Total Underwriter's Discount	4.500000
Bid Price	120.359892

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Serial Bonds	227,440,000.00	120.810	5.000%	12.458	205,374.60
	227,440,000.00			12.458	205,374.60

	TIC	All-In TIC	Arbitrage Yield
Par Value	227,440,000.00	227,440,000.00	227,440,000.00
+ Accrued Interest			
+ Premium (Discount)	47,330,019.25	47,330,019.25	47,330,019.25
- Underwriter's Discount	-1,023,480.00	-1,023,480.00	
- Cost of Issuance Expense		-796,040.00	
- Other Amounts			
Target Value	273,746,539.25	272,950,499.25	274,770,019.25
Target Date	06/01/2016	06/01/2016	06/01/2016
Yield	2.967754%	2.998471%	2.430516%

BOND PRICING

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Bond Component	Maturity Date	Amount	Rate	Yield	Price		Yield to Maturity
Serial Bonds:							
	11/15/2020	13,270,000	5.000%	1.210%	116.390		
	11/15/2021	13,945,000	5.000%	1.430%	118.671		
	11/15/2022	14,660,000	5.000%	1.630%	120.569		
	11/15/2023	15,410,000	5.000%	1.850%	121.842		
	11/15/2024	16,205,000	5.000%	2.020%	123.055		
	11/15/2025	17,035,000	5.000%	2.180%	123.977		
	11/15/2026	17,905,000	5.000%	2.310%	124.858		
	11/15/2027	18,820,000	5.000%	2.420%	123.706	C	2.594%
	11/15/2028	19,790,000	5.000%	2.520%	122.669	C	2.828%
	11/15/2029	20,795,000	5.000%	2.590%	121.949	C	3.005%
	11/15/2030	805,000	5.000%	2.640%	121.438	C	3.143%
	11/15/2031	840,000	5.000%	2.720%	120.626	C	3.287%
	11/15/2032	885,000	5.000%	2.810%	119.720	C	3.423%
	11/15/2033	930,000	5.000%	2.860%	119.220	C	3.517%
	11/15/2034	975,000	5.000%	2.910%	118.723	C	3.602%
	11/15/2035	10,130,000	5.000%	2.960%	118.228	C	3.680%
	11/15/2036	10,585,000	5.000%	3.010%	117.735	C	3.750%
	11/15/2037	11,035,000	5.000%	3.060%	117.245	C	3.815%
	11/15/2038	11,485,000	5.000%	3.110%	116.758	C	3.876%
	11/15/2039	11,935,000	5.000%	3.150%	116.370	C	3.926%
		227,440,000					

Dated Date	06/01/2016	
Delivery Date	06/01/2016	
First Coupon	11/15/2016	
Par Amount	227,440,000.00	
Premium	47,330,019.25	
Production	274,770,019.25	120.809892%
Underwriter's Discount	-1,023,480.00	-0.450000%
Purchase Price	273,746,539.25	120.359892%
Accrued Interest		
Net Proceeds	273,746,539.25	

SUMMARY OF BONDS REFUNDED

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Bond	Maturity Date	Interest Rate	Par Amount	Call Date	Call Price
Ser 2009A, W & Wastewater Sys Rev Ref Bds, WW2009AR:					
SER	11/15/2020	5.000%	5,020,000.00	11/15/2019	100.000
	11/15/2021	4.750%	5,270,000.00	11/15/2019	100.000
	11/15/2022	4.000%	5,505,000.00	11/15/2019	100.000
	11/15/2023	4.125%	5,730,000.00	11/15/2019	100.000
	11/15/2024	4.125%	5,975,000.00	11/15/2019	100.000
	11/15/2025	5.000%	6,255,000.00	11/15/2019	100.000
	11/15/2026	5.000%	6,575,000.00	11/15/2019	100.000
	11/15/2027	5.000%	6,910,000.00	11/15/2019	100.000
	11/15/2028	5.000%	7,265,000.00	11/15/2019	100.000
	11/15/2029	5.000%	7,635,000.00	11/15/2019	100.000
TERM34	11/15/2030	5.000%	1,485,000.00	11/15/2019	100.000
	11/15/2031	5.000%	1,555,000.00	11/15/2019	100.000
	11/15/2032	5.000%	1,635,000.00	11/15/2019	100.000
	11/15/2033	5.000%	1,720,000.00	11/15/2019	100.000
	11/15/2034	5.000%	1,805,000.00	11/15/2019	100.000
TERM39	11/15/2035	5.000%	11,000,000.00	11/15/2019	100.000
	11/15/2036	5.000%	11,500,000.00	11/15/2019	100.000
	11/15/2037	5.000%	12,000,000.00	11/15/2019	100.000
	11/15/2038	5.000%	12,500,000.00	11/15/2019	100.000
	11/15/2039	5.000%	13,000,000.00	11/15/2019	100.000
			130,340,000.00		
Ser 2009, W & Wastewater Sys Rev Ref Bds, WW2009R:					
SER	11/15/2020	5.000%	8,830,000.00	11/15/2019	100.000
	11/15/2021	5.000%	9,280,000.00	11/15/2019	100.000
	11/15/2022	4.500%	9,730,000.00	11/15/2019	100.000
	11/15/2023	5.000%	10,205,000.00	11/15/2019	100.000
	11/15/2024	5.000%	10,730,000.00	11/15/2019	100.000
	11/15/2025	5.000%	11,280,000.00	11/15/2019	100.000
	11/15/2026	5.000%	11,855,000.00	11/15/2019	100.000
	11/15/2027	5.000%	12,465,000.00	11/15/2019	100.000
	11/15/2028	5.125%	13,115,000.00	11/15/2019	100.000
	11/15/2029	5.125%	13,800,000.00	11/15/2019	100.000
			111,290,000.00		
			241,630,000.00		

ESCROW REQUIREMENTS

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Period Ending	Interest	Principal Redeemed	Total
11/15/2016	5,947,925.00		5,947,925.00
05/15/2017	5,947,925.00		5,947,925.00
11/15/2017	5,947,925.00		5,947,925.00
05/15/2018	5,947,925.00		5,947,925.00
11/15/2018	5,947,925.00		5,947,925.00
05/15/2019	5,947,925.00		5,947,925.00
11/15/2019	5,947,925.00	241,630,000.00	247,577,925.00
	41,635,475.00	241,630,000.00	283,265,475.00

ESCROW DESCRIPTIONS

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

	Type of Security	CUSIP or ID	Maturity Date	Par Amount	Rate	Yield	Price	Interest Class	Interest Frequency	Interest Day Basis
Jun 1, 2016:										
	TNote	912828FY1	11/15/2016	1,677,000	4.625%	0.623%	101.810403	Periodic	Semiannual	ACT/ACT
	TNote	912828GS3	05/15/2017	1,715,000	4.500%	0.771%	103.536540	Periodic	Semiannual	ACT/ACT
	TNote	912828HH6	11/15/2017	1,753,000	4.250%	0.850%	104.901796	Periodic	Semiannual	ACT/ACT
	TNote	912828XA3	05/15/2018	1,791,000	1.000%	0.881%	100.229919	Periodic	Semiannual	ACT/ACT
	TNote	912828M64	11/15/2018	1,800,000	1.250%	0.943%	100.742816	Periodic	Semiannual	ACT/ACT
	TNote	912828KQ2	05/15/2019	1,811,000	3.125%	1.029%	106.082297	Periodic	Semiannual	ACT/ACT
	TNote	912828LY4	11/15/2019	243,469,000	3.375%	1.157%	107.487880	Periodic	Semiannual	ACT/ACT
				254,016,000						

ESCROW STATISTICS

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Total Escrow Cost	Modified Duration (years)	Yield to Receipt Date	Yield to Disbursement Date	Perfect Escrow Cost	Value of Negative Arbitrage	Cost of Dead Time
Global Proceeds Escrow:						
272,946,049.07	3.212	1.151308%	1.151306%	262,003,168.92	10,942,842.98	37.17
272,946,049.07				262,003,168.92	10,942,842.98	37.17

Delivery date	06/01/2016
Arbitrage yield	2.430516%

ESCROW CASH FLOW

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Date	Principal	Interest	Net Escrow Receipts	Present Value to 06/01/2016 @ 1.1513081%
11/15/2016	1,677,000.00	4,271,660.64	5,948,660.64	5,917,631.49
05/15/2017	1,715,000.00	4,232,880.01	5,947,880.01	5,882,989.26
11/15/2017	1,753,000.00	4,194,292.51	5,947,292.51	5,848,739.67
05/15/2018	1,791,000.00	4,157,041.26	5,948,041.26	5,815,996.00
11/15/2018	1,800,000.00	4,148,086.26	5,948,086.26	5,782,751.36
05/15/2019	1,811,000.00	4,136,836.26	5,947,836.26	5,749,411.59
11/15/2019	243,469,000.00	4,108,539.38	247,577,539.38	237,948,391.03
	254,016,000.00	29,249,336.32	283,265,336.32	272,945,910.39

Escrow Cost Summary

Purchase date	06/01/2016
Purchase cost of securities	272,945,910.39
Target for yield calculation	272,945,910.39

BOND DEBT SERVICE

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Period Ending	Principal	Coupon	Interest	Debt Service
09/30/2017			10,866,577.78	10,866,577.78
09/30/2018			11,372,000.00	11,372,000.00
09/30/2019			11,372,000.00	11,372,000.00
09/30/2020			11,372,000.00	11,372,000.00
09/30/2021	13,270,000	5.000%	11,040,250.00	24,310,250.00
09/30/2022	13,945,000	5.000%	10,359,875.00	24,304,875.00
09/30/2023	14,660,000	5.000%	9,644,750.00	24,304,750.00
09/30/2024	15,410,000	5.000%	8,893,000.00	24,303,000.00
09/30/2025	16,205,000	5.000%	8,102,625.00	24,307,625.00
09/30/2026	17,035,000	5.000%	7,271,625.00	24,306,625.00
09/30/2027	17,905,000	5.000%	6,398,125.00	24,303,125.00
09/30/2028	18,820,000	5.000%	5,480,000.00	24,300,000.00
09/30/2029	19,790,000	5.000%	4,514,750.00	24,304,750.00
09/30/2030	20,795,000	5.000%	3,500,125.00	24,295,125.00
09/30/2031	805,000	5.000%	2,960,125.00	3,765,125.00
09/30/2032	840,000	5.000%	2,919,000.00	3,759,000.00
09/30/2033	885,000	5.000%	2,875,875.00	3,760,875.00
09/30/2034	930,000	5.000%	2,830,500.00	3,760,500.00
09/30/2035	975,000	5.000%	2,782,875.00	3,757,875.00
09/30/2036	10,130,000	5.000%	2,505,250.00	12,635,250.00
09/30/2037	10,585,000	5.000%	1,987,375.00	12,572,375.00
09/30/2038	11,035,000	5.000%	1,446,875.00	12,481,875.00
09/30/2039	11,485,000	5.000%	883,875.00	12,368,875.00
09/30/2040	11,935,000	5.000%	298,375.00	12,233,375.00
	227,440,000		141,677,827.78	369,117,827.78

PRIOR BOND DEBT SERVICE

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Period Ending	Principal	Coupon	Interest	Debt Service
09/30/2017			11,895,850.00	11,895,850.00
09/30/2018			11,895,850.00	11,895,850.00
09/30/2019			11,895,850.00	11,895,850.00
09/30/2020			11,895,850.00	11,895,850.00
09/30/2021	13,850,000	5.000%	11,549,600.00	25,399,600.00
09/30/2022	14,550,000	** %	10,846,187.50	25,396,187.50
09/30/2023	15,235,000	** %	10,160,000.00	25,395,000.00
09/30/2024	15,935,000	** %	9,457,668.75	25,392,668.75
09/30/2025	16,705,000	** %	8,692,878.13	25,397,878.13
09/30/2026	17,535,000	5.000%	7,863,018.76	25,398,018.76
09/30/2027	18,430,000	5.000%	6,963,893.76	25,393,893.76
09/30/2028	19,375,000	5.000%	6,018,768.76	25,393,768.76
09/30/2029	20,380,000	** %	5,016,696.88	25,396,696.88
09/30/2030	21,435,000	** %	3,954,500.00	25,389,500.00
09/30/2031	1,485,000	5.000%	3,372,875.00	4,857,875.00
09/30/2032	1,555,000	5.000%	3,296,875.00	4,851,875.00
09/30/2033	1,635,000	5.000%	3,217,125.00	4,852,125.00
09/30/2034	1,720,000	5.000%	3,133,250.00	4,853,250.00
09/30/2035	1,805,000	5.000%	3,045,125.00	4,850,125.00
09/30/2036	11,000,000	5.000%	2,725,000.00	13,725,000.00
09/30/2037	11,500,000	5.000%	2,162,500.00	13,662,500.00
09/30/2038	12,000,000	5.000%	1,575,000.00	13,575,000.00
09/30/2039	12,500,000	5.000%	962,500.00	13,462,500.00
09/30/2040	13,000,000	5.000%	325,000.00	13,325,000.00
	241,630,000		151,921,862.54	393,551,862.54

SAVINGS BY MATURITY

City of Austin Utility System
Water and Wastewater System Revenue Refunding Bonds
Market as of March 4, 2016

Bond	Maturity Date	Interest Rate	Par Amount	Adjusted Savings	Adjusted Savings Percent
Ser 2009A, W & Wastewater Sys Rev Ref Bds, WW2009AR:					
SER	11/15/2020	5.000%	5,020,000.00	123,123.46	2.453%
	11/15/2021	4.750%	5,270,000.00	242,535.06	4.602%
	11/15/2022	4.000%	5,505,000.00	247,384.52	4.494%
	11/15/2023	4.125%	5,730,000.00	308,322.84	5.381%
	11/15/2024	4.125%	5,975,000.00	352,483.19	5.899%
	11/15/2025	5.000%	6,255,000.00	681,013.31	10.888%
	11/15/2026	5.000%	6,575,000.00	778,733.75	11.844%
	11/15/2027	5.000%	6,910,000.00	732,759.91	10.604%
	11/15/2028	5.000%	7,265,000.00	684,122.31	9.417%
	11/15/2029	5.000%	7,635,000.00	657,124.83	8.607%
TERM34	11/15/2030	5.000%	1,485,000.00	136,447.76	9.188%
	11/15/2031	5.000%	1,555,000.00	147,773.45	9.503%
	11/15/2032	5.000%	1,635,000.00	158,414.17	9.689%
	11/15/2033	5.000%	1,720,000.00	172,247.65	10.014%
	11/15/2034	5.000%	1,805,000.00	185,803.79	10.294%
TERM39	11/15/2035	5.000%	11,000,000.00	602,150.99	5.474%
	11/15/2036	5.000%	11,500,000.00	582,218.35	5.063%
	11/15/2037	5.000%	12,000,000.00	554,343.63	4.620%
	11/15/2038	5.000%	12,500,000.00	524,055.46	4.192%
	11/15/2039	5.000%	13,000,000.00	502,592.41	3.866%
			130,340,000.00	8,373,650.81	
Ser 2009, W & Wastewater Sys Rev Ref Bds, WW2009R:					
SER	11/15/2020	5.000%	8,830,000.00	214,545.61	2.430%
	11/15/2021	5.000%	9,280,000.00	460,947.51	4.967%
	11/15/2022	4.500%	9,730,000.00	562,933.69	5.786%
	11/15/2023	5.000%	10,205,000.00	866,860.24	8.494%
	11/15/2024	5.000%	10,730,000.00	1,058,684.27	9.867%
	11/15/2025	5.000%	11,280,000.00	1,228,134.75	10.888%
	11/15/2026	5.000%	11,855,000.00	1,405,180.45	11.853%
	11/15/2027	5.000%	12,465,000.00	1,317,553.88	10.570%
	11/15/2028	5.125%	13,115,000.00	1,366,279.83	10.418%
	11/15/2029	5.125%	13,800,000.00	1,338,078.58	9.696%
			111,290,000.00	9,819,198.82	
			241,630,000.00	18,192,849.63	

Note: Calculated Using Remaining Maturities

City of Austin, Texas

Electric Utility System Revenue Refunding Analysis

Issue Description: **Advance Refunding of Electric Utility System Revenue Refunding Bonds, Series 2008A**

- Assumed Delivery: 06/01/2016
- Assumes Current Interest Rates
- Assumes "A1/AA-/AA-" Underlying Ratings

Estimated Refunding Results & Rate Movement Sensitivity			
	Current Rates 3/4/2016	Rate Decrease of 50 bps	Rate Increase of 50 bps
Total Savings	$12,453,160	$19,711,555	$5,335,079
PV Savings	$8,710,411	$14,932,513	$3,081,354
% PV Savings	9.03%	15.49%	3.20%
Refunded Par	$96,430,000	$96,430,000	$96,430,000
Negative Arbitrage	($4,916,921)	($4,920,182)	($4,914,508)
"All-In" TIC	3.70%	3.22%	4.19%

Bonds to be Refunded	Principal Refunded	Maturities Refunded	Refunded Bonds Call Date
Electric Utility System Revenue Refunding Bonds, Series 2008A	$96,430,000	2019-2038	11/15/18 @ 100%

City of Austin, Texas

Electric Utility System Revenue Refunding Analysis

Assumed Delivery Date: 6/1/2016

Debt Service Savings Report - Current Interest Rates

Fiscal Year Ending 9/30	Total Bonds to be Refunded			Series 2016 Refunding Bonds				Debt Service Savings
	Principal	Interest	Total	Principal	Yield	Interest	Total	
2017		4,987,000	4,987,000			$4,362,828	$4,362,828	$624,172
2018		4,987,000	4,987,000			4,565,750	4,565,750	421,250
2019		4,987,000	4,987,000			4,565,750	4,565,750	421,250
2020	$4,855,000	4,853,488	9,708,488	$4,540,000	1.070%	4,452,250	8,992,250	716,238
2021		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2022		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2023		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2024		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2025		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2026		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2027		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2028		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2029		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2030		4,719,975	4,719,975			4,338,750	4,338,750	381,225
2031	8,305,000	4,501,969	12,806,969	7,950,000	2.740%	4,140,000	12,090,000	716,969
2032	8,720,000	4,055,063	12,775,063	8,325,000	2.820%	3,733,125	12,058,125	716,938
2033	9,155,000	3,585,844	12,740,844	8,715,000	2.910%	3,307,125	12,022,125	718,719
2034	9,615,000	3,093,131	12,708,131	9,130,000	2.960%	2,861,000	11,991,000	717,131
2035	10,095,000	2,575,744	12,670,744	9,560,000	3.010%	2,393,750	11,953,750	716,994
2036	10,600,000	2,032,500	12,632,500	10,010,000	3.060%	1,904,500	11,914,500	718,000
2037	11,130,000	1,476,000	12,606,000	10,495,000	3.110%	1,391,875	11,886,875	719,125
2038	11,685,000	905,625	12,590,625	11,020,000	3.160%	854,000	11,874,000	716,625
2039	12,270,000	306,750	12,576,750	11,570,000	3.210%	289,250	11,859,250	717,500
Totals	**$96,430,000**	**$89,546,863**	**$185,976,863**	**$91,315,000**		**$82,208,703**	**$173,523,703**	**$12,453,160**

Present Value Debt Service Savings:	$ 8,710,411
PV Savings as a % of Refunded Principal:	9.03%

Negative Arbitrage in Escrow:	$ (4,916,921)

Bonds to be Refunded

	Principal Refunded	Maturities Refunded	Refunded Bonds Call Date
Electric Utility System Revenue Refunding Bonds, Series 2008A	$96,430,000	2019-2038	11/15/18 @ 100%

Analysis Dated: 03/04/16

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City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

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SOURCES AND USES OF FUNDS

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Sources:	
Bond Proceeds:	
Par Amount	91,315,000.00
Premium	15,957,267.45
	107,272,267.45

Uses:	
Refunding Escrow Deposits:	
Cash Deposit	173.75
Open Market Purchases	106,538,013.96
	106,538,187.71
Delivery Date Expenses:	
Cost of Issuance	319,602.50
Underwriter's Discount	410,917.50
	730,520.00
Other Uses of Funds:	
Additional Proceeds	3,559.74
	107,272,267.45

SUMMARY OF REFUNDING RESULTS

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Dated Date	06/01/2016
Delivery Date	06/01/2016
Arbitrage yield	2.978935%
Escrow yield	0.938118%
Value of Negative Arbitrage	4,916,896.24
Bond Par Amount	91,315,000.00
True Interest Cost	3.680297%
Net Interest Cost	4.054458%
All-In TIC	3.704769%
Average Coupon	5.000000%
Average Life	18.006
Par amount of refunded bonds	96,430,000.00
Average coupon of refunded bonds	5.143879%
Average life of refunded bonds	18.008
PV of prior debt to 06/01/2016 @ 2.978935%	125,297,242.76
Net PV Savings	8,710,410.51
Percentage savings of refunded bonds	9.032884%
Percentage savings of refunding bonds	9.538861%

SAVINGS

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Date	Prior Debt Service	Refunding Debt Service	Savings	Present Value to 06/01/2016 @ 2.9789347%
09/30/2017	4,987,000.00	4,362,827.78	624,172.22	612,770.82
09/30/2018	4,987,000.00	4,565,750.00	421,250.00	400,542.98
09/30/2019	4,987,000.00	4,565,750.00	421,250.00	388,872.45
09/30/2020	9,708,487.50	8,992,250.00	716,237.50	644,141.72
09/30/2021	4,719,975.00	4,338,750.00	381,225.00	331,714.72
09/30/2022	4,719,975.00	4,338,750.00	381,225.00	322,049.63
09/30/2023	4,719,975.00	4,338,750.00	381,225.00	312,666.14
09/30/2024	4,719,975.00	4,338,750.00	381,225.00	303,556.06
09/30/2025	4,719,975.00	4,338,750.00	381,225.00	294,711.42
09/30/2026	4,719,975.00	4,338,750.00	381,225.00	286,124.48
09/30/2027	4,719,975.00	4,338,750.00	381,225.00	277,787.74
09/30/2028	4,719,975.00	4,338,750.00	381,225.00	269,693.90
09/30/2029	4,719,975.00	4,338,750.00	381,225.00	261,835.89
09/30/2030	4,719,975.00	4,338,750.00	381,225.00	254,206.84
09/30/2031	12,806,968.75	12,090,000.00	716,968.75	465,947.25
09/30/2032	12,775,062.50	12,058,125.00	716,937.50	452,544.31
09/30/2033	12,740,843.75	12,022,125.00	718,718.75	440,656.09
09/30/2034	12,708,131.25	11,991,000.00	717,131.25	427,080.83
09/30/2035	12,670,743.75	11,953,750.00	716,993.75	414,778.44
09/30/2036	12,632,500.00	11,914,500.00	718,000.00	403,490.36
09/30/2037	12,606,000.00	11,886,875.00	719,125.00	392,475.62
09/30/2038	12,590,625.00	11,874,000.00	716,625.00	379,843.93
09/30/2039	12,576,750.00	11,859,250.00	717,500.00	369,359.15
	185,976,862.50	173,523,702.78	12,453,159.72	8,706,850.77

Savings Summary

PV of savings from cash flow	8,706,850.77
Plus: Refunding funds on hand	3,559.74
Net PV Savings	8,710,410.51

BOND SUMMARY STATISTICS

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Dated Date	06/01/2016
Delivery Date	06/01/2016
Last Maturity	11/15/2038
Arbitrage Yield	2.978935%
True Interest Cost (TIC)	3.680297%
Net Interest Cost (NIC)	4.054458%
All-In TIC	3.704769%
Average Coupon	5.000000%
Average Life (years)	18.006
Duration of Issue (years)	12.471
Par Amount	91,315,000.00
Bond Proceeds	107,272,267.45
Total Interest	82,208,702.78
Net Interest	66,662,352.83
Total Debt Service	173,523,702.78
Maximum Annual Debt Service	12,090,000.00
Average Annual Debt Service	7,727,428.62
Underwriter's Fees (per $1000)	
Average Takedown	3.500000
Other Fee	1.000000
Total Underwriter's Discount	4.500000
Bid Price	117.024968

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Serial Bonds	91,315,000.00	117.475	5.000%	18.006	86,881.10
	91,315,000.00			18.006	86,881.10

	TIC	All-In TIC	Arbitrage Yield
Par Value	91,315,000.00	91,315,000.00	91,315,000.00
+ Accrued Interest			
+ Premium (Discount)	15,957,267.45	15,957,267.45	15,957,267.45
- Underwriter's Discount	-410,917.50	-410,917.50	
- Cost of Issuance Expense		-319,602.50	
- Other Amounts			
Target Value	106,861,349.95	106,541,747.45	107,272,267.45
Target Date	06/01/2016	06/01/2016	06/01/2016
Yield	3.680297%	3.704769%	2.978935%

BOND PRICING

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Bond Component	Maturity Date	Amount	Rate	Yield	Price		Yield to Maturity
Serial Bonds:							
	11/15/2019	4,540,000	5.000%	1.070%	113.296		
	11/15/2030	7,950,000	5.000%	2.740%	120.424	C	3.221%
	11/15/2031	8,325,000	5.000%	2.820%	119.620	C	3.362%
	11/15/2032	8,715,000	5.000%	2.910%	118.723	C	3.494%
	11/15/2033	9,130,000	5.000%	2.960%	118.228	C	3.586%
	11/15/2034	9,560,000	5.000%	3.010%	117.735	C	3.669%
	11/15/2035	10,010,000	5.000%	3.060%	117.245	C	3.744%
	11/15/2036	10,495,000	5.000%	3.110%	116.758	C	3.813%
	11/15/2037	11,020,000	5.000%	3.160%	116.273	C	3.876%
	11/15/2038	11,570,000	5.000%	3.210%	115.790	C	3.934%
		91,315,000					

Dated Date	06/01/2016	
Delivery Date	06/01/2016	
First Coupon	11/15/2016	
Par Amount	91,315,000.00	
Premium	15,957,267.45	
Production	107,272,267.45	117.474968%
Underwriter's Discount	-410,917.50	-0.450000%
Purchase Price	106,861,349.95	117.024968%
Accrued Interest		
Net Proceeds	106,861,349.95	

SUMMARY OF BONDS REFUNDED

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Bond	Maturity Date	Interest Rate	Par Amount	Call Date	Call Price
Ser 2008A, Elec Util Sys Rev Ref Bds, EU2008A:					
SER	11/15/2019	5.500%	4,855,000.00	11/15/2018	100.000
TERM35	11/15/2030	5.250%	8,305,000.00	11/15/2018	100.000
	11/15/2031	5.250%	8,720,000.00	11/15/2018	100.000
	11/15/2032	5.250%	9,155,000.00	11/15/2018	100.000
	11/15/2033	5.250%	9,615,000.00	11/15/2018	100.000
	11/15/2034	5.250%	10,095,000.00	11/15/2018	100.000
	11/15/2035	5.250%	10,600,000.00	11/15/2018	100.000
TERM38	11/15/2036	5.000%	11,130,000.00	11/15/2018	100.000
	11/15/2037	5.000%	11,685,000.00	11/15/2018	100.000
	11/15/2038	5.000%	12,270,000.00	11/15/2018	100.000
			96,430,000.00		

ESCROW REQUIREMENTS

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Period Ending	Interest	Principal Redeemed	Total
11/15/2016	2,493,500.00		2,493,500.00
05/15/2017	2,493,500.00		2,493,500.00
11/15/2017	2,493,500.00		2,493,500.00
05/15/2018	2,493,500.00		2,493,500.00
11/15/2018	2,493,500.00	96,430,000.00	98,923,500.00
	12,467,500.00	96,430,000.00	108,897,500.00

ESCROW DESCRIPTIONS

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

	Type of Security	CUSIP or ID	Maturity Date	Par Amount	Rate	Yield	Price	Interest Class	Interest Frequency	Interest Day Basis
Jun 1, 2016:										
	TNote	912828FY1	11/15/2016	1,750,000	4.625%	0.623%	101.810403	Periodic	Semiannual	ACT/ACT
	TNote	912828GS3	05/15/2017	1,791,000	4.500%	0.771%	103.536540	Periodic	Semiannual	ACT/ACT
	TNote	912828HH6	11/15/2017	1,831,000	4.250%	0.850%	104.901796	Periodic	Semiannual	ACT/ACT
	TNote	912828XA3	05/15/2018	1,869,000	1.000%	0.881%	100.229919	Periodic	Semiannual	ACT/ACT
	TNote	912828M64	11/15/2018	98,309,000	1.250%	0.943%	100.742816	Periodic	Semiannual	ACT/ACT
				105,550,000						

ESCROW STATISTICS

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Total Escrow Cost	Modified Duration (years)	Yield to Receipt Date	Yield to Disbursement Date	Perfect Escrow Cost	Value of Negative Arbitrage	Cost of Dead Time
Global Proceeds Escrow:						
106,538,187.71	2.329	0.938118%	0.938116%	101,621,266.57	4,916,896.24	24.90
106,538,187.71				101,621,266.57	4,916,896.24	24.90

Delivery date	06/01/2016
Arbitrage yield	2.978935%

ESCROW CASH FLOW

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Date	Principal	Interest	Net Escrow Receipts	Present Value to 06/01/2016 @ 0.9381185%
11/15/2016	1,750,000.00	743,451.25	2,493,451.25	2,482,842.66
05/15/2017	1,791,000.00	702,982.50	2,493,982.50	2,471,777.54
11/15/2017	1,831,000.00	662,685.00	2,493,685.00	2,459,944.10
05/15/2018	1,869,000.00	623,776.25	2,492,776.25	2,447,567.10
11/15/2018	98,309,000.00	614,431.25	98,923,431.25	96,675,882.56
	105,550,000.00	3,347,326.25	108,897,326.25	106,538,013.96

Escrow Cost Summary

Purchase date	06/01/2016
Purchase cost of securities	106,538,013.96
Target for yield calculation	106,538,013.96

BOND DEBT SERVICE

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Period Ending	Principal	Coupon	Interest	Debt Service
09/30/2017			4,362,827.78	4,362,827.78
09/30/2018			4,565,750.00	4,565,750.00
09/30/2019			4,565,750.00	4,565,750.00
09/30/2020	4,540,000	5.000%	4,452,250.00	8,992,250.00
09/30/2021			4,338,750.00	4,338,750.00
09/30/2022			4,338,750.00	4,338,750.00
09/30/2023			4,338,750.00	4,338,750.00
09/30/2024			4,338,750.00	4,338,750.00
09/30/2025			4,338,750.00	4,338,750.00
09/30/2026			4,338,750.00	4,338,750.00
09/30/2027			4,338,750.00	4,338,750.00
09/30/2028			4,338,750.00	4,338,750.00
09/30/2029			4,338,750.00	4,338,750.00
09/30/2030			4,338,750.00	4,338,750.00
09/30/2031	7,950,000	5.000%	4,140,000.00	12,090,000.00
09/30/2032	8,325,000	5.000%	3,733,125.00	12,058,125.00
09/30/2033	8,715,000	5.000%	3,307,125.00	12,022,125.00
09/30/2034	9,130,000	5.000%	2,861,000.00	11,991,000.00
09/30/2035	9,560,000	5.000%	2,393,750.00	11,953,750.00
09/30/2036	10,010,000	5.000%	1,904,500.00	11,914,500.00
09/30/2037	10,495,000	5.000%	1,391,875.00	11,886,875.00
09/30/2038	11,020,000	5.000%	854,000.00	11,874,000.00
09/30/2039	11,570,000	5.000%	289,250.00	11,859,250.00
	91,315,000		82,208,702.78	173,523,702.78

PRIOR BOND DEBT SERVICE

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Period Ending	Principal	Coupon	Interest	Debt Service
09/30/2017			4,987,000.00	4,987,000.00
09/30/2018			4,987,000.00	4,987,000.00
09/30/2019			4,987,000.00	4,987,000.00
09/30/2020	4,855,000	5.500%	4,853,487.50	9,708,487.50
09/30/2021			4,719,975.00	4,719,975.00
09/30/2022			4,719,975.00	4,719,975.00
09/30/2023			4,719,975.00	4,719,975.00
09/30/2024			4,719,975.00	4,719,975.00
09/30/2025			4,719,975.00	4,719,975.00
09/30/2026			4,719,975.00	4,719,975.00
09/30/2027			4,719,975.00	4,719,975.00
09/30/2028			4,719,975.00	4,719,975.00
09/30/2029			4,719,975.00	4,719,975.00
09/30/2030			4,719,975.00	4,719,975.00
09/30/2031	8,305,000	5.250%	4,501,968.75	12,806,968.75
09/30/2032	8,720,000	5.250%	4,055,062.50	12,775,062.50
09/30/2033	9,155,000	5.250%	3,585,843.75	12,740,843.75
09/30/2034	9,615,000	5.250%	3,093,131.25	12,708,131.25
09/30/2035	10,095,000	5.250%	2,575,743.75	12,670,743.75
09/30/2036	10,600,000	5.250%	2,032,500.00	12,632,500.00
09/30/2037	11,130,000	5.000%	1,476,000.00	12,606,000.00
09/30/2038	11,685,000	5.000%	905,625.00	12,590,625.00
09/30/2039	12,270,000	5.000%	306,750.00	12,576,750.00
	96,430,000		89,546,862.50	185,976,862.50

SAVINGS BY MATURITY

City of Austin Utility System
Electric Utility System Revenue Refunding Bonds
Market as of March 4, 2016

Bond	Maturity Date	Interest Rate	Par Amount	Adjusted Savings	Adjusted Savings Percent
Ser 2008A, Elec Util Sys Rev Ref Bds, EU2008A:					
SER	11/15/2019	5.500%	4,855,000.00	96,071.25	1.979%
TERM35	11/15/2030	5.250%	8,305,000.00	1,048,460.16	12.624%
	11/15/2031	5.250%	8,720,000.00	1,047,732.05	12.015%
	11/15/2032	5.250%	9,155,000.00	1,034,986.63	11.305%
	11/15/2033	5.250%	9,615,000.00	1,057,301.87	10.996%
	11/15/2034	5.250%	10,095,000.00	1,078,560.96	10.684%
	11/15/2035	5.250%	10,600,000.00	1,100,510.07	10.382%
TERM38	11/15/2036	5.000%	11,130,000.00	764,903.17	6.872%
	11/15/2037	5.000%	11,685,000.00	750,260.48	6.421%
	11/15/2038	5.000%	12,270,000.00	731,623.87	5.963%
			96,430,000.00	8,710,410.51	

Note: Calculated Using Remaining Maturities

City of Austin, Texas

General Obligation Bonds Refunding Analysis

Issue Description: **Advance Refunding of Various Outstanding General Obligation Bonds**

- Assumed Delivery: 06/01/2016
- Assumes Current Interest Rates
- Assumes "Aaa/AAA/AAA" Underlying Ratings

Estimated Refunding Results & Rate Movement Sensitivity			
	Current Rates 3/4/2016	Rate Decrease of 40 bps	Rate Increase of 40 bps
Total Savings	$10,179,814	$11,995,303	$8,370,613
PV Savings	$8,062,148	$10,098,529	$6,132,284
% PV Savings	11.34%	14.21%	8.63%
Refunded Par	$71,065,000	$71,065,000	$71,065,000
Negative Arbitrage	($1,828,031)	($1,830,947)	($1,822,833)
"All-In" TIC	2.25%	1.84%	2.65%

Raymond James' Estimated Refunding Results							
	Past Analysis 7/1/2015	Past Analysis 6/22/2015	Past Analysis 1/23/2015	Past Analysis 10/24/2014	Past Analysis 8/26/2014	Past Analysis 4/23/2014	Past Analysis 4/8/2014
Total Savings	$18,916,028	$19,910,433	$27,159,930	$18,975,347	$16,232,618	$4,090,858	$2,749,502
PV Savings	$14,821,898	$15,725,067	$22,603,408	$15,297,639	$13,623,048	$3,473,896	$2,355,288
% PV Savings	6.82%	7.23%	10.17%	6.89%	6.34%	5.84%	5.21%
Refunded Par	$217,480,000	$217,480,000	$222,150,000	$222,150,000	$214,745,000	$59,495,000	$45,190,000
Negative Arbitrage	($7,406,993)	($7,152,640)	($6,187,269)	($7,944,221)	($7,414,622)	($1,999,779)	($1,565,157)
"All-In" TIC	2.75%	2.70%	2.28%	2.59%	2.67%	2.62%	2.59%

Bonds to be Refunded					
	Principal Refunded	Maturities Refunded	Refunded Bonds Call Date	PV Savings	Negative Arbitrage
Certificates of Obligation, Series 2008	$6,755,000	2019-2028	09/01/18 @ 100%	$667,679	($136,197)
Public Improvement Bonds, Series 2008	$56,905,000	2019-2028	09/01/18 @ 100%	$6,225,840	($1,258,708)
Certificates of Obligation, Series 2009	$7,405,000	2020-2039	09/01/19 @ 100%	$1,168,630	($433,125)

City of Austin, Texas

General Obligation Bonds Refunding Analysis

Assumed Delivery Date: 6/1/2016

Debt Service Savings Report - Current Interest Rates

Fiscal Year Ending 9/30	Total Bonds to be Refunded			Series 2016 Refunding Bonds				Debt Service Savings
	Principal	Interest	Total	Principal	Yield	Interest	Total	
2016		$1,617,775	$1,617,775			$1,594,511	$1,594,511 (1)	$23,264
2017		3,235,550	3,235,550			3,162,750	3,162,750	72,800
2018		3,235,550	3,235,550			3,162,750	3,162,750	72,800
2019	$4,485,000	3,235,550	7,720,550	$4,005,000	0.950%	3,162,750	7,167,750	552,800
2020	5,070,000	3,056,150	8,126,150	4,610,000	1.110%	2,962,500	7,572,500	553,650
2021	5,345,000	2,855,475	8,200,475	4,915,000	1.290%	2,732,000	7,647,000	553,475
2022	5,645,000	2,630,975	8,275,975	5,235,000	1.480%	2,486,250	7,721,250	554,725
2023	5,955,000	2,357,794	8,312,794	5,535,000	1.680%	2,224,500	7,759,500	553,294
2024	4,180,000	2,069,106	6,249,106	3,750,000	1.850%	1,947,750	5,697,750	551,356
2025	4,525,000	1,883,631	6,408,631	4,095,000	1.990%	1,760,250	5,855,250	553,381
2026	5,550,000	1,682,206	7,232,206	5,125,000	2.110%	1,555,500	6,680,500	551,706
2027	11,305,000	1,428,425	12,733,425	10,880,000	2.210%	1,299,250	12,179,250	554,175
2028	15,400,000	895,475	16,295,475	14,985,000	2.310%	755,250	15,740,250	555,225
2029	540,000	167,870	707,870	150,000	2.680%	6,000	156,000	551,870
2030	240,000	144,920	384,920					384,920
2031	255,000	133,640	388,640					388,640
2032	265,000	121,655	386,655					386,655
2033	280,000	109,200	389,200					389,200
2034	295,000	96,040	391,040					391,040
2035	310,000	82,175	392,175					392,175
2036	330,000	67,450	397,450					397,450
2037	345,000	51,775	396,775					396,775
2038	365,000	35,388	400,388					400,388
2039	380,000	18,050	398,050					398,050
Totals	**$71,065,000**	**$31,211,825**	**$102,276,825**	**$63,285,000**		**$28,812,011**	**$92,097,011**	**$10,179,814**

(1) *Includes accrued interest on refunded bonds of $808,888*

Present Value Debt Service Savings:	**$ 8,062,148**
PV Savings as a % of Refunded Principal:	**11.34%**

Negative Arbitrage in Escrow:	**$ (1,828,031)**

Bonds to be Refunded

	Principal Refunded	Maturities Refunded	Refunded Bonds Call Date
Certificates of Obligation, Series 2008	$6,755,000	2019-2028	09/01/18 @ 100%
Public Improvement Bonds, Series 2008	$56,905,000	2019-2028	09/01/18 @ 100%
Certificates of Obligation, Series 2009	$7,405,000	2020-2039	09/01/19 @ 100%

Analysis Dated: 03/04/16

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City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

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SOURCES AND USES OF FUNDS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Sources:	
Bond Proceeds:	
Par Amount	63,285,000.00
Premium	14,270,442.30
	77,555,442.30
Other Sources of Funds:	
Accrued Interest on Refunded Bonds	808,887.50
	78,364,329.80

Uses:	
Refunding Escrow Deposits:	
Cash Deposit	265.99
SLGS Purchases	64,927,347.00
Open Market Purchases	12,925,372.55
	77,852,985.54
Delivery Date Expenses:	
Cost of Issuance	221,497.50
Underwriter's Discount	284,782.50
	506,280.00
Other Uses of Funds:	
Additional Proceeds	5,064.26
	78,364,329.80

SUMMARY OF REFUNDING RESULTS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Dated Date	06/01/2016
Delivery Date	06/01/2016
Arbitrage yield	1.985772%
Escrow yield	0.917821%
Value of Negative Arbitrage	1,827,561.60
Bond Par Amount	63,285,000.00
True Interest Cost	2.207192%
Net Interest Cost	2.501516%
All-In TIC	2.246123%
Average Coupon	4.996454%
Average Life	8.858
Par amount of refunded bonds	71,065,000.00
Average coupon of refunded bonds	4.623168%
Average life of refunded bonds	9.254
PV of prior debt to 06/01/2016 @ 1.985772%	87,412,232.10
Net PV Savings	8,062,148.31
Percentage savings of refunded bonds	11.344752%
Percentage savings of refunding bonds	12.739430%

SAVINGS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Date	Prior Debt Service	Prior Receipts	Prior Net Cash Flow	Refunding Debt Service	Savings	Present Value to 06/01/2016 @ 1.9857719%
09/30/2016	1,617,775.00	808,887.50	808,887.50	790,687.50	18,200.00	14,124.31
09/30/2017	3,235,550.00		3,235,550.00	3,162,750.00	72,800.00	71,376.48
09/30/2018	3,235,550.00		3,235,550.00	3,162,750.00	72,800.00	69,979.94
09/30/2019	7,720,550.00		7,720,550.00	7,167,750.00	552,800.00	518,754.39
09/30/2020	8,126,150.00		8,126,150.00	7,572,500.00	553,650.00	509,481.23
09/30/2021	8,200,475.00		8,200,475.00	7,647,000.00	553,475.00	499,488.52
09/30/2022	8,275,975.00		8,275,975.00	7,721,250.00	554,725.00	490,913.63
09/30/2023	8,312,793.76		8,312,793.76	7,759,500.00	553,293.76	480,019.10
09/30/2024	6,249,106.26		6,249,106.26	5,697,750.00	551,356.26	468,930.72
09/30/2025	6,408,631.26		6,408,631.26	5,855,250.00	553,381.26	461,450.80
09/30/2026	7,232,206.26		7,232,206.26	6,680,500.00	551,706.26	451,067.71
09/30/2027	12,733,425.00		12,733,425.00	12,179,250.00	554,175.00	444,228.67
09/30/2028	16,295,475.00		16,295,475.00	15,740,250.00	555,225.00	436,404.29
09/30/2029	707,870.00		707,870.00	156,000.00	551,870.00	425,366.20
09/30/2030	384,920.00		384,920.00		384,920.00	291,000.77
09/30/2031	388,640.00		388,640.00		388,640.00	288,017.83
09/30/2032	386,655.00		386,655.00		386,655.00	280,899.54
09/30/2033	389,200.00		389,200.00		389,200.00	277,169.44
09/30/2034	391,040.00		391,040.00		391,040.00	272,983.76
09/30/2035	392,175.00		392,175.00		392,175.00	268,371.44
09/30/2036	397,450.00		397,450.00		397,450.00	266,607.00
09/30/2037	396,775.00		396,775.00		396,775.00	260,895.92
09/30/2038	400,387.50		400,387.50		400,387.50	258,066.24
09/30/2039	398,050.00		398,050.00		398,050.00	251,486.10
	102,276,825.04	808,887.50	101,467,937.54	91,293,187.50	10,174,750.04	8,057,084.05

Savings Summary

PV of savings from cash flow	8,057,084.05
Plus: Refunding funds on hand	5,064.26
Net PV Savings	8,062,148.31

BOND SUMMARY STATISTICS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Dated Date	06/01/2016
Delivery Date	06/01/2016
Last Maturity	09/01/2029
Arbitrage Yield	1.985772%
True Interest Cost (TIC)	2.207192%
Net Interest Cost (NIC)	2.501516%
All-In TIC	2.246123%
Average Coupon	4.996454%
Average Life (years)	8.858
Duration of Issue (years)	7.458
Par Amount	63,285,000.00
Bond Proceeds	77,555,442.30
Total Interest	28,008,187.50
Net Interest	14,022,527.70
Total Debt Service	91,293,187.50
Maximum Annual Debt Service	15,740,250.00
Average Annual Debt Service	6,890,051.89
Underwriter's Fees (per $1000)	
Average Takedown	3.500000
Other Fee	1.000000
Total Underwriter's Discount	4.500000
Bid Price	122.099486

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Serial Bonds	63,285,000.00	122.549	4.996%	8.858	53,481.65
	63,285,000.00			8.858	53,481.65

	TIC	All-In TIC	Arbitrage Yield
Par Value	63,285,000.00	63,285,000.00	63,285,000.00
+ Accrued Interest			
+ Premium (Discount)	14,270,442.30	14,270,442.30	14,270,442.30
- Underwriter's Discount	-284,782.50	-284,782.50	
- Cost of Issuance Expense		-221,497.50	
- Other Amounts			
Target Value	77,270,659.80	77,049,162.30	77,555,442.30
Target Date	06/01/2016	06/01/2016	06/01/2016
Yield	2.207192%	2.246123%	1.985772%

BOND PRICING

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Bond Component	Maturity Date	Amount	Rate	Yield	Price		Yield to Maturity
Serial Bonds:							
	09/01/2019	4,005,000	5.000%	0.950%	112.929		
	09/01/2020	4,610,000	5.000%	1.110%	116.103		
	09/01/2021	4,915,000	5.000%	1.290%	118.772		
	09/01/2022	5,235,000	5.000%	1.480%	120.936		
	09/01/2023	5,535,000	5.000%	1.680%	122.570		
	09/01/2024	3,750,000	5.000%	1.850%	123.996		
	09/01/2025	4,095,000	5.000%	1.990%	125.312		
	09/01/2026	5,125,000	5.000%	2.110%	126.509		
	09/01/2027	10,880,000	5.000%	2.210%	125.461	C	2.403%
	09/01/2028	14,985,000	5.000%	2.310%	124.422	C	2.652%
	09/01/2029	150,000	4.000%	2.680%	111.759	C	2.923%
		63,285,000					

Dated Date	06/01/2016	
Delivery Date	06/01/2016	
First Coupon	09/01/2016	
Par Amount	63,285,000.00	
Premium	14,270,442.30	
Production	77,555,442.30	122.549486%
Underwriter's Discount	-284,782.50	-0.450000%
Purchase Price	77,270,659.80	122.099486%
Accrued Interest		
Net Proceeds	77,270,659.80	

SUMMARY OF BONDS REFUNDED

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Bond	Maturity Date	Interest Rate	Par Amount	Call Date	Call Price
Ser 2008, Pub Imp Bds, 2008:					
SER	09/01/2019	4.000%	3,960,000.00	09/01/2018	100.000
	09/01/2020	4.000%	4,175,000.00	09/01/2018	100.000
	09/01/2021	4.250%	4,405,000.00	09/01/2018	100.000
	09/01/2022	5.000%	4,650,000.00	09/01/2018	100.000
	09/01/2023	5.000%	4,905,000.00	09/01/2018	100.000
	09/01/2024	4.500%	3,075,000.00	09/01/2018	100.000
	09/01/2025	4.500%	3,360,000.00	09/01/2018	100.000
	09/01/2026	4.625%	4,325,000.00	09/01/2018	100.000
	09/01/2027	4.750%	10,015,000.00	09/01/2018	100.000
	09/01/2028	4.750%	14,035,000.00	09/01/2018	100.000
			56,905,000.00		
Ser 2008, C/O, 2008_CO:					
SER	09/01/2019	4.000%	525,000.00	09/01/2018	100.000
	09/01/2020	4.000%	555,000.00	09/01/2018	100.000
	09/01/2021	4.250%	585,000.00	09/01/2018	100.000
	09/01/2022	4.375%	615,000.00	09/01/2018	100.000
	09/01/2023	4.375%	650,000.00	09/01/2018	100.000
	09/01/2024	4.500%	685,000.00	09/01/2018	100.000
	09/01/2025	4.500%	725,000.00	09/01/2018	100.000
TERM28	09/01/2026	4.625%	760,000.00	09/01/2018	100.000
	09/01/2027	4.625%	805,000.00	09/01/2018	100.000
	09/01/2028	4.625%	850,000.00	09/01/2018	100.000
			6,755,000.00		
Ser 2009, C/O, 2009_CO:					
SER	09/01/2020	3.375%	340,000.00	09/01/2019	100.000
	09/01/2021	3.500%	355,000.00	09/01/2019	100.000
	09/01/2022	3.625%	380,000.00	09/01/2019	100.000
	09/01/2023	3.750%	400,000.00	09/01/2019	100.000
	09/01/2024	3.875%	420,000.00	09/01/2019	100.000
	09/01/2025	4.000%	440,000.00	09/01/2019	100.000
	09/01/2026	4.000%	465,000.00	09/01/2019	100.000
	09/01/2027	4.125%	485,000.00	09/01/2019	100.000
	09/01/2028	4.200%	515,000.00	09/01/2019	100.000
	09/01/2029	4.250%	540,000.00	09/01/2019	100.000
TERM34	09/01/2030	4.700%	240,000.00	09/01/2019	100.000
	09/01/2031	4.700%	255,000.00	09/01/2019	100.000
	09/01/2032	4.700%	265,000.00	09/01/2019	100.000
	09/01/2033	4.700%	280,000.00	09/01/2019	100.000
	09/01/2034	4.700%	295,000.00	09/01/2019	100.000
TERM39	09/01/2035	4.750%	310,000.00	09/01/2019	100.000
	09/01/2036	4.750%	330,000.00	09/01/2019	100.000
	09/01/2037	4.750%	345,000.00	09/01/2019	100.000
	09/01/2038	4.750%	365,000.00	09/01/2019	100.000
	09/01/2039	4.750%	380,000.00	09/01/2019	100.000
			7,405,000.00		
			71,065,000.00		

ESCROW REQUIREMENTS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Period Ending	Interest	Principal Redeemed	Total
09/01/2016	1,617,775.00		1,617,775.00
03/01/2017	1,617,775.00		1,617,775.00
09/01/2017	1,617,775.00		1,617,775.00
03/01/2018	1,617,775.00		1,617,775.00
09/01/2018	1,617,775.00	63,660,000.00	65,277,775.00
03/01/2019	157,328.13		157,328.13
09/01/2019	157,328.13	7,405,000.00	7,562,328.13
	8,403,531.26	71,065,000.00	79,468,531.26

ESCROW DESCRIPTIONS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Type of Security	CUSIP or ID	Type of SLGS	Maturity Date	First Int Pmt Date	Par Amount	Rate	Max Rate	Yield	Price	Dated Date	Interest Class
Jun 1, 2016:											
TBill	912796JH3		09/01/2016		1,365,000			0.485%	99.877903	03/03/2016	Discount
TNote	912828MS6		02/28/2017		1,220,000	3.000%		0.703%	101.708355		Periodic
TNote	912828NW6		08/31/2017		1,238,000	1.875%		0.810%	101.318539		Periodic
TNote	912828PY0		02/28/2018		1,250,000	2.750%		0.849%	103.289414		Periodic
SLGS		Note	09/01/2018	09/01/2016	64,927,347	0.890%	0.890%				
TNote	912828SH4		02/28/2019		96,000	1.375%		0.996%	101.024162		Periodic
TNote	912828D80		08/31/2019		7,501,000	1.625%		1.110%	101.637547		Periodic
					77,597,347						

ESCROW DESCRIPTIONS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

	Maturity Date	Interest Frequency	Interest Day Basis
Jun 1, 2016:			
	09/01/2016	Semiannual	ACT/360
	02/28/2017	Semiannual	ACT/ACT
	08/31/2017	Semiannual	ACT/ACT
	02/28/2018	Semiannual	ACT/ACT
	09/01/2018		
	02/28/2019	Semiannual	ACT/ACT
	08/31/2019	Semiannual	ACT/ACT

ESCROW DESCRIPTIONS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

SLGS Summary

SLGS Rates File	04MAR16
Total Notes	64,927,347.00

ESCROW STATISTICS

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Total Escrow Cost	Modified Duration (years)	Yield to Receipt Date	Yield to Disbursement Date	Perfect Escrow Cost	Value of Negative Arbitrage	Cost of Dead Time
Global Proceeds Escrow:						
77,852,985.54	2.232	0.917821%	0.917695%	76,024,954.70	1,827,561.60	469.24
77,852,985.54				76,024,954.70	1,827,561.60	469.24

Delivery date	06/01/2016
Arbitrage yield	1.985772%

BOND DEBT SERVICE

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Period Ending	Principal	Coupon	Interest	Debt Service
09/30/2016			790,687.50	790,687.50
09/30/2017			3,162,750.00	3,162,750.00
09/30/2018			3,162,750.00	3,162,750.00
09/30/2019	4,005,000	5.000%	3,162,750.00	7,167,750.00
09/30/2020	4,610,000	5.000%	2,962,500.00	7,572,500.00
09/30/2021	4,915,000	5.000%	2,732,000.00	7,647,000.00
09/30/2022	5,235,000	5.000%	2,486,250.00	7,721,250.00
09/30/2023	5,535,000	5.000%	2,224,500.00	7,759,500.00
09/30/2024	3,750,000	5.000%	1,947,750.00	5,697,750.00
09/30/2025	4,095,000	5.000%	1,760,250.00	5,855,250.00
09/30/2026	5,125,000	5.000%	1,555,500.00	6,680,500.00
09/30/2027	10,880,000	5.000%	1,299,250.00	12,179,250.00
09/30/2028	14,985,000	5.000%	755,250.00	15,740,250.00
09/30/2029	150,000	4.000%	6,000.00	156,000.00
	63,285,000		28,008,187.50	91,293,187.50

PRIOR BOND DEBT SERVICE

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Period Ending	Principal	Coupon	Interest	Debt Service
09/30/2016			1,617,775.00	1,617,775.00
09/30/2017			3,235,550.00	3,235,550.00
09/30/2018			3,235,550.00	3,235,550.00
09/30/2019	4,485,000	4.000%	3,235,550.00	7,720,550.00
09/30/2020	5,070,000	** %	3,056,150.00	8,126,150.00
09/30/2021	5,345,000	** %	2,855,475.00	8,200,475.00
09/30/2022	5,645,000	** %	2,630,975.00	8,275,975.00
09/30/2023	5,955,000	** %	2,357,793.76	8,312,793.76
09/30/2024	4,180,000	** %	2,069,106.26	6,249,106.26
09/30/2025	4,525,000	** %	1,883,631.26	6,408,631.26
09/30/2026	5,550,000	** %	1,682,206.26	7,232,206.26
09/30/2027	11,305,000	** %	1,428,425.00	12,733,425.00
09/30/2028	15,400,000	** %	895,475.00	16,295,475.00
09/30/2029	540,000	4.250%	167,870.00	707,870.00
09/30/2030	240,000	4.700%	144,920.00	384,920.00
09/30/2031	255,000	4.700%	133,640.00	388,640.00
09/30/2032	265,000	4.700%	121,655.00	386,655.00
09/30/2033	280,000	4.700%	109,200.00	389,200.00
09/30/2034	295,000	4.700%	96,040.00	391,040.00
09/30/2035	310,000	4.750%	82,175.00	392,175.00
09/30/2036	330,000	4.750%	67,450.00	397,450.00
09/30/2037	345,000	4.750%	51,775.00	396,775.00
09/30/2038	365,000	4.750%	35,387.50	400,387.50
09/30/2039	380,000	4.750%	18,050.00	398,050.00
	71,065,000		31,211,825.04	102,276,825.04

ESCROW CASH FLOW

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Date	Principal	Interest	Net Escrow Receipts	Present Value to 06/01/2016 @ 0.9178212%
08/31/2016		108,699.38	108,699.38	108,450.82
09/01/2016	1,365,000.00	144,463.35	1,509,463.35	1,506,011.68
02/28/2017	1,220,000.00	108,699.38	1,328,699.38	1,319,705.96
03/01/2017		288,926.69	288,926.69	286,949.17
08/31/2017	1,238,000.00	90,399.38	1,328,399.38	1,313,280.52
09/01/2017		288,926.69	288,926.69	285,638.34
02/28/2018	1,250,000.00	78,793.13	1,328,793.13	1,307,768.55
03/01/2018		288,926.69	288,926.69	284,333.50
08/31/2018		61,605.63	61,605.63	60,349.31
09/01/2018	64,927,347.00	288,926.69	65,216,273.69	63,886,322.84
02/28/2019	96,000.00	61,605.63	157,605.63	153,698.04
08/31/2019	7,501,000.00	60,945.63	7,561,945.63	7,340,210.82
	77,597,347.00	1,870,918.27	79,468,265.27	77,852,719.55

Escrow Cost Summary

Purchase date	06/01/2016
Purchase cost of securities	77,852,719.55
Target for yield calculation	77,852,719.55

SAVINGS BY MATURITY

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Bond	Maturity Date	Interest Rate	Par Amount	Adjusted Savings	Adjusted Savings Percent
Ser 2008, Pub Imp Bds, 2008:					
SER	09/01/2019	4.000%	3,960,000.00	81,885.83	2.068%
	09/01/2020	4.000%	4,175,000.00	181,021.77	4.336%
	09/01/2021	4.250%	4,405,000.00	299,587.71	6.801%
	09/01/2022	5.000%	4,650,000.00	518,409.67	11.149%
	09/01/2023	5.000%	4,905,000.00	627,332.50	12.790%
	09/01/2024	4.500%	3,075,000.00	353,645.78	11.501%
	09/01/2025	4.500%	3,360,000.00	416,887.16	12.407%
	09/01/2026	4.625%	4,325,000.00	611,269.75	14.133%
	09/01/2027	4.750%	10,015,000.00	1,378,063.83	13.760%
	09/01/2028	4.750%	14,035,000.00	1,757,735.55	12.524%
			56,905,000.00	6,225,839.55	
Ser 2008, C/O, 2008_CO:					
SER	09/01/2019	4.000%	525,000.00	11,061.67	2.107%
	09/01/2020	4.000%	555,000.00	23,891.04	4.305%
	09/01/2021	4.250%	585,000.00	39,881.47	6.817%
	09/01/2022	4.375%	615,000.00	54,011.38	8.782%
	09/01/2023	4.375%	650,000.00	64,354.93	9.901%
	09/01/2024	4.500%	685,000.00	78,588.68	11.473%
	09/01/2025	4.500%	725,000.00	89,645.15	12.365%
TERM28	09/01/2026	4.625%	760,000.00	107,145.64	14.098%
	09/01/2027	4.625%	805,000.00	102,317.77	12.710%
	09/01/2028	4.625%	850,000.00	96,780.92	11.386%
			6,755,000.00	667,678.64	
Ser 2009, C/O, 2009_CO:					
SER	09/01/2020	3.375%	340,000.00	4,867.13	1.432%
	09/01/2021	3.500%	355,000.00	10,241.63	2.885%
	09/01/2022	3.625%	380,000.00	15,254.60	4.014%
	09/01/2023	3.750%	400,000.00	18,909.91	4.727%
	09/01/2024	3.875%	420,000.00	24,297.04	5.785%
	09/01/2025	4.000%	440,000.00	30,009.41	6.820%
	09/01/2026	4.000%	465,000.00	33,576.20	7.221%
	09/01/2027	4.125%	485,000.00	30,404.72	6.269%
	09/01/2028	4.200%	515,000.00	26,614.52	5.168%
	09/01/2029	4.250%	540,000.00	65,787.58	12.183%
TERM34	09/01/2030	4.700%	240,000.00	46,849.26	19.521%
	09/01/2031	4.700%	255,000.00	55,589.97	21.800%
	09/01/2032	4.700%	265,000.00	62,571.54	23.612%
	09/01/2033	4.700%	280,000.00	72,709.10	25.968%
	09/01/2034	4.700%	295,000.00	81,524.26	27.635%
TERM39	09/01/2035	4.750%	310,000.00	93,450.31	30.145%
	09/01/2036	4.750%	330,000.00	106,390.75	32.240%
	09/01/2037	4.750%	345,000.00	116,124.17	33.659%
	09/01/2038	4.750%	365,000.00	130,444.19	35.738%
	09/01/2039	4.750%	380,000.00	143,013.83	37.635%
			7,405,000.00	1,168,630.12	
			71,065,000.00	8,062,148.31	

SAVINGS BY MATURITY

City of Austin, Texas
Public Improvement Refunding Bonds
Market as of March 4, 2016

Note: Calculated Using Remaining Maturities

City of Austin, Texas

General Obligation Bonds Refunding Analysis

Issue Description: **TAXABLE Advance Refunding of Public Improvement Refunding Bonds, Series 2008**

- Assumed Delivery: 06/01/2016
- Assumes Current Interest Rates
- Assumes "Aaa/AAA/AAA" Underlying Ratings

Estimated Refunding Results & Rate Movement Sensitivity			
	Current Rates 3/4/2016	Rate Decrease of 30 bps	Rate Increase of 30 bps
Total Savings	$2,049,418	$2,284,751	$1,810,963
PV Savings	$1,980,969	$2,226,682	$1,739,214
% PV Savings	5.28%	5.93%	4.63%
Refunded Par	$37,525,000	$37,525,000	$37,525,000
Negative Arbitrage	($322,029)	($323,068)	($321,037)
"All-In" TIC	1.73%	1.43%	2.03%

Bonds to be Refunded	Principal Refunded	Maturities Refunded	Refunded Bonds Call Date
Public Improvement Refunding Bonds, Series 2008	$37,525,000	2018-2021	09/01/17 @ 100%

City of Austin, Texas

General Obligation Bonds Refunding Analysis

Assumed Delivery Date: 6/1/2016

Debt Service Savings Report - Current Interest Rates

Assumes Taxable Issuance

Fiscal Year Ending 9/30	Total Bonds to be Refunded			Series 2016 Taxable Refunding Bonds				Debt Service Savings
	Principal	Interest	Total	Principal	Yield	Interest	Total	
2016		$938,125	$938,125			$602,663	$602,663 (1)	$335,462
2017		1,876,250	1,876,250	$980,000	1.043%	553,356	1,533,356	342,895
2018	$17,800,000	1,876,250	19,676,250	18,790,000	1.183%	543,134	19,333,134	343,116
2019	5,505,000	986,250	6,491,250	5,830,000	1.405%	320,848	6,150,848	340,402
2020	8,140,000	711,000	8,851,000	8,270,000	1.577%	238,937	8,508,937	342,063
2021	6,080,000	304,000	6,384,000	5,930,000	1.830%	108,519	6,038,519	345,481
Totals	**$37,525,000**	**$6,691,875**	**$44,216,875**	**$39,800,000**		**$2,367,457**	**$42,167,457**	**$2,049,418**

(1) Includes accrued interest on refunded bonds of $469,063

Present Value Debt Service Savings:	$ 1,980,969
PV Savings as a % of Refunded Principal:	5.28%

Negative Arbitrage in Escrow:	$ (322,029)

Bonds to be Refunded

	Principal Refunded	Maturities Refunded	Refunded Bonds Call Date
Public Improvement Refunding Bonds, Series 2008	$37,525,000	2018-2021	09/01/17 @ 100%

Analysis Dated: 03/04/16

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City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

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SOURCES AND USES OF FUNDS

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Sources:	
Bond Proceeds:	
Par Amount	39,800,000.00
Other Sources of Funds:	
Accrued Interest on Refunded Bonds	469,062.50
	40,269,062.50

Uses:	
Refunding Escrow Deposits:	
Cash Deposit	481.86
Open Market Purchases	39,946,422.66
	39,946,904.52
Delivery Date Expenses:	
Cost of Issuance	139,300.00
Underwriter's Discount	178,120.00
	317,420.00
Other Uses of Funds:	
Additional Proceeds	4,737.98
	40,269,062.50

SUMMARY OF REFUNDING RESULTS

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Dated Date	06/01/2016
Delivery Date	06/01/2016
Arbitrage yield	1.476391%
Escrow yield	0.806438%
Value of Negative Arbitrage	321,905.60
Bond Par Amount	39,800,000.00
True Interest Cost	1.619258%
Net Interest Cost	1.616758%
All-In TIC	1.731572%
Average Coupon	1.478391%
Average Life	3.234
Par amount of refunded bonds	37,525,000.00
Average coupon of refunded bonds	5.000000%
Average life of refunded bonds	3.317
PV of prior debt to 06/01/2016 @ 1.476391%	42,245,293.06
Net PV Savings	1,980,968.54
Percentage savings of refunded bonds	5.279063%
Percentage savings of refunding bonds	4.977308%

SAVINGS

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Date	Prior Debt Service	Prior Receipts	Prior Net Cash Flow	Refunding Debt Service	Savings	Present Value to 06/01/2016 @ 1.4763909%
09/30/2016	938,125.00	469,062.50	469,062.50	138,338.88	330,723.62	327,787.87
09/30/2017	1,876,250.00		1,876,250.00	1,533,355.50	342,894.50	341,441.09
09/30/2018	19,676,250.00		19,676,250.00	19,333,134.10	343,115.90	336,706.05
09/30/2019	6,491,250.00		6,491,250.00	6,150,848.40	340,401.60	326,852.40
09/30/2020	8,851,000.00		8,851,000.00	8,508,936.90	342,063.10	322,970.14
09/30/2021	6,384,000.00		6,384,000.00	6,038,519.00	345,481.00	320,473.02
	44,216,875.00	469,062.50	43,747,812.50	41,703,132.78	2,044,679.72	1,976,230.56

Savings Summary

PV of savings from cash flow	1,976,230.56
Plus: Refunding funds on hand	4,737.98
Net PV Savings	1,980,968.54

BOND SUMMARY STATISTICS

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Dated Date	06/01/2016
Delivery Date	06/01/2016
Last Maturity	09/01/2021
Arbitrage Yield	1.476391%
True Interest Cost (TIC)	1.619258%
Net Interest Cost (NIC)	1.616758%
All-In TIC	1.731572%
Average Coupon	1.478391%
Average Life (years)	3.234
Duration of Issue (years)	3.163
Par Amount	39,800,000.00
Bond Proceeds	39,800,000.00
Total Interest	1,903,132.78
Net Interest	2,081,252.78
Total Debt Service	41,703,132.78
Maximum Annual Debt Service	19,333,134.10
Average Annual Debt Service	7,943,453.86
Underwriter's Fees (per $1000)	
Average Takedown	3.475377
Other Fee	1.000000
Total Underwriter's Discount	4.475377
Bid Price	99.552462

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Serial Bonds	39,800,000.00	100.000	1.478%	3.234	12,413.40
	39,800,000.00			3.234	12,413.40

	TIC	All-In TIC	Arbitrage Yield
Par Value	39,800,000.00	39,800,000.00	39,800,000.00
+ Accrued Interest			
+ Premium (Discount)			
- Underwriter's Discount	-178,120.00	-178,120.00	
- Cost of Issuance Expense		-139,300.00	
- Other Amounts			
Target Value	39,621,880.00	39,482,580.00	39,800,000.00
Target Date	06/01/2016	06/01/2016	06/01/2016
Yield	1.619258%	1.731572%	1.476391%

BOND PRICING

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Bond Component	Maturity Date	Amount	Rate	Yield	Price
Serial Bonds:					
	09/01/2017	980,000	1.043%	1.043%	100.000
	09/01/2018	18,790,000	1.183%	1.183%	100.000
	09/01/2019	5,830,000	1.405%	1.405%	100.000
	09/01/2020	8,270,000	1.577%	1.577%	100.000
	09/01/2021	5,930,000	1.830%	1.830%	100.000
		39,800,000			

Dated Date	06/01/2016	
Delivery Date	06/01/2016	
First Coupon	09/01/2016	
Par Amount	39,800,000.00	
Original Issue Discount		
Production	39,800,000.00	100.000000%
Underwriter's Discount	-178,120.00	-0.447538%
Purchase Price	39,621,880.00	99.552462%
Accrued Interest		
Net Proceeds	39,621,880.00	

SUMMARY OF BONDS REFUNDED

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Bond	Maturity Date	Interest Rate	Par Amount	Call Date	Call Price
Ser 2008, Pub Imp Ref Bds, 2008R:					
SER	09/01/2018	5.000%	17,800,000.00	09/01/2017	100.000
	09/01/2019	5.000%	5,505,000.00	09/01/2017	100.000
	09/01/2020	5.000%	8,140,000.00	09/01/2017	100.000
	09/01/2021	5.000%	6,080,000.00	09/01/2017	100.000
			37,525,000.00		

ESCROW REQUIREMENTS

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Period Ending	Interest	Principal Redeemed	Total
09/01/2016	938,125.00		938,125.00
03/01/2017	938,125.00		938,125.00
09/01/2017	938,125.00	37,525,000.00	38,463,125.00
	2,814,375.00	37,525,000.00	40,339,375.00

ESCROW DESCRIPTIONS

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

	Type of Security	CUSIP or ID	Maturity Date	Par Amount	Rate	Yield	Price	Dated Date	Interest Class	Interest Frequency	Interest Day Basis
Jun 1, 2016:											
	TBill	912796JH3	09/01/2016	572,000		0.485%	99.877903	03/03/2016	Discount	Semiannual	ACT/360
	TNote	912828MS6	02/28/2017	573,000	3.000%	0.703%	101.708355		Periodic	Semiannual	ACT/ACT
	TNote	912828NW6	08/31/2017	38,105,000	1.875%	0.810%	101.318539		Periodic	Semiannual	ACT/ACT
				39,250,000							

ESCROW STATISTICS

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Total Escrow Cost	Modified Duration (years)	Yield to Receipt Date	Yield to Disbursement Date	Perfect Escrow Cost	Value of Negative Arbitrage	Cost of Dead Time
Global Proceeds Escrow:						
39,946,904.52	1.210	0.806438%	0.806300%	39,624,875.51	321,905.60	123.41
39,946,904.52				39,624,875.51	321,905.60	123.41

Delivery date	06/01/2016
Arbitrage yield	1.476391%

BOND DEBT SERVICE

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Period Ending	Principal	Coupon	Interest	Debt Service
09/30/2016			138,338.88	138,338.88
09/30/2017	980,000	1.043%	553,355.50	1,533,355.50
09/30/2018	18,790,000	1.183%	543,134.10	19,333,134.10
09/30/2019	5,830,000	1.405%	320,848.40	6,150,848.40
09/30/2020	8,270,000	1.577%	238,936.90	8,508,936.90
09/30/2021	5,930,000	1.830%	108,519.00	6,038,519.00
	39,800,000		1,903,132.78	41,703,132.78

PRIOR BOND DEBT SERVICE

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Period Ending	Principal	Coupon	Interest	Debt Service
09/30/2016			938,125	938,125
09/30/2017			1,876,250	1,876,250
09/30/2018	17,800,000	5.000%	1,876,250	19,676,250
09/30/2019	5,505,000	5.000%	986,250	6,491,250
09/30/2020	8,140,000	5.000%	711,000	8,851,000
09/30/2021	6,080,000	5.000%	304,000	6,384,000
	37,525,000		6,691,875	44,216,875

ESCROW CASH FLOW

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Date	Principal	Interest	Net Escrow Receipts	Present Value to 06/01/2016 @ 0.8064380%
08/31/2016		365,829.38	365,829.38	365,094.06
09/01/2016	572,000.00		572,000.00	570,850.27
02/28/2017	573,000.00	365,829.38	938,829.38	933,242.15
08/31/2017	38,105,000.00	357,234.38	38,462,234.38	38,077,236.19
	39,250,000.00	1,088,893.14	40,338,893.14	39,946,422.66

Escrow Cost Summary

Purchase date	06/01/2016
Purchase cost of securities	39,946,422.66
Target for yield calculation	39,946,422.66

SAVINGS BY MATURITY

City of Austin, Texas
Taxable Public Improvement Refunding Bonds
Market as of March 4, 2016

Bond	Maturity Date	Interest Rate	Par Amount	Adjusted Savings	Adjusted Savings Percent
Ser 2008, Pub Imp Ref Bds, 2008R:					
SER	09/01/2018	5.000%	17,800,000.00	427,002.11	2.399%
	09/01/2019	5.000%	5,505,000.00	295,061.85	5.360%
	09/01/2020	5.000%	8,140,000.00	653,636.51	8.030%
	09/01/2021	5.000%	6,080,000.00	605,268.07	9.955%
			37,525,000.00	1,980,968.54	

Note: Calculated Using Remaining Maturities

APPENDIX F

Raymond James Financial Reports

Index

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended September 30, 2015
Or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____
Commission file number 1-9109
RAYMOND JAMES FINANCIAL, INC.
(Exact name of registrant as specified in its charter)

Florida (State or other jurisdiction of incorporation or organization)	No. 59-1517485 (I.R.S. Employer Identification No.)
880 Carillon Parkway, St. Petersburg, Florida (Address of principal executive offices)	33716 (Zip Code)
Registrant's telephone number, including area code	(727) 567-1000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $.01 Par Value	New York Stock Exchange
6.90% Senior Notes Due 2042	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (Section 232.405) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (Section 229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of March 31, 2015, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant computed by reference to the price at which the common stock was last sold was $7,216,031,146.

The number of shares outstanding of the registrant's common stock as of November 20, 2015 was 143,148,705.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held February 18, 2016 are incorporated by reference into Part III.

RAYMOND JAMES FINANCIAL, INC.
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PART I

Item 1. BUSINESS

Raymond James Financial, Inc. ("RJF" or the "Company") is a financial holding company whose broker-dealer subsidiaries are engaged in various financial services businesses, including the underwriting, distribution, trading and brokerage of equity and debt securities and the sale of mutual funds and other investment products. In addition, other subsidiaries of RJF provide investment management services for retail and institutional clients, corporate and retail banking, and trust services.

Established in 1962 and public since 1983, RJF has been listed on the New York Stock Exchange (the "NYSE") since 1986 under the symbol "RJF". As a financial holding company, RJF is subject to the oversight and periodic examination of the Board of Governors of the Federal Reserve System (the "Fed").

Through its operations which are predominately conducted in the United States of America (the "U.S.") and Canada, RJF's principal subsidiaries include Raymond James & Associates, Inc. ("RJ&A"), Raymond James Financial Services, Inc. ("RJFS"), Raymond James Financial Services Advisors, Inc. ("RJFSA"), Raymond James Ltd. ("RJ Ltd."), Eagle Asset Management, Inc. ("Eagle"), and Raymond James Bank, N.A. ("RJ Bank"). All of these subsidiaries are wholly owned by RJF. RJF and its subsidiaries are hereinafter collectively referred to as "our," "we" or "us."

Among the keys to our historical and continued success, our emphasis on putting the client first is at the core of our corporate values. We also believe in maintaining a conservative, long-term focus in our decision making. We believe that this disciplined decision-making approach translates to a strong, stable financial services firm for clients, advisors, associates and shareholders.

REPORTABLE SEGMENTS

We currently operate through four operating segments and our "Other" segment. The four operating segments include "Private Client Group" (or "PCG"), "Capital Markets," "Asset Management," and RJ Bank. The Other segment captures principal capital and private equity activities as well as certain corporate overhead costs of RJF.

The graphic below provides an indication of the relative net revenue contribution associated with each of our operating segments in the most recent fiscal year.

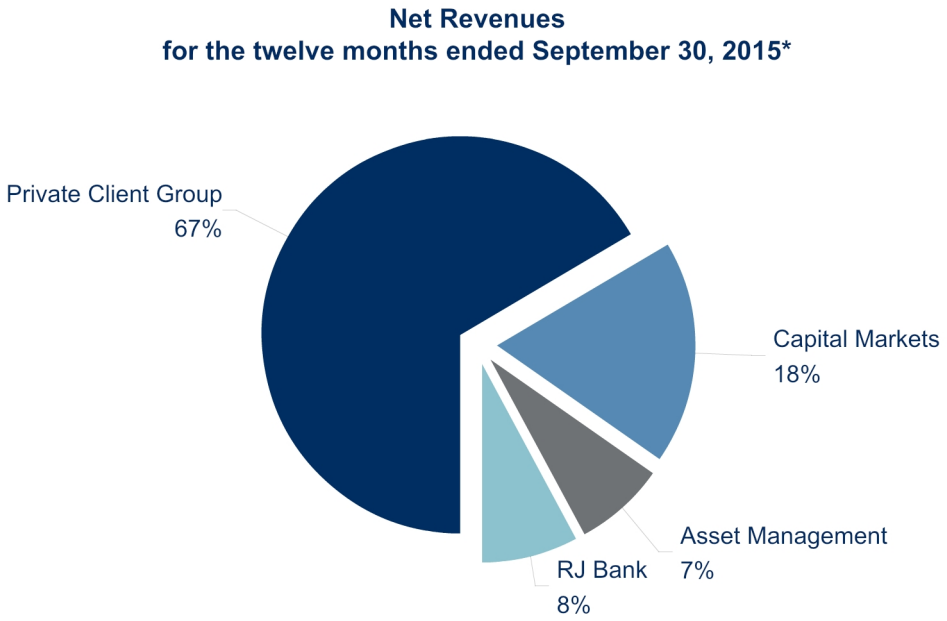


*Chart above does not include intersegment eliminations or the Other segment.

PRIVATE CLIENT GROUP

We provide financial planning and securities transaction services to more than 2.7 million client accounts through the branch office systems of RJ&A, RJFS, RJFSA, RJ Ltd. and in the United Kingdom ("UK") through Raymond James Investment Services Limited ("RJIS"). Financial advisors have multiple affiliation options, which we refer to as AdvisorChoice.

Experienced financial advisors are recruited from a wide variety of competitors. As a part of their agreement to join us, we may make loans to financial advisors and to certain key revenue producers, primarily for recruiting, transitional cost assistance, and retention purposes.

Our two primary affiliation options are either the employee or an independent contractor financial advisor option.

Total assets under administration in the PCG segment as of September 30, 2015 amount to $453.3 billion. We have 6,596 financial advisors affiliated with us as of September 30, 2015.

Employee Financial Advisors

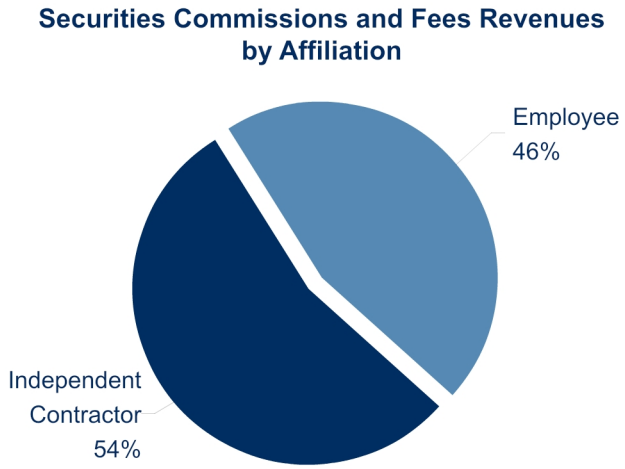
Traditional employee financial advisors work in a traditional branch setting supported by local management and administrative staff. They provide services predominately to individual clients. These financial advisors are employees and their compensation primarily includes commission payments and participation in the firm's benefit plans.

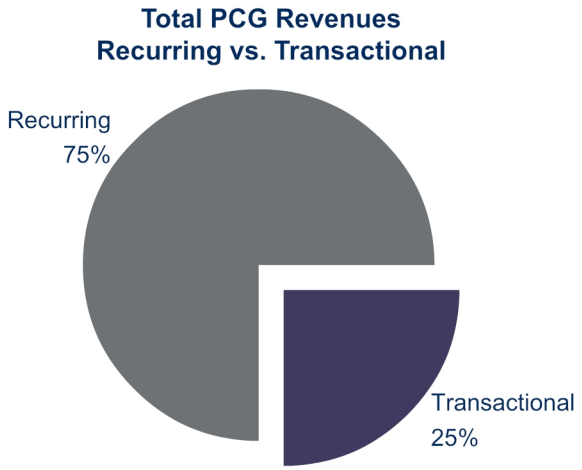
Independent Contractors

Independent contractors are responsible for all of their direct costs and, accordingly, are paid a larger percentage of commissions and fees than employee financial advisors. Our independent contractor financial advisor option is designed to help our advisors build their businesses with as much or as little of our support as they determine they need. With specific approval, they are permitted to conduct, on a limited basis, certain other approved business activities such as offering insurance products, independent registered investment advisory services, and accounting and tax services.

Over the past several fiscal years, the mix of securities commissions and fees revenues originating from the employee versus the independent contractor affiliation option has become more balanced, partially due to our fiscal year 2012 acquisition of Morgan Keegan (as hereinafter defined) which operated an employee financial advisor business model. Irrespective of the affiliation choice, our financial advisors offer a broad range of investments and services, including both third party and proprietary products, and a variety of financial planning services. Revenues of this segment are typically driven by total client assets under administration, and are generally either recurring fee-based or transactional in nature.

Securities commissions and fees revenues by affiliation, as well as the portion of total segment revenues that are recurring versus transactional in nature, for the twelve months ended September 30, 2015, respectively, are presented below:





A summary of the services we provide that are captured in this segment include the following:

- We provide investment services for which we charge sales commissions or asset-based fees based on established schedules.

- We offer investment advisory services under various financial advisor affiliation options. Fee revenues for such services are computed as either a percentage of the assets in the client account, or a flat periodic fee charged to the client for investment advice.

- The majority of our U.S. financial advisors are licensed to sell insurance and annuity products through our general insurance agency, Raymond James Insurance Group, Inc. ("RJIG").

- Our U.S. financial advisors offer a number of professionally managed load mutual funds, as well as a selection of no-load mutual funds.

- Clients' transactions in securities are affected on either a cash or margin basis. These margin loans to clients are collateralized by the securities purchased or by other securities owned by the client. Interest is charged to clients on the amount borrowed. The interest rate charged to a client on a margin loan is based on current interest rates and on the outstanding amount of the loan.

- We provide certain custodial, trading, research and other back office support and services (including access to clients' account information and the services of the Asset Management segment) to the independent contractor registered investment advisors with whom we are affiliated.

- We conduct securities lending activities through our RJ&A subsidiary, where we borrow and lend securities from and to other broker-dealers, financial institutions, and other counterparties. Generally, we conduct these activities as an intermediary (referred to as "Matched Book"). However, RJ&A will also loan client marginable securities held in a margin account containing a debit (referred to as lending from the "Box") to counterparties. The borrower of the securities puts up a cash deposit on which interest is earned. The lender in turn receives cash and pays interest. The net revenues of the securities lending business are the interest spreads generated on these activities.

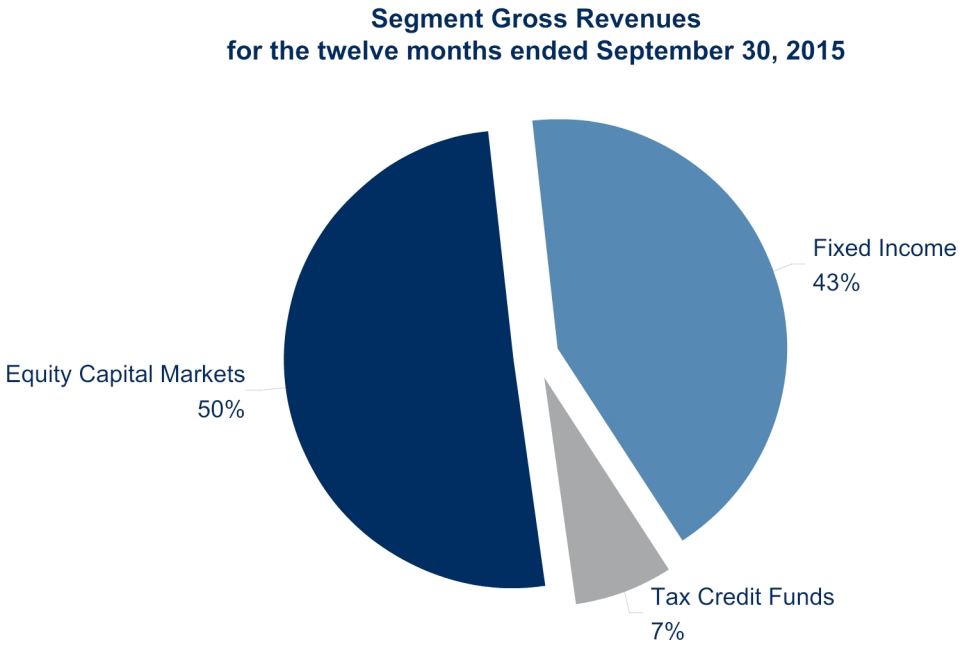
- Through our Alternative Investments Group, we provide diversification strategies and products to qualified clients of our affiliated financial advisors. The Alternative Investments Group provides strategies and products for portfolio investment allocation opportunities where a selective addition of alternative investments that have historically demonstrated lower correlation to traditional market indices may reduce overall portfolio volatility through diversification and increase long-term portfolio performance through a variety of market conditions.

.

CAPITAL MARKETS

Activities conducted in our capital markets segment include: institutional sales, securities trading, equity research, investment banking, syndicate, and the syndication of investments that qualify for tax credits under Section 42 of the Internal Revenue Code. Within our management structure, we distinguish between activities that support equity and fixed income products and services. We primarily conduct these activities in the U.S., Canada, and Europe.

The graphic below provides an indication of the relative portion of this segment's revenues that are associated with equity securities and products, fixed income securities and products, and our tax credit fund syndication activities.



A summary of the services we provide that are captured in this segment include the following:

Equity Capital Markets activities

- Institutional sales commissions are earned on equity products fueled by a combination of general market activity and the Capital Markets group's ability to identify and promote attractive investment opportunities for our institutional clients. Commission amounts on equity transactions are based on trade size and the amount of business conducted annually with each institution.

- We provide various investment banking services through activities including public and private equity financing for corporate clients, and merger and acquisition advisory services. Our investment banking activities provide a comprehensive range of strategic and financial advisory services tailored to our clients' business life cycles and backed by our strategic industry focus.

- In our syndicate operations, professionals coordinate the marketing, distribution, pricing and stabilization of lead and co-managed equity underwritings. In addition to lead and co-managed offerings, this department coordinates the firm's syndicate and selling group activities in transactions managed by other investment banking firms.

- Analysts in our domestic research department support our institutional and retail sales efforts and publish research on certain companies. This research primarily focuses on U.S. and Canadian companies in specific industries including agricultural, consumer, energy, clean energy, energy services, financial services, healthcare, industrial, mining and natural resources, forest products, real estate, technology, and communication and transportation. Proprietary industry studies and company-specific research reports are made available to both institutional and individual clients.

Fixed Income activities

- Institutional sales commissions are earned on fixed income products from institutional clients who purchase both taxable and tax-exempt fixed income products, primarily municipal, corporate, government agency and mortgage-backed bonds. Commission amounts on fixed income products are based on trade size and the characteristics of the specific security involved.

- We carry inventories of taxable and tax-exempt securities to facilitate institutional sales activities. We trade both taxable and tax-exempt fixed income securities primarily for the purpose of facilitating such sales. The taxable and tax-exempt fixed income traders purchase and sell corporate, municipal, government, government agency, and mortgage-backed bonds, asset-backed securities, preferred stock, and certificates of deposit from and to our clients or other dealers.

- Our fixed income investment banking services include public finance and debt underwriting activities where we serve as a financial advisor, placement agent or underwriter to various issuers who include municipal agencies (including political subdivisions), housing developers, and non-profit health care institutions. We may also act as a consultant, underwriter, or selling group member for corporate bonds, mortgage-backed securities ("MBS"), whole loans, agency bonds, preferred stock and unit investment trusts. When underwriting new issue securities, we may agree to purchase the issue through a negotiated sale or submit a competitive bid.

- To facilitate client transactions, hedge a portion of our fixed income securities inventories, or to a limited extent for our own account, we enter into interest rate swaps, futures contracts, and forward foreign exchange contracts as part of our fixed income business activities. In addition, we conduct a "matched book" derivatives business where we may enter into derivative transactions, including interest rate swaps, options, and combinations of those instruments, primarily with government entities and not-for-profit counterparties. In this matched book business, for every derivative transaction we enter into with a client, we enter into an offsetting derivative transaction with a credit support provider who is a third party financial institution.

- Through our fixed income public finance operations, we enter into forward commitments to purchase Government National Mortgage Association ("GNMA"), or Federal National Mortgage Association ("FNMA"), MBS. The MBS securities are issued on behalf of various state and local housing finance agencies ("HFA") clients and consist of the mortgages originated through their lending programs.

Tax Credit Fund investment syndication activities

- In our syndication of tax credit investments, one of our subsidiaries is the general partner or managing member in partnerships and limited liability companies that invest in real estate project entities which qualify for tax credits under Section 42 of the Internal Revenue Code. We earn fees for the origination and sale of these investment products to investors as well as for oversight and management of the investments over the statutory tax credit compliance period.

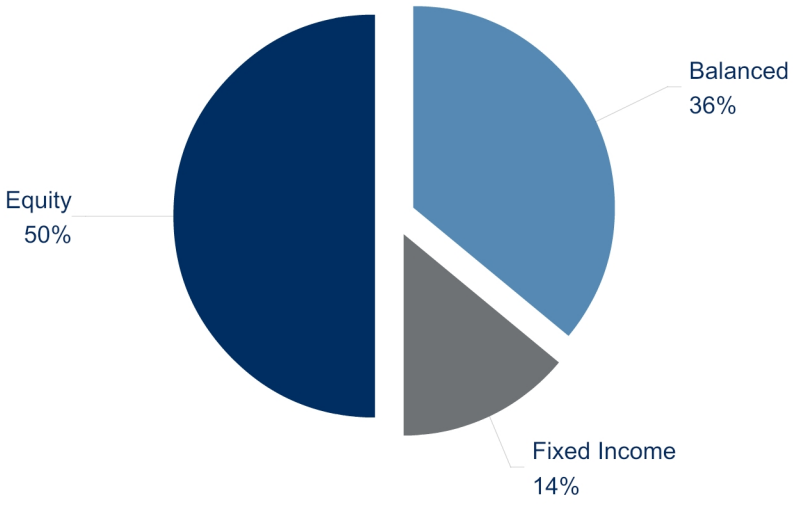
ASSET MANAGEMENT

Our Asset Management segment operations include Eagle, the Eagle Family of Funds ("Eagle Funds"), asset management operations conducted within our asset management services division for the benefit of our PCG clients (referred to as "AMS"), Raymond James Trust, National Association ("RJ Trust") a wholly owned subsidiary of RJF, and other fee-based programs. We generate revenues in this segment by providing investment advisory and asset management services to either individual or institutional investment portfolios, along with mutual funds. Investment advisory fee revenues are earned on the assets held in either managed or non-discretionary asset-based programs. As of September 30, 2015, there were $65.2 billion in financial assets held in managed programs and $91.0 billion in financial assets held in non-discretionary asset-based programs.

In managed programs, we are making decisions, in accordance with such programs objectives, about how to invest the assets held in such programs. In non-discretionary asset-based programs, we are providing administrative support to each plan, providing as an example, trade execution, record-keeping, and periodic investor reporting, for assets held in such programs. We generally earn higher fees for managed programs than we do for non-discretionary asset-based programs, which is to be expected given that additional services are provided to managed programs, most notably investment advice.

The graphic below provides the financial assets under management in managed programs by objective.

Financial Assets Under Management by Objective as of September 30, 2015

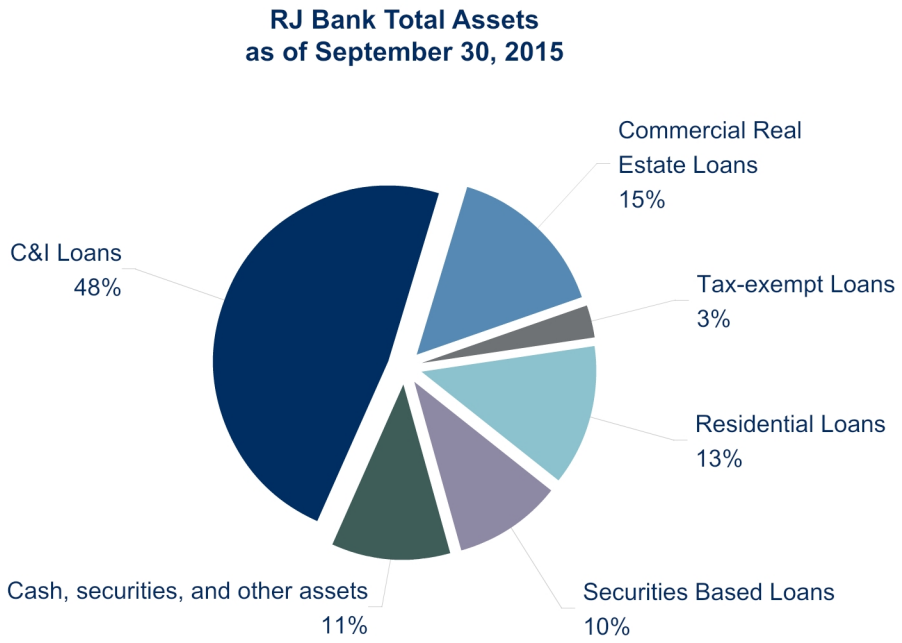


RJ BANK

RJ Bank provides corporate, securities based loans ("SBL") and residential loans, as well as Federal Deposit Insurance Corporation ("FDIC") insured deposit accounts, to clients of our broker-dealer subsidiaries and to the general public. RJ Bank is active in corporate loan syndications and participations. RJ Bank generates net interest revenue principally through the interest income earned on loans and investments, which is offset by the interest expense it pays on client deposits and on its borrowings.

RJ Bank operates primarily from a branch location adjacent to RJF's corporate office complex in St. Petersburg, Florida. Access to RJ Bank's products and services is available nationwide through the offices of our affiliated broker-dealers as well as through electronic banking services. RJ Bank's assets include commercial and industrial ("C&I") loans, commercial and residential real estate loans, tax-exempt loans, as well as loans fully collateralized by marketable securities. Corporate loans represent approximately 75% of RJ Bank's loan portfolio of which 90% are U.S. and Canadian syndicated loans. Residential mortgage loans are originated and held for investment or sold in the secondary market. RJ Bank's liabilities primarily consist of deposits that are cash balances swept from the investment accounts of PCG clients.

RJ Bank has total assets of $14.2 billion at September 30, 2015, which are comprised of the following:



OTHER

Our other segment includes our principal capital and private equity activities as well as certain corporate overhead costs of RJF including the interest cost on our public debt, and the acquisition and integration costs associated with our material acquisitions including, most significantly in fiscal years 2013 and 2012, Morgan Keegan (as hereinafter defined).

Our principal capital and private equity activities include various direct and third party private equity investments; employee investment funds (the "Employee Funds"); and various private equity funds which we sponsor.

On April 2, 2012 (the "Closing Date"), RJF completed its acquisition of all of the issued and outstanding shares of Morgan Keegan & Company, Inc. ("MK & Co."), and MK Holding, Inc. and certain of its affiliates (collectively referred to hereinafter as "Morgan Keegan") from Regions Financial Corporation ("Regions"). In mid-February 2013, we completed the transfer of all of the active businesses of MK & Co. to RJ&A.

EMPLOYEES AND INDEPENDENT CONTRACTORS

Our employees and independent contractors (collectively referred to hereinafter as "associates"), are vital to our success in the financial services industry. As of September 30, 2015, we had approximately 11,000 employees, and more than 3,850 independent contractor financial advisors with whom we are affiliated.

OPERATIONS AND INFORMATION PROCESSING

We have operations personnel who are responsible for the processing of securities transactions, custody of client securities, support of client accounts, receipt, identification and delivery of funds and securities, and compliance with certain regulatory and legal requirements for most of our U.S. securities brokerage operations through locations throughout the United States. RJ Ltd. operations personnel have similar responsibilities at our Canadian brokerage operations located in Vancouver, British Columbia.

The information technology department develops and supports the integrated solutions that provide a differentiated platform for our business. This platform is designed to allow our financial advisors to spend more time with their clients and enhance and grow their business.

In the area of information security, we have developed and implemented a framework of principles, policies and technology to protect both our own information assets as well as those we have pertaining to our clients. Safeguards are applied to maintain the confidentiality, integrity and availability of both client and Company information.

Our business continuity program has been developed to provide reasonable assurance of business continuity in the event of disruptions at our critical facilities. Business departments have developed operational plans for such disruptions, and we have a staff which devotes their full time to monitoring and facilitating those plans. Our business continuity plan continues to be enhanced and tested to allow for continuous business processing in the event of weather-related or other interruptions of operations at our corporate headquarters in Florida, or one of our operations processing or data center sites in Florida, Colorado, Tennessee and Michigan.

We have also developed a business continuity plan for each of our PCG retail branches in the event any of these branches are impacted by severe weather.

COMPETITION

We are engaged in intensely competitive businesses. We compete with many financial services firms, including a number of larger securities firms, most of which are affiliated with major financial services companies, insurance companies, banking institutions and other organizations. We also compete with a number of firms offering web-based financial services and discount brokerage services, usually with lower levels of service, to individual clients. We compete principally on the basis of the quality of our associates, service, product selection, location and reputation in local markets.

In the financial services industry, there is significant competition for qualified associates. Our ability to compete effectively in these businesses is substantially dependent on our continuing ability to attract, retain and motivate qualified associates, including successful financial advisors, investment bankers, trading professionals, portfolio managers and other revenue producing or specialized personnel.

REGULATION

RJF is subject to the oversight and periodic examination of the Fed. RJ Bank is a national bank regulated by the Office of the Comptroller of the Currency (“OCC”), the Fed, the FDIC, and the Consumer Financial Protection Bureau (“CFPB”). Our broker-dealer subsidiaries are subject to various regulatory authorities which are discussed in the “other regulations applicable to our operations” portion of this section.

The following discussion sets forth some of the material elements of the regulatory framework applicable to the financial services industry and provides some specific information relevant to us. The regulatory framework is intended primarily for the protection of our clients, customers, the securities markets, our depositors and the Federal Deposit Insurance Fund and not for the protection of our creditors or shareholders. Under certain circumstances, these rules may limit our ability to make capital withdrawals from RJ Bank or our broker-dealer subsidiaries.

To the extent that the following information describes statutory and regulatory provisions, it is qualified in its entirety by reference to the particular statutory and regulatory provisions. A change in applicable statutes, regulations or regulatory policy may have a material effect on our business.

The financial services industry in the United States is subject to extensive regulation under U.S. federal and state laws.

New rules and regulations resulting from the Dodd-Frank Act

In July 2010, the U.S. government enacted financial services reform legislation known as the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"). The Dodd-Frank Act enacted sweeping changes in the supervision and regulation of the financial industry designed to provide for greater oversight of financial industry participants, reduce risk in banking practices and in securities and derivatives trading, enhance public company corporate governance practices and executive compensation disclosures, and provide greater protections to individual consumers and investors. Certain elements of the Dodd-Frank Act became effective immediately; however, the details of some provisions remain subject to implementing regulations that are yet to be adopted by various applicable regulatory agencies. Furthermore, many provisions of the Dodd-Frank Act are still subject to further rule making procedures and studies and will take effect over several years.

The Dodd-Frank Act instructs U.S. federal banking and other regulatory agencies to conduct hundreds of rule-makings, studies and reports. These regulatory agencies include: the Commodity Futures Trading Commission (the "CFTC"); the Securities and Exchange Commission (the "SEC"); the Fed; the OCC; the FDIC; the CFPB; and the Financial Stability Oversight Council (the "FSOC"). As a result of Dodd-Frank Act rule-making and other regulatory reforms, we are currently experiencing a period of unprecedented change in financial regulation and these changes could have a significant impact on how we conduct certain aspects of our business. Given that much of this regulatory development remains in a state of flux, we cannot specifically quantify the potential impact that such regulations will have on our business and operations (see Item 1A, "Risk Factors," within this report for further discussion of the potential future impact on our operations). Some of the changes that have been enacted under the Dodd-Frank Act thus far include the following:

- Since RJ Bank provides deposits covered by FDIC insurance, generally up to $250,000 per account ownership type, RJ Bank is subject to the Federal Deposit Insurance Act. In February 2011, under the provisions of the Dodd-Frank Act, the FDIC issued a final rule changing its assessment base in addition to other minor adjustments. For banks with more than $10 billion in assets, the FDIC's new rule changed the assessment rate calculation, which relies on a scorecard designed to measure financial performance and ability to withstand stress in addition to measuring the FDIC's exposure should the bank fail. This new rule became effective for RJ Bank beginning with the December 2013 assessment period.

- In July 2011, pursuant to the Dodd-Frank Act, the CFPB began operations and was given rulemaking authority for a wide range of consumer protection laws that would apply to all banks and provide broad powers to supervise and enforce federal consumer protection laws. The CFPB has supervisory and enforcement powers under the following consumer protection laws: the Equal Credit Opportunity Act; the Truth in Lending Act; Real Estate Settlement Procedures Act; Fair Credit Reporting Act; Fair Debt Collection Act; the Consumer Financial Privacy provisions of the Gramm-Leach-Bliley Act and certain other statutes. At the beginning of fiscal year 2014, the CFPB assumed regulatory authority over RJ Bank for its compliance with various federal consumer protection laws. The CFPB has proposed and finalized many rules since its establishment; the majority of those became effective in early fiscal year 2014. The CFPB has authority to promulgate regulations, issue orders, draft policy statements, conduct examinations, and bring enforcement actions. The creation of the CFPB has led to enhanced enforcement of consumer protection laws. Although the ultimate impact of this heightened scrutiny is uncertain, it could result in changes to pricing, practices, products and procedures. It could also result in increased costs related to regulatory oversight, supervision and examination, remediation efforts and possible penalties.

- Moreover, in October 2012, under the provisions of the Dodd-Frank Act, the Fed, FDIC and OCC jointly issued final rules requiring certain bank holding companies, state member banks, and savings and loan companies with total assets between $10 billion and $50 billion to conduct annual company-prepared stress tests, report the results to their primary regulator and the Fed, and publish a summary of the results. Under the rules, stress tests must be conducted using certain scenarios (baseline, adverse, and severely adverse), which the Fed provides each year. RJF was required to conduct its first stress test by March 31, 2014. We submitted our initial stress testing results, utilizing data as of September 30, 2013, to the Fed on March 31, 2014. The Dodd-Frank Act also required that RJF begin publicly disclosing a summary of certain stress test results no later than June 30, 2015 for the stress test cycle beginning on October 1, 2014. RJF publicly disclosed the required summary of its stress test results on June 29, 2015, in accordance with the abovementioned stress testing requirements.

- The Volcker Rule:

  Under the provisions of the Dodd-Frank Act, Congress adopted the "Volcker Rule," which generally prohibits, subject to exceptions, insured depository institutions, bank holding companies and their affiliates (together, "Banking Entities") from engaging in "proprietary trading" or acquiring or retaining an ownership interest in a hedge fund or private equity fund ("covered funds"). In December 2013, the CFTC, the OCC, the Fed, the FDIC, and the SEC adopted a final version

of the Volcker Rule. Certain elements of the final rule provide for phasing-in over time. However, based upon our latest analysis and understandings of these regulations, we do not anticipate that the Volcker Rule will have a material impact on our results of operations. Nevertheless, due to its complexity and scope, we continue to review the details contained in the Volcker Rule to assess its impact on our operations.

The Volcker Rule prohibits Banking Entities from engaging in proprietary trading, and imposes limitations on the extent to which Banking Entities are permitted to invest in certain "covered funds" (e.g., hedge funds and private equity funds, among others) and requires that such investments be fully deducted from Tier 1 capital. "Proprietary trading" is defined as engaging as principal for the trading account of the banking entity in the purchase or sale of a financial instrument. Under the Volcker Rule's per-fund limits, a Banking Entity's aggregate ownership in hedge funds and private equity funds cannot exceed three percent of Tier 1 capital, although the impact of such limit to RJF's investment portfolio is subject to further analysis. Additionally, Banking Entities engaged in proprietary trading and/or covered fund investments must establish a Volcker Rule-specific compliance program. Congress provided an exemption for certain permitted activities of Banking Entities, such as underwriting, market making, hedging, and risk management.

The Volcker Rule became effective as of April 1, 2014 and all covered entities, including RJF, were required to conform to the Volcker Rule's provisions on July 21, 2015 (the "conformance period"). However, on December 18, 2014, the Fed issued an order extending for an additional year the Volcker Rule conformance period for Banking Entities to conform their investments in and relationships with covered funds that may be subject to the Volcker Rule, and were in place prior to December 31, 2014 ("Legacy Funds"). The order also announced the Fed's intention to grant an additional one-year extension of the conformance period until July 21, 2017. This extension, however, only applies to Legacy Funds. No extension was granted for the conformance period for proprietary trading activities. Banking Entities may still apply for an additional five-year extension for continued investments with respect to an illiquid fund. Such an extension will only be granted after a demonstration that the investment is necessary to fulfill a contractual commitment effective on May 1, 2010.

We currently maintain a number of private equity investments, some of which meet the definition of "covered funds" and therefore are subject to certain limitations under the covered funds provisions of the Volcker Rule. The amount of future investments of this nature that we may make may be limited in order to maintain compliance levels specified by the Volcker Rule. Further, subsequent interpretations of what constitutes "covered funds" under the final Volcker Rule may adversely impact our operations. The recent extension of the conformance deadline provides us additional time to assess our holdings in the context of the new regulations and execute appropriate strategies to be in conformance with the Volcker Rule.

- In July 2013, the OCC, the Fed and the FDIC released final United States Basel III regulatory capital rules implementing the global regulatory capital reforms of Basel III and certain changes required by the Dodd-Frank Act. The rule increases the quantity and quality of regulatory capital, establishes a capital conservation buffer, and makes selected changes to the calculation of risk-weighted assets. The rule became effective for RJF on January 1, 2015, subject to a phase-in period for several aspects of the rule, including the new minimum capital ratio requirements, the capital conservation buffer, and certain regulatory capital adjustments and deductions. While we continue to evaluate the impact of these rules on both RJF and RJ Bank, based on our current analyses, we believe that both RJF and RJ Bank meet all capital adequacy requirements under the final rules. However, the increased capital requirements could restrict our ability to grow during favorable market conditions or require us to raise additional capital. As a result, our business, results of operations, financial condition and prospects could be adversely affected. See Item 1A, "Risk Factors," within this report for more information.

- In July 2014, the SEC adopted amendments to the rules that govern money market mutual funds. The amendments make structural and operational reforms to address risks of excessive withdrawals over relatively short time frames by investors from money market funds, while preserving the benefits of the funds. We do not sponsor any money market funds. We utilize such funds in limited circumstances for our own investment purposes, and offer to our clients money market funds that are sponsored by third parties as one of several cash sweep alternatives.

- In September 2013, the SEC issued final rules regarding the mandatory registration of "municipal advisors" as required under the Dodd-Frank Act. These rules, which became effective on July 1, 2014 impose a fiduciary duty on municipal advisors when advising municipal entities, may result in the need for new written representations by issuers, and may limit the manner in which we, in our capacity as an underwriter or in our other professional roles, interact with municipal issuers. We registered as a municipal advisor with the SEC in 2014; by virtue of such registration our municipal finance business is now subject to additional regulation and oversight by the SEC. In August 2014, the SEC also announced that it will undertake a two-year review of municipal advisors as part of an exam initiative. Moreover, forthcoming rulemaking

by the Municipal Securities Rulemaking Board may cause further changes to the manner in which state and local government are able to interact with outside finance professionals. These new rules may impact the nature of our interactions with public finance clients, and may also have a negative short-term impact on the volume of public finance financing transactions while the industry attempts to adapt to the new regulatory landscape. However, we do not expect these new rules to have a materially adverse impact on our public finance results of operations (which are included in our Capital Markets segment).

Other regulations applicable to our operations

The SEC is the federal agency charged with administration of the federal securities laws. Financial services firms are also subject to regulation by state securities commissions in those states in which they conduct business. RJ&A and RJFS are currently registered as broker-dealers in all 50 states. The SEC recently adopted amendments, most of which were effective October 2013, to its financial responsibility rules, including changes to the net capital rule, the customer protection rule, the record-keeping rules and the notification rules applicable to our broker-dealer subsidiaries. We are currently evaluating the impact of these amendments on our broker-dealer subsidiaries; however, based on our current analyses, we do not believe they will have a material adverse effect on any of our broker-dealer subsidiaries. Pursuant to the Dodd-Frank Act, the SEC was charged with considering whether broker-dealers should be subject to a standard of care similar to the fiduciary standard applicable to registered investment advisors. It is not clear whether the SEC will determine that a heightened standard of conduct should be applicable to broker-dealers. Financial services firms are subject to regulation by various foreign governments, securities exchanges, central banks and regulatory bodies, particularly in those countries where they have established offices. Outside of the United States, we have additional offices in Europe, Canada and Latin America that are subject to local regulatory bodies in these territories.

Much of the regulation of broker-dealers in the United States and Canada, however, has been delegated to self-regulatory organizations ("SROs"), the Financial Industry Regulatory Authority ("FINRA"), the Investment Industry Regulatory Organization of Canada ("IIROC") and securities exchanges. These SROs adopt and amend rules for regulating the industry, subject to the approval of government agencies. These SROs also conduct periodic examinations of member broker-dealers.

The SEC, SROs and state securities commissions may conduct administrative proceedings that can result in censure, fine, suspension or expulsion of a broker-dealer, its officers or employees. Such administrative proceedings, whether or not resulting in adverse findings, can require substantial expenditures and may adversely impact the reputation of a broker-dealer.

Our U.S. broker-dealer subsidiaries are required by federal law to be members of the Securities Investors Protection Corporation ("SIPC"). The SIPC was established under the Securities Investor Protection Act, and oversees the liquidation of broker-dealers during liquidation or financial distress. The SIPC fund provides protection for cash and securities held in client accounts up to $500,000 per client, with a limitation of $250,000 on claims for cash balances. We have purchased excess SIPC coverage through various syndicates of Lloyd's, a London-based firm that holds an "A+" rating from Standard and Poor's, and an "AA-" rating from Fitch Ratings. Excess SIPC insurance is fully protected by the Lloyd's trust funds and Lloyd's Central Fund (the "Excess SIPC Insurer"). For RJ&A, the additional protection currently provided has an aggregate firm limit of $750 million for cash and securities, including a sub-limit of $1.9 million per client for cash above basic SIPC coverage. Account protection applies when a SIPC member fails financially and is unable to meet obligations to clients. This coverage does not protect against market fluctuations. RJF has provided an indemnity to the Excess SIPC Insurer against any and all losses they may incur associated with the excess SIPC insurance policies.

During fiscal year 2015, the Department of Labor (the "DOL") proposed a new rule enhancing standards for individuals providing investment advice to retirement plans, their participants, or beneficiaries. We are continuing our study and evaluation of the proposal. The total impact of the standard, once finalized and implemented, on our business is unknown at this time.

RJ Ltd. is currently registered in all provinces and territories in Canada. The financial services industry in Canada is subject to comprehensive regulation under both federal and provincial laws. Securities commissions have been established in all provinces and territorial jurisdictions, which are charged with the administration of securities laws. Investment dealers in Canada are also subject to regulation by SROs, which are responsible for the enforcement of, and conformity with, securities legislation for their members and have been granted the powers to prescribe their own rules of conduct and financial requirements of members. RJ Ltd. is regulated by each of the securities commissions in the jurisdictions of registration, as well as by the SROs and IIROC.

IIROC requires that RJ Ltd. be a member of the Canadian Investors Protection Fund (the "CIPF"). The primary role of the CIPF is investor protection. The CIPF Board of Directors determines the fund size required to meet its coverage obligations and sets a quarterly assessment rate. Dealer members are assessed the lesser of 1% of revenue or a risk-based assessment. The CIPF provides protection for securities and cash held in client accounts up to $1 million Canadian currency ("CDN") per client, with separate coverage of CDN $1 million for certain types of accounts. This coverage does not protect against market fluctuations.

See Note 26 of the Notes to Consolidated Financial Statements in this Form 10-K for further information on SEC, FINRA and IIROC regulations pertaining to broker-dealer regulatory minimum net capital requirements.

Our investment advisory operations, including the mutual funds that we sponsor, are also subject to extensive regulation in the United States. Our U.S. asset managers are registered as investment advisors with the SEC under the Investment Advisers Act of 1940, and are also required to make notice filings in certain states. Virtually all aspects of our asset management business are subject to various federal and state laws and regulations. These laws and regulations are primarily intended to benefit the asset management clients.

RJF is under the supervision of, and subject to the rules, regulations, and periodic examination by the Fed. Additionally, RJ Bank is subject to the rules and regulations of the OCC, the Fed, the FDIC and the CFPB. Collectively, these rules and regulations cover all aspects of the banking business, including lending practices, safeguarding deposits, capital structure, transactions with affiliates, and conduct and qualifications of personnel.

RJ Bank is also subject to the Community Reinvestment Act (the "CRA"). The CRA is intended to encourage banks to help meet the credit needs of their communities, including low and moderate income neighborhoods, consistent with safe and sound bank operations. Under the CRA, the federal banking agencies (i.e., the Fed, the FDIC and the OCC) are required to periodically examine and assign to each bank a public CRA rating ("outstanding," "satisfactory," "needs to improve," or "substantial noncompliance"). Members of the public may submit comments on a bank's performance, which will be considered as part of its performance evaluation. The results of the evaluation, together with the bank's CRA rating, are also taken into consideration when evaluating mergers, acquisitions, and applications to open a branch or facility. RJ Bank could face additional requirements and limitations should it fail to adequately meet the criteria stipulated under the CRA.

Both RJF as a financial holding company, and RJ Bank, are subject to various capital requirements. Failure to meet minimum capital requirements can initiate certain mandatory (and possibly additional discretionary) actions by regulators that, if undertaken, could have a direct material effect on the financial results of RJF and RJ Bank. Under capital adequacy guidelines, RJF and RJ Bank must meet specific capital guidelines that involve quantitative measures of assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting practices. The capital amounts and classification for RJF and RJ Bank are also subject to the qualitative judgments of U.S. regulators based on components of capital, risk-weightings of assets, off-balance sheet transactions, and other factors. Quantitative measures established by regulation to ensure capital adequacy require RJF, as a financial holding company, and RJ Bank, to maintain minimum amounts and ratios of Common equity Tier 1, Tier 1 and Total capital to risk-weighted assets, and Tier 1 capital to average assets (as defined in the regulations). See Item 7, "Regulatory" in this report and Note 26 of the Notes to Consolidated Financial Statements in this Form 10-K, for further information.

EXECUTIVE OFFICERS OF THE REGISTRANT

Executive officers of the registrant (which includes officers of certain significant subsidiaries) are as follows:

Jennifer C. Ackart	51	Senior Vice President since August, 2009 and Controller since February, 1995
Bella Loykhter Allaire	62	Executive Vice President - Technology and Operations - Raymond James & Associates, Inc. since June, 2011; Managing Director and Chief Information Officer, UBS Wealth Management Americas, November, 2006 - January, 2011
Paul D. Allison	59	Chairman, President and CEO - Raymond James Ltd. since January, 2009; Co-President and Co-CEO - Raymond James Ltd., August, 2008 - January, 2009
John C. Carson, Jr.	59	President since April, 2012; President - Morgan Keegan & Company, LLC, formerly known as Morgan Keegan & Company, Inc., since July, 2013; Chief Executive Officer and Executive Managing Director - Morgan Keegan & Company, Inc., March, 2008 - July, 2013
George Catanese	56	Senior Vice President since October, 2005 and Chief Risk Officer since February, 2006
Scott A. Curtis	53	President - Raymond James Financial Services, Inc., since January, 2012; Senior Vice President - Private Client Group - Raymond James & Associates, Inc., July, 2005 - December 2011
Jeffrey A. Dowdle	51	Executive Vice President - Asset Management Group, since February, 2014; President - Asset Management Services - Raymond James & Associates, Inc., January, 2005 - February 2014; Senior Vice President - Raymond James & Associates, Inc., January, 2005 - February, 2014
Tashtego S. Elwyn	44	President - Private Client Group - Raymond James & Associates, Inc., since January, 2012; Regional Director - Raymond James & Associates, Inc., October, 2006 - December, 2011
Jeffrey P. Julien	59	Executive Vice President - Finance since August, 2009, Chief Financial Officer since April, 1987 and Treasurer since February, 2011; Director and/or officer of several RJF subsidiaries
Paul L. Matecki	59	Senior Vice President since February, 2000, General Counsel since February, 2005 and Secretary since February, 2006
Steven M. Raney	50	President and CEO - Raymond James Bank, N.A. since January, 2006
Paul C. Reilly	61	Chief Executive Officer since May, 2010; Director since January, 2006; President, May, 2009 - April, 2010
Jeffrey E. Trocin	56	President - Global Equities and Investment Banking - Raymond James & Associates, Inc. since July, 2013; Executive Vice President - Equity Capital Markets - Raymond James & Associates, Inc., February 2001 - July, 2013
Dennis W. Zank	61	Chief Operating Officer since January, 2012; Chief Executive Officer - Raymond James & Associates, Inc. since January, 2012; President - Raymond James & Associates, Inc., December, 2002 - December, 2011

Except where otherwise indicated, the executive officer has held his or her current position for more than five years.

OTHER INFORMATION

Our Internet address is www.raymondjames.com. We make available on our website, free of charge and in printer-friendly format including ".pdf" file extensions, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

Factors affecting "forward-looking statements"

Certain statements made in this report on Form 10-K may constitute "forward-looking statements" under the Private Securities Litigation Reform Act of 1995. Forward-looking statements include information concerning future strategic objectives, business prospects, anticipated savings, financial results (including expenses, earnings, liquidity, cash flow and capital expenditures), industry or market conditions, demand for and pricing of our products, acquisitions and divestitures, anticipated results of litigation and regulatory developments or general economic conditions. In addition, words such as "believes," "expects," "anticipates," "intends," "plans," "estimates," "projects," "forecasts," and future or conditional verbs such as "will," "may," "could," "should," and "would," as well as any other statement that necessarily depends on future events, are intended to identify forward-looking statements. Forward-looking statements are not guarantees, and they involve risks, uncertainties and assumptions. Although we make such statements based on assumptions that we believe to be reasonable, there can be no assurance that actual results will not differ materially from those expressed in the forward-looking statements. We caution investors not to rely unduly on any forward-looking statements and urge you to carefully consider the risks described in Item 1A, "Risk Factors," in this report. We expressly disclaim any obligation to update any forward-looking statement in the event it later turns out to be inaccurate, whether as a result of new information, future events or otherwise.

Item 1A. RISK FACTORS

Our operations and financial results are subject to various risks and uncertainties, including those described below, that could adversely affect our business, financial condition, results of operations, liquidity and the trading price of our common stock or our senior notes which are listed on the NYSE. The list of risk factors provided below is not exhaustive; there may be factors not discussed below or in this Form 10-K that adversely impact our results of operations, harm our reputation or inhibit our ability to generate new business prospects.

RISKS RELATED TO OUR BUSINESS AND INDUSTRY

Damage to our reputation could damage our businesses.

Maintaining our reputation is critical to attracting and maintaining clients, customers, investors and associates. If we fail to deal with, or appear to fail to deal with, issues that may give rise to reputational risk, we could significantly harm our business prospects. These issues include, but are not limited to, any of the risks discussed in this Item 1A, appropriately dealing with potential conflicts of interest, legal and regulatory requirements, ethical issues, money laundering, cybersecurity and privacy, recordkeeping, sales and trading practices, failure to sell securities we have underwritten at the anticipated price levels, and the proper identification of the legal, reputational, credit, liquidity, and market risks inherent in our products. A failure to maintain appropriate standards of service and quality, or a failure or perceived failure to treat customers and clients fairly, can result in client dissatisfaction, litigation and heightened regulatory scrutiny, all of which can lead to lost revenue, higher operating costs and harm to our reputation. Further, negative publicity regarding us, whether or not true, may also harm our future business prospects.

We are affected by domestic and international macroeconomic conditions that impact the global financial markets.

We are engaged in various financial services businesses. As such, we are generally affected by domestic and international macroeconomic and political conditions, including levels of economic output, interest and inflation rates, employment levels, consumer confidence levels, and fiscal and monetary policy. These conditions may directly and indirectly impact a number of factors in the global financial markets that may be detrimental to our operating results, including trading levels, investing, and origination activity in the securities markets, security valuations, the absolute and relative level and volatility of interest and currency rates, real estate values, the actual and perceived quality of issuers and borrowers, and the supply of and demand for loans and deposits.

At times over the last several years we have experienced operating cycles during weak and uncertain U.S. and global economic conditions, including low levels of economic output, artificially maintained levels of historically low interest rates, relatively high rates of unemployment, and significant uncertainty with regards to fiscal and monetary policy both domestically and abroad. These

conditions led to several changes in the global financial markets that from time to time negatively impacted our net revenue and profitability. While the global financial markets have showed general signs of improvement, uncertainty remains. A period of sustained downturns and/or volatility in the securities markets, prolonged continuation of the artificially low level of short term interest rates, a return to increased dislocations in the credit markets, reductions in the value of real estate, and other negative market factors could significantly impair our revenues and profitability. We could experience a decline in commission revenue from a lower volume of trades we execute for our clients, a decline in fees from reduced portfolio values of securities managed on behalf of our clients, a reduction in revenue from the number and size of transactions in which we provide underwriting, financial advisory and other services, increased credit provisions and charge-offs, losses sustained from our customers' and market participants' failure to fulfill their settlement obligations, reduced net interest earnings, and other losses. These periods of reduced revenue and other losses could be accompanied by periods of reduced profitability because certain of our expenses including but not limited to our interest expense on debt, rent, facilities and salary expenses are fixed and, our ability to reduce them over short periods of time is limited.

U.S. markets may also be impacted by political and civil unrest occurring in the Middle East and in Eastern Europe and Russia. Concerns about the European Union's ("EU") sovereign debt in recent years, including the Greek government bailout, has caused uncertainty and disruption for financial markets globally. Continued uncertainties loom over the outcome of the EU's financial support programs and the possibility exists that other EU member states may experience similar financial troubles in the future. Any negative impact on economic conditions and global markets from these matters could adversely affect our business, financial condition and liquidity.

Our businesses and earnings are affected by the fiscal and other policies adopted by various regulatory authorities of the United States, foreign governments, and domestic and international agencies. The Fed regulates the supply of money and credit in the United States. Fed policies determine in large part the cost of funds for lending and investing and the return earned on those loans and investments. The market impact from such policies can also materially decrease the value of certain of our financial assets, most notably debt securities. Changes in Fed policies are beyond our control and, consequently, the impact of these changes on our activities and results of our operations are difficult to predict. We may also be indirectly impacted by fiscal and monetary policy enacted in various global markets.

U.S. state and local governments also continue to struggle with budget pressures caused by the ongoing less than optimal economic environment and ongoing concerns regarding municipal issuer credit quality. If these trends continue or worsen, investor concerns could potentially reduce the number and size of transactions in which we participate and, in turn, reduce investment banking revenues. In addition, such factors could adversely affect the value of the municipal securities we hold in our trading securities portfolio.

RJ Bank is particularly affected by economic conditions in North America. Market conditions in the United States and Canada can be assessed through the following metrics: the level and volatility of interest rates; the rates of unemployment and under-employment; real estate prices; the level of consumer confidence; changes in consumer spending; and the number of personal bankruptcies, among others. The deterioration of these factors can diminish loan demand, lead to an increase in mortgage and other loan delinquencies, affect loan repayment performance and result in higher reserves and net charge-offs, which can adversely affect our earnings.

Lack of liquidity or access to capital could impair our business and financial condition.

Maintaining an appropriate level of liquidity, or the amount of capital that is readily available for investment, spending, or to meet our contractual obligations, is essential to our business. Our inability to maintain adequate levels of capital in the form of cash and readily available access to the credit and capital markets could have a significant negative effect on our financial condition. If liquidity from our brokerage or banking operations is inadequate or unavailable, we may be required to scale back or curtail our operations, including limiting our efforts to recruit additional financial advisors, selling assets at prices that may be less favorable to us, and cutting or eliminating the dividends we pay to our shareholders. Some potential conditions that could negatively affect our liquidity include the inability of our subsidiaries to generate cash in the form of dividends from earnings, changes imposed by regulators to our liquidity or capital requirements in our subsidiaries that may prevent the upstream of dividends in the form of cash to the parent company, limited or no accessibility to credit markets for secured and unsecured borrowings by our subsidiaries, diminished access to the capital markets for our company, and other commitments or restrictions on capital as a result of adverse legal settlements, judgments, or regulatory sanctions.

The availability of outside financing, including access to the credit and capital markets, depends on a variety of factors, such as conditions in the debt and equity markets, the general availability of credit, the volume of securities trading activity, the overall availability of credit to the financial services sector, and our credit ratings. Our cost and availability of funding may be adversely

affected by illiquid credit markets and wider credit spreads. Additionally, lenders may from time to time curtail, or even cease to provide, funding to borrowers as a result of future concerns over the strength of specific counterparties, as well as the stability of markets generally.

If our credit ratings were downgraded, or if rating agencies indicate that a downgrade may occur, our business, financial position, and results of operations could be adversely affected, perceptions of our financial strength could be damaged, and as a result, adversely affect our relationships with clients. Such a reduction in our credit ratings could also adversely affect our liquidity and competitive position, increase our incremental borrowing costs, limit our access to the capital markets, trigger obligations under certain financial agreements, or decrease the number of investors, clients and counterparties willing or permitted to do business with or lend to us, thereby curtailing our business operations and reducing profitability.

We may not be able to successfully obtain additional outside financing to fund our operations on favorable terms, or at all. The impact of a credit rating downgrade to a level below investment grade would result in our breaching provisions in certain of our derivative instruments, and may result in a request for immediate payment and/or ongoing overnight collateralization on our derivative instruments in liability positions (see Note 18 of the Notes to Consolidated Financial Statements in this Form 10-K for such information as of September 30, 2015). A credit downgrade would also result in RJF incurring a higher commitment fee on any unused balance on its $300 million revolving credit facility executed on August 6, 2015, in addition to triggering a higher interest rate applicable to any borrowings outstanding on the line as of and subsequent to such downgrade (see Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Sources of Liquidity" for information on this revolving credit facility).

Furthermore, as a bank holding company, we may become subject to a prohibition or to limitations on our ability to pay dividends or repurchase our stock. The OCC, the Fed, the FDIC, and the SEC (through FINRA) have the authority, and under certain circumstances the duty, to prohibit or to limit the payment of dividends by the subsidiaries to their parent, for the subsidiaries they supervise.

See Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources" in this report for additional information on liquidity and how we manage our liquidity risk.

We are exposed to market risk.

We are, directly and indirectly, affected by changes in market conditions. Market risk generally represents the risk that values of assets and liabilities or revenues will be adversely affected by changes in market conditions. For example, changes in interest rates could adversely affect our net interest spread, the difference between the yield we earn on our assets and the interest rate we pay for deposits and other sources of funding, which in turn impacts our net interest income and earnings. Changes in interest rates could affect the interest earned on assets differently than interest paid on liabilities. In our brokerage operations, a rising interest rate environment generally results in our earning a larger net interest spread. Conversely in those operations, a falling interest rate environment generally results in our earning a smaller net interest spread. If we are unable to effectively manage our interest rate risk, changes in interest rates could have a material adverse effect on our profitability.

Market risk is inherent in the financial instruments associated with our operations and activities, including loans, deposits, securities, short-term borrowings, long-term debt, trading account assets and liabilities, derivatives, and venture capital and private equity investments. Market conditions that change from time to time, thereby exposing us to market risk, include fluctuations in interest rates, equity prices, relative exchange rates, and price deterioration or changes in value due to changes in market perception or actual credit quality of an issuer.

In addition, disruptions in the liquidity or transparency of the financial markets may result in our inability to sell, syndicate or realize the value of security positions, thereby leading to increased concentrations. The inability to reduce our positions in specific securities may not only increase the market and credit risks associated with such positions, but also increase the level of risk-weighted assets on our balance sheet, thereby increasing capital requirements, which could have an adverse effect on our business results, financial condition and liquidity.

Our venture capital and private equity investments are carried at fair value with unrealized gains and losses reflected in earnings. The value of our private equity portfolios can fluctuate and earnings from our venture capital investments can be volatile and difficult to predict. When, and if, we recognize gains can depend on a number of factors, including general economic conditions, the prospects of the companies in which we invest, when these companies go public, the size of our position relative to the public float and whether we are subject to any resale restrictions. Further, our investments could incur significant mark-to-market losses, especially if they have been written up in prior periods because of higher market prices.

See Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," in this report for additional information regarding our exposure to and approaches to managing market risk.

We are exposed to credit risk.

We are generally exposed to the risk that third parties that owe us money, securities or other assets will fail to meet their performance obligations due to numerous causes, including bankruptcy, lack of liquidity, or operational failure, among others.

We actively buy and sell securities from and to clients and counterparties in the normal course of our broker-dealers market making and underwriting businesses, which exposes us to credit risk. Although generally collateralized by the underlying security to the transaction, we still face the risk associated with changes in the market value of collateral through settlement date. We also hold certain securities, loans and derivatives in our trading accounts. Deterioration in the actual or perceived credit quality of the underlying issuers of securities or loans, or the non-performance of issuers and counterparties to certain derivative contracts could result in trading losses.

We borrow securities from, and lend securities to, other broker-dealers, and may also enter into agreements to repurchase and/or resell securities as part of investing and financing activities. A sharp change in the security market values utilized in these transactions may result in losses if counterparties to these transactions fail to honor their commitments.

We manage the risk associated with these transactions by establishing and monitoring credit limits, as well as by monitoring collateral and transaction levels on a daily basis. A significant deterioration in the credit quality of one of our counterparties could lead to concerns in the market about the credit quality of other counterparties in the same industry, thereby exacerbating our credit risk exposure. We may require counterparties to deposit additional collateral or substitute collateral pledged. In the case of aged securities failed to receive, we may, under industry regulations, purchase the underlying securities in the market and seek reimbursement for any losses from the counterparty.

Also, we permit our clients to purchase securities on margin. During periods of steep declines in securities prices, the value of the collateral securing client margin loans may fall below the amount of the purchaser's indebtedness. If the clients are unable to provide additional collateral for these margin loans, we may incur losses on those margin transactions. This may cause us to incur additional expenses defending or pursuing claims or litigation related to counterparty or client defaults.

We deposit our cash in depository institutions as a means of maintaining the liquidity necessary to meet our operating needs, and we also facilitate the deposit of cash awaiting investment in depository institutions on behalf of our clients. A failure of a depository institution to return these deposits could severely impact our operating liquidity, result in significant reputational damage, and adversely impact our financial performance.

We also incur credit risk by lending to businesses and individuals through the offering of: C&I loans, commercial and residential mortgage loans, tax-exempt loans, home equity lines of credit, and margin and non-purpose loans collateralized by securities, among others. We incur credit risk through our investments, which include MBS, collateralized mortgage obligations, auction rate securities, and other municipal securities.

Our credit risk and credit losses can increase if our loans or investments are concentrated among borrowers or issuers engaged in the same or similar activities, industries, geographies, or to borrowers or issuers who as a group may be uniquely or disproportionately affected by economic or market conditions. The deterioration of an individually large exposure, for example due to natural disasters, health emergencies or pandemics, acts of terrorism, severe weather events or other adverse economic events, could lead to additional loan loss provisions and/or charges-offs, or credit impairment of our investments, and subsequently have a material impact on our net income and regulatory capital.

Declines in the real estate market or sustained economic downturns may cause us to write down the value of some of the loans in RJ Bank's portfolio, foreclose on certain real estate properties or write down the value of some of our available for sale securities portfolio. Credit quality generally may also be affected by adverse changes in the financial performance or condition of our debtors or deterioration in the strength of the U.S. economy. Our policies also can adversely affect borrowers, potentially increasing the risk that they may fail to repay their loans or satisfy their obligations to us.

See Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," in this report for additional information regarding our exposure to and approaches to managing credit risk.

Our business depends on fees generated from the distribution of financial products, fees earned from the management of client accounts by our asset management subsidiaries, and on advisory fees.

A large portion of our revenues are derived from fees generated from the distribution of financial products, such as mutual funds and variable annuities. Changes in the structure or amount of the fees paid by the sponsors of these products could directly affect our revenues, business and financial condition. In addition, if these products experience losses or increased investor redemptions, we may receive lower fee revenue from the investment management and distribution services we provide on behalf of the mutual funds and annuities. The investment management fees we are paid may also decline over time due to factors such as increased competition, renegotiation of contracts and the introduction of new, lower-priced investment products and services. Changes in market values or in the fee structure of asset management accounts would affect our revenues, business and financial condition. Asset management fees often are primarily comprised of base management and incentive fees. Management fees are primarily based on assets under management ("AUM"). AUM balances are impacted by net inflow/outflow of client assets and market values. Below-market investment performance by our funds and portfolio managers could result in a loss of managed accounts and could result in reputational damage that might make it more difficult to attract new investors and thus further impact our business and financial condition. If we were to experience the loss of managed accounts, our fee revenue would decline. In addition, in periods of declining market values, our asset values under management may resultantly decline, which would negatively impact our fee revenues.

Our underwriting, market-making, trading, and other business activities place our capital at risk.

We may incur losses and be subject to reputational harm to the extent that, for any reason, we are unable to sell securities which we have underwritten at the anticipated price levels. As an underwriter, we also are subject to heightened standards regarding liability for material misstatements or omissions in prospectuses and other offering documents relating to offerings we underwrite. As a market maker, we may own positions in specific securities, and these undiversified holdings concentrate the risk of market fluctuations and may result in greater losses than would be the case if our holdings were more diversified. In addition, we may incur losses as a result of proprietary positions we hold in connection with our market making or underwriting activities.

From time to time and as part of our underwriting processes, we may carry significant positions in securities of a single issuer or issuers engaged in a specific industry. Sudden changes in the value of these positions could impact our financial results.

We have made and may continue to make principal investments in private equity funds and other illiquid investments, which are typically private limited partnership interests and securities that are not publicly traded. There is risk that we may be unable to realize our investment objectives by sale or other disposition at attractive prices or that we may otherwise be unable to complete a desirable exit strategy. In particular, these risks could arise from changes in the financial condition or prospects of the portfolio companies in which investments are made, changes in economic conditions or changes in laws, regulations, fiscal policies or political conditions. It could take a substantial period of time to identify attractive investment opportunities and then to realize the cash value of such investments through resale. Even if a private equity investment proves to be profitable, it may be several years or longer before any profits can be realized in cash.

The soundness of other financial institutions and intermediaries affects us.

We face the risk of operational failure, termination or capacity constraints of any of the clearing agents, exchanges, clearing houses or other financial intermediaries that we use to facilitate our securities transactions. As a result of the consolidation over the years among clearing agents, exchanges and clearing houses, our exposure to certain financial intermediaries has increased and could affect our ability to find adequate and cost-effective alternatives should the need arise. Any failure, termination or constraint of these intermediaries could adversely affect our ability to execute transactions, service our clients and manage our exposure to risk.

Our ability to engage in routine trading and funding transactions could be adversely affected by the actions and commercial soundness of other financial institutions. Financial services institutions are interrelated as a result of trading, clearing, funding, counterparty or other relationships. We have exposure to many different industries and counterparties, and we routinely execute transactions with counterparties in the financial industry, including brokers and dealers, commercial banks, investment banks, mutual and hedge funds and other institutional clients. Furthermore, although we do not hold any EU sovereign debt, we may do business with and be exposed to financial institutions that have been affected by the EU sovereign debt circumstances. Defaults by, or even rumors or questions about the financial condition of, one or more financial services institutions, or the financial services industry generally, have historically led to market-wide liquidity problems and could lead to losses or defaults by us or by other institutions. Many of these transactions expose us to credit risk in the event of default of our counterparty or client. In addition, our credit risk may be exacerbated when the collateral held by us cannot be realized or is liquidated at prices not sufficient to recover the full amount of the loan or derivative exposure due us. Although we have not suffered any material or significant losses

as a result of the failure of any financial counterparty, any such losses in the future may have a material adverse effect on our results of operations.

We have experienced increased pricing pressures in areas of our business which may impair our future revenue and profitability.

Our business continues to experience increased pricing pressures on trading margins and commissions in fixed income and equity trading. In the fixed income market, regulatory requirements have resulted in greater price transparency, leading to increased price competition and decreased trading margins. In the equity market, we have experienced increased pricing pressure from institutional clients to reduce commissions, and this pressure has been augmented by the increased use of electronic and direct market access trading, which has created additional competitive downward pressure on trading margins. We believe that price competition and pricing pressures in these and other areas will continue as institutional investors continue to reduce the amounts they are willing to pay, including by reducing the number of brokerage firms they use, and some of our competitors seek to obtain market share by reducing fees, commissions or margins.

Regions may fail to honor its indemnification obligations associated with Morgan Keegan matters.

Under the definitive stock purchase agreement, dated January 11, 2012, entered into by RJF and Regions, governing our acquisition of Morgan Keegan (the "SPA"), Regions has ongoing obligations to continue to indemnify RJF with respect to certain litigation as well as other matters. Specifically, the terms of the SPA provide that Regions will indemnify RJF for losses incurred in connection with legal proceedings pending as of the closing date, April 2, 2012, or commenced thereafter and related to pre-closing matters that are received prior to April 2, 2015, as well as any cost of defense pertaining thereto. RJF is relying on Regions to continue fulfilling its indemnification obligations under the SPA with respect to such matters. Our inability to enforce these indemnification provisions, or our failure to recover losses for which we are entitled to be indemnified, could result in our incurring significant costs for defense, settlement, and any adverse judgments, and resultantly have an adverse effect on our results of operations, financial condition, and our regulatory capital levels.

See Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K for further information regarding the indemnification from Regions.

Growth of our business could increase costs and regulatory and integration risks.

Integrating acquired businesses, providing a platform for new businesses and partnering with other firms involve a number of risks and present financial, managerial and operational challenges. We may incur significant expenses in connection with further expansion of our existing businesses, or recruitment of financial advisors, or in connection with strategic acquisitions or investments, if and to the extent they arise from time to time. Our overall profitability would be negatively affected if investments and expenses associated with such growth are not matched or exceeded by the revenues that are derived from such investment or growth.

Expansion may also create a need for additional compliance, documentation, risk management and internal control procedures, and often involves the hiring of additional personnel to monitor such procedures. To the extent such procedures are not adequate to appropriately monitor any new or expanded business, we could be exposed to a material loss or regulatory sanction.

Moreover, to the extent we pursue strategic acquisitions, we may be unable to complete such acquisitions on acceptable terms, or be unable to successfully integrate the operations of any acquired business into our existing business. Such acquisitions could be of significant size and/or complexity. This effort, together with difficulties we may encounter in integrating an acquired business, could have an adverse effect on our business, financial condition, and results of operations. In addition, we may need to raise equity capital or borrow to finance such acquisitions, which could dilute our shareholders or increase our leverage. Any such borrowings might not be available on terms as favorable to us as our current borrowings, or perhaps at all.

We face intense competition.

We are engaged in intensely competitive businesses. We compete on the basis of a number of factors, including the quality of our financial advisors and associates, our products and services, pricing (such as execution pricing and fee levels), location and reputation in relevant markets. Over time there has been substantial consolidation and convergence among companies in the financial services industry which has significantly increased the capital base and geographic reach of our competitors. See the section entitled "Competition" of Item 1 of this report for additional information about our competitors.

We compete directly with national full service broker-dealers, investment banking firms, and commercial banks, and to a lesser extent, with discount brokers and dealers and investment advisors. In addition, we face competition from more recent

entrants into the market and increased use of alternative sales channels by other firms. We also compete indirectly for investment assets with insurance companies, real estate firms and hedge funds, among others. This competition could cause our business to suffer.

To remain competitive, our future success also depends in part on our ability to develop and enhance our products and services. The inability to develop new products and services, or enhance existing offerings, could have a material adverse effect on our profitability. In addition, we may incur substantial expenditures to keep pace with the constant changes and enhancements being made in technology, including improvements made to internet connectivity, networking and telecommunications systems.

Our ability to attract and retain senior professionals, qualified financial advisors and other associates is critical to the continued success of our business.

Our ability to develop and retain our client base depends on the reputation, judgment, business generation capabilities and skills of our senior professionals, particularly our managing directors, and the members of our executive committees, as well as employees and financial advisors. To compete effectively we must attract, retain and motivate qualified professionals, including successful financial advisors, investment bankers, trading professionals, portfolio managers and other revenue producing or specialized personnel. The reputations and relationships of our senior professionals with our clients are a critical element in obtaining and executing client engagement. Competitive pressures we experience could have an adverse effect on our business, results of operations, financial condition and liquidity.

Turnover in the financial services industry is high. The cost of retaining skilled professionals in the financial services industry has escalated considerably. Employers in the industry are increasingly offering guaranteed contracts, upfront payments, and increased compensation. These can be important factors in a current employee's decision to leave us as well as a prospective employee's decision to join us. As competition for skilled professionals in the industry remains intense, we may have to devote significant resources to attracting and retaining qualified personnel. To the extent we have compensation targets, we may not be able to retain our employees which could result in increased recruiting expense or result in our recruiting additional employees at compensation levels that are not within our target range. In particular, our financial results may be adversely affected by the costs we incur in connection with any upfront loans or other incentives we may offer to newly recruited financial advisors and other key personnel. If we were to lose the services of any of our investment bankers, senior equity research, sales and trading professionals, asset managers, or executive officers to a new or existing competitor or otherwise, we may not be able to retain valuable relationships and some of our clients could choose to use the services of a competitor instead of our services. If we are unable to retain our senior professionals or recruit additional professionals, our reputation, business, results of operations and financial condition will be adversely affected. Further, new business initiatives and efforts to expand existing businesses generally require that we incur compensation and benefits expense before generating additional revenues.

Moreover, companies in our industry whose employees accept positions with competitors frequently claim that those competitors have engaged in unfair hiring practices. We have been subject to several such claims in the past and may be subject to additional claims in the future as we seek to hire qualified personnel, some of whom may currently be working for our competitors. Some of these claims may result in material litigation. We could incur substantial costs in defending ourselves against these claims, regardless of their merits. Such claims could also discourage potential employees who currently work for our competitors from joining us.

We are exposed to operational risk.

Our diverse operations expose us to risk of loss resulting from inadequate or failed internal processes, people and systems, external events, including technological or connectivity failures either at the exchanges in which we do business or between our data center, operations processing sites or our branches. Our businesses depend on our ability to process and monitor, on a daily basis, a large number of complex transactions across numerous and diverse markets. The inability of our systems to accommodate an increasing volume of transactions could also constrain our ability to expand our businesses. Our financial, accounting, data processing or other operating systems and facilities may fail to operate properly or become disabled as a result of events that are wholly or partially beyond our control, adversely affecting our ability to process these transactions or provide these services. Operational risk exists in every activity, function or unit of our business, and can take the form of internal or external fraud, employment and hiring practices, an error in meeting a professional obligation, or failure to meet corporate fiduciary standards. It is not always possible to deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in all cases. If our employees engage in misconduct, our businesses would be adversely affected. Operational risk also exists in the event of business disruption, system failures or failed transaction processing. Third parties with which we do business could also be a source of operational risk, including with respect to breakdowns or failures of the systems or misconduct by the employees of such parties. In addition as we change processes or introduce new products and services, we may not fully appreciate

or identify new operational risks that may arise from such changes. Increasing use of automated technology has the potential to amplify risks from manual or system processing errors, including outsourced operations.

Our existing business contingency plan is intended to ensure that we have the ability to recover our critical business functions and supporting assets, including staff and technology, in the event of a systemic business interruption. Despite the diligence we have applied to the development and testing of our plans, due to unforeseen factors, our ability to conduct business may in any case be adversely affected by a disruption involving physical site access, catastrophic events including weather related events, events involving electrical, environmental or communications malfunctions, as well as events impacting services provided by others that we rely upon which could impact our employees or third parties with whom we conduct business.

See Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," in this report for additional information regarding our exposure to and approaches to managing operational risk.

Associate misconduct, which is difficult to detect and deter, could harm us by impairing our ability to attract and retain clients and subject us to significant legal liability and reputational harm.

There have been a number of highly-publicized cases involving fraud or other misconduct by associates in the financial services industry, and there is a risk that our associates could engage in misconduct that adversely affects our business. For example, our banking business often requires that we deal with confidential matters of great significance to our clients. If our associates were to improperly use or disclose confidential information provided by our clients, we could be subject to regulatory sanctions and suffer serious harm to our reputation, financial position, current client relationships and ability to attract future clients. We are also subject to a number of obligations and standards arising from our asset management business and our authority over the assets managed by our asset management business. In addition our financial advisors may act in a fiduciary capacity, providing financial planning, investment advice and discretionary asset management. The violation of these obligations and standards by any of our associates would adversely affect our clients and us. It is not always possible to deter associate misconduct, and the precautions we take to detect and prevent this activity may not be effective in all cases. If our associates engage in misconduct, our business would be adversely affected.

Our businesses depend on technology.

Our businesses rely extensively on electronic data processing and communications systems. In addition to better serving clients, the effective use of technology increases efficiency and enables us to reduce costs. Adapting or developing our technology systems to meet new regulatory requirements, client needs, and competitive demands is critical for our business. Introduction of new technology presents challenges on a regular basis. There are significant technical and financial costs and risks in the development of new or enhanced applications, including the risk that we might be unable to effectively use new technologies or adapt our applications to emerging industry standards.

Our continued success depends, in part, upon our ability to: successfully maintain and upgrade the capability of our technology systems; address the needs of our clients by using technology to provide products and services that satisfy their demands; and retain skilled information technology employees. Failure of our technology systems, which could result from events beyond our control, or an inability to effectively upgrade those systems or implement new technology-driven products or services, could result in financial losses, liability to clients, violations of applicable privacy and other applicable laws and regulatory sanctions.

The expectations of sound operational and informational security practices have risen among our clients and customers, the public at large and regulators. Thus, our operational systems and infrastructure must continue to be safeguarded and monitored for potential failures, disruptions, cyberattacks and breakdowns. Our operations rely on the secure processing, storage and transmission of confidential and other information in our computer systems and networks. Although cyber security incidents among financial services firms are on the rise, we have not experienced any material losses relating to cyberattacks or other information security breaches. However, there can be no assurances that we will not suffer such losses in the future. Despite our implementation of protective measures and endeavoring to modify them as circumstances warrant, our computer systems, software and networks may be vulnerable to human error, natural disasters, power loss, spam attacks, unauthorized access, distributed denial of service attacks, computer viruses and other malicious code and other events that could have an impact on the security and stability of our operations.

Notwithstanding the precautions taken by us and measures put in place, if one or more of these events were to occur, this could jeopardize the information we confidentially maintain, including that of our clients and counterparties, which is processed, stored in and transmitted through our computer systems and networks, or otherwise cause interruptions or malfunctions in our operations or the operations of our clients and counterparties. We may be required to expend significant additional resources to modify our protective measures, to investigate and remediate vulnerabilities or other exposures or to make required notifications.

We may also be subject to litigation and financial losses that are neither insured nor covered under any of our current insurance policies. A technological breakdown could also interfere with our ability to comply with financial reporting and other regulatory requirements, exposing us to potential disciplinary action by regulators.

Extraordinary trading volumes beyond reasonably foreseeable spikes could cause our computer systems to operate at an unacceptably slow speed or even fail entirely. While we have invested resources to maintain the reliability and scalability of our systems and maintain hardware to address extraordinary volumes, there can be no assurance that our systems will be sufficient to handle truly extraordinary and unforeseen circumstances. Systems failures and delays could occur and could cause, among other things, unanticipated disruptions in service to our clients or slower system response times, resulting in client dissatisfaction due to transactions not being processed as quickly as desired.

In providing services to clients, we may manage, utilize and store sensitive or confidential client or employee data, including personal data. As a result, we may be subject to numerous laws and regulations designed to protect this information, such as U.S. federal and state laws governing the protection of personally identifiable information and international laws. These laws and regulations are increasing in complexity and number. If any person, including any of our associates, negligently disregards or intentionally breaches our established controls with respect to client or employee data, or otherwise mismanages or misappropriates such data, we could be subject to significant monetary damages, regulatory enforcement actions, fines and/or criminal prosecution. In addition, unauthorized disclosure of sensitive or confidential client or employee data, whether through system failure, employee negligence, fraud or misappropriation, could damage our reputation and cause us to lose clients and related revenue. Potential liability in the event of a security breach of client data could be significant. Depending on the circumstances giving rise to the breach, this liability may not be subject to a contractual limit or an exclusion of consequential or indirect damages.

See Item 7A, “Quantitative and Qualitative Disclosures about Market Risk,” in this report for additional information regarding our exposure to and approaches for managing these types of operational risks.

Our operations could be adversely affected by serious weather conditions.

Certain of our principal operations are located in St. Petersburg, Florida. While we have a business continuity plan that permits significant operations to be conducted out of our Southfield, Michigan and Memphis, Tennessee locations and our information systems processing to be conducted out of our information technology data center in the Denver, Colorado area, our operations could be adversely affected by hurricanes or other serious weather conditions that could affect the processing of transactions, communications, and the ability of our associates to get to our offices, or work from home. Refer to the “we are exposed to credit risk” risk factor in this Item 1A for a discussion of how events, including weather events, could adversely impact RJ Bank’s loan portfolio. Refer to the “we are exposed to operational risk” risk factor in this Item 1A for a discussion of how weather-related events could impact our ability to conduct business.

We are exposed to litigation risks, which could materially and adversely impact our business operations and prospects.

Many aspects of our business involve substantial risks of liability arising out of the normal course of business. We have been named as a defendant or co-defendant in lawsuits and arbitrations involving primarily claims for damages. The risks associated with potential litigation often may be difficult to assess or quantify and the existence and magnitude of potential claims often remain unknown for substantial periods of time. Unauthorized or illegal acts of our associates could result in substantial liability. The failure of our advisors to fully understand investor needs or risk tolerances may result in the recommendation or purchase of a portfolio of assets that may not be suitable for the investor. To the extent we fail to fully understand our clients or improperly advise them, we could be found liable for losses suffered by such clients, which could harm our business. Our Private Client Group business segment has historically been more susceptible to litigation than our institutional businesses.

In highly volatile markets, the volume of claims and amount of damages sought in litigation and regulatory proceedings against financial institutions has historically increased. These risks include potential liability under securities laws or other laws for: alleged materially false or misleading statements made in connection with securities offerings and other transactions; issues related to the suitability of our investment advice based on our clients’ investment objectives; the inability to sell or redeem securities in a timely manner during adverse market conditions; contractual issues; employment claims; and potential liability for other advice we provide to participants in strategic transactions. Substantial legal liability could have a material adverse financial impact or cause us significant reputational harm, which in turn could seriously harm our business and future business prospects.

In addition to the foregoing financial costs and risks associated with potential liability, the costs of defending individual litigation and claims continue to increase over time. The amount of outside attorneys’ fees incurred in connection with the defense of litigation and claims could be substantial and might materially and adversely affect our results of operations.

With regard to Morgan Keegan, a number of the types of claims and matters described above arising prior to our acquisition, that are received prior to April 2, 2015, are subject to indemnification from Regions. Refer to the separate risk factor in this section entitled "Regions may fail to honor its indemnification obligations associated with Morgan Keegan matters" for a discussion of the risks associated with these indemnifications.

See Item 3, "Legal Proceedings" in this report for a discussion of our legal matters and Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," in this report for a discussion regarding our approach to managing legal risk.

The preparation of the consolidated financial statements requires the use of estimates that may vary from actual results and new accounting standards could adversely affect future reported results.

The preparation of the consolidated financial statements in conformity with U.S. generally accepted accounting principles ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Such estimates and assumptions may require management to make difficult, subjective and complex judgments about matters that are inherently uncertain. One of our most critical estimates is RJ Bank's allowance for loan losses. At any given point in time, conditions in the real estate and credit markets may increase the complexity and uncertainty involved in estimating the losses inherent in RJ Bank's loan portfolio. If management's underlying assumptions and judgments prove to be inaccurate, one outcome could be that the allowance for loan losses could be insufficient to cover actual losses. Our financial condition, including our liquidity and capital, and results of operations could be materially and adversely impacted. See Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations-Critical Accounting Estimates," in this report for additional information on the nature of these estimates.

Our financial instruments, including certain trading assets and liabilities, available for sale securities including Auction Rate Securities ("ARS"), certain loans, intangible assets and private equity investments, among other items, require management to make a determination of their fair value in order to prepare our consolidated financial statements. Where quoted market prices are not available, we may make fair value determinations based on internally developed models or other means, which ultimately rely to some degree on our subjective judgment. Some of these instruments and other assets and liabilities may have no direct observable inputs, making their valuation particularly subjective and, consequently, based on significant estimation and judgment. In addition, sudden illiquidity in markets or declines in prices of certain securities may make it more difficult to value certain items, which may lead to the possibility that such valuations will be subject to further change or adjustment, as well as declines in our earnings in subsequent periods.

Our accounting policies and methods are fundamental to how we record and report our financial condition and results of operations. The Financial Accounting Standards Board (the "FASB") and the SEC have at times revised the financial accounting and reporting standards that govern the preparation of our financial statements. In addition, accounting standard setters and those who interpret the accounting standards may change or even reverse their previous interpretations or positions on how these standards should be applied. These changes can be hard to predict and can materially impact how we record and report our financial condition and results of operations. In some cases, we could be required to apply a new or revised standard retroactively, resulting in our restating prior period financial statements. For further discussion of some of our significant accounting policies and standards, see the "Critical Accounting Estimates" discussion within Item 7 in this report, and Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K.

In December 2012, the FASB issued a proposed standard on accounting for credit losses. The standard would replace multiple existing impairment models, including the replacement of the "incurred loss" model for loans with an "expected loss" model. The FASB announced it will establish the effective date when it issues the final standard. We cannot predict when a final standard will be issued, when it will be made effective, what its final provisions will encompass, or the potential impact its eventual adoption may have on our retained earnings.

Our risk management and conflicts of interest policies and procedures may leave us exposed to unidentified or unanticipated risk.

We seek to manage, monitor and control our operational, legal and regulatory risk through operational and compliance reporting systems, internal controls, management review processes and other mechanisms; however, there can be no assurance that our procedures will be fully effective. Our banking and trading processes seek to balance our ability to profit from banking and trading positions with our exposure to potential losses. While we utilize limits and other risk mitigation techniques, those techniques and the judgments that accompany their application cannot anticipate unforeseen economic and financial outcomes or the specifics and timing of such outcomes.

Further, our risk management methods may not effectively predict future risk exposures, which could be significantly greater than the historical measures indicate. In addition, some of our risk management methods are based on an evaluation of information regarding markets, clients and other matters that are based on assumptions that may no longer be accurate. A failure to adequately manage our growth, or to effectively manage our risk, could materially and adversely affect our business and financial condition.

Financial services firms are subject to numerous conflicts of interest or perceived conflicts, all of which are under growing scrutiny by federal and state regulators in the United States. Our risk management processes include addressing potential conflicts of interest that arise in our business. We have procedures and controls in place to address conflicts of interest. Management of potential conflicts of interest has become increasingly complex as we expand our business activities through numerous transactions, obligations and interests with and among our clients. The actual or perceived failure to adequately address conflicts of interest could affect our reputation, the willingness of clients to transact business with us or give rise to litigation or regulatory actions. Therefore, there can be no assurance that conflicts of interest will not arise in the future that could cause material harm to us.

For more information on how we monitor and manage market and certain other risks, see Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," in this report.

We are exposed to risk from international markets.

We do business in other parts of the world, including a few developing regions commonly known as emerging markets, and as a result, are exposed to a number of risks, including economic, market, litigation and regulatory risks. Our businesses and revenues derived from non-U.S. operations are subject to risk of loss from currency fluctuations, social or political instability, less established regulatory regimes, changes in governmental policies or policies of central banks, downgrades in the credit ratings of sovereign countries, expropriation, nationalization, confiscation of assets and unfavorable legislative, economic and political developments. Action or inaction in any of these operations, including failure to follow proper practices with respect to regulatory compliance and/or corporate governance, could harm our operations and our reputation. We also invest or trade in the securities of corporations located in non-U.S. jurisdictions. Revenues from the trading of non-U.S. securities also may be subject to negative fluctuations as a result of the abovementioned factors. The impact of these fluctuations could be magnified because non-U.S. trading markets, particularly in emerging market countries, are generally smaller and less developed, less liquid and more volatile than U.S. trading markets. Additionally, a political, economic or financial disruption in a country or region could adversely impact our business and increase volatility in financial markets generally.

We have risks related to our insurance programs.

Our operations and financial results are subject to risks and uncertainties related to our use of a combination of insurance, self-insured retention and self-insurance for a number of risks, including most significantly: property and casualty, workers' compensation, errors and omissions liability, general liability and the portion of employee-related health care benefits plans we fund, among others.

While we endeavor to purchase insurance coverage that is appropriate to our assessment of risk, we are unable to predict with certainty the frequency, nature or magnitude of claims for direct or consequential damages. Our business may be negatively affected if in the future our insurance proves to be inadequate or unavailable. In addition, insurance claims may divert management resources away from operating our business.

RISKS RELATED TO OUR REGULATORY ENVIRONMENT

Financial services firms have been subject to increased regulatory scrutiny over the last several years, increasing the risk of financial liability and reputational harm resulting from adverse regulatory actions.

Firms in the financial services industry have been operating in an onerous regulatory environment, which will become even more stringent in light of recent well-publicized failures of regulators to detect and prevent fraud. The industry has experienced increased scrutiny from a variety of regulators, including the SEC, the Fed, the OCC and the CFPB, in addition to stock exchanges, FINRA and state attorneys general. Penalties and fines sought by regulatory authorities have increased substantially over the last several years. We may be adversely affected by changes in the interpretation or enforcement of existing laws and rules by these governmental authorities and SROs. Each of the regulatory bodies with jurisdiction over us has regulatory powers dealing with many different aspects of financial services, including, but not limited to, the authority to fine us and to grant, cancel, restrict or otherwise impose conditions on the right to continue operating particular businesses. For example, the failure to comply with the obligations imposed by the Exchange Act on broker-dealers and the Investment Advisers Act of 1940 on investment advisers, including recordkeeping, advertising and operating requirements, disclosure obligations and prohibitions on fraudulent activities,

or by the Investment Company Act of 1940 (the "1940 Act"), could result in investigations, sanctions and reputational damage. We also may be adversely affected as a result of new or revised legislation or regulations imposed by the SEC, other U.S. or foreign governmental regulatory authorities or SROs (e.g., FINRA) that supervise the financial markets. Substantial legal liability or significant regulatory action taken against us could harm our business prospects through adverse financial effects and reputational harm.

Changes in regulations resulting from either the Dodd-Frank Act or any new regulations or laws may affect our businesses.

The market and economic conditions over the past several years have directly led to a demand by the public for changes in the way the financial services industry is regulated, including a call for more stringent legislation and regulation in the United States and abroad. The Dodd-Frank Act enacted sweeping changes and an unprecedented increase in the supervision and regulation of the financial services industry (see Item 1, "Regulation," in this report for a discussion of such changes, including the Volcker Rule). The ultimate impact that the Dodd-Frank Act will have on us, the financial industry and the economy at large cannot be specifically ascertained until all of the implementing regulations called for under the legislation have been finalized and fully implemented. Nevertheless, it is apparent that these legislative and regulatory changes could affect our revenue, limit our ability to pursue business opportunities, impact the value of our assets, require us to alter at least some of our business practices, impose additional costs, and otherwise adversely affect our businesses.

The Dodd-Frank Act impacts the manner in which we market our products and services, manage our business and operations, and interact with regulators, all of which could materially impact our results of operations, financial condition and liquidity. Certain provisions of the Dodd-Frank Act that have or may impact our businesses include: the establishment of a fiduciary standard for broker-dealers; regulatory oversight of incentive compensation; the imposition of capital requirements on financial holding companies and to a lesser extent, greater oversight over derivatives trading; and restrictions on proprietary trading. There is also increased regulatory scrutiny (and related compliance costs) as we continue to grow and surpass certain thresholds established under the Dodd-Frank Act. These include, but are not limited to, RJ Bank's oversight by the CFPB. The CFPB has been active in investigating products, services, and operations of credit providers, including banks, for compliance with various consumer protection laws, such as the Truth in Lending Act, the Equal Credit Opportunity Act, the Fair Credit Reporting Act, and the Real Estate Settlement Procedures Act. Any actions taken by the CFPB could result in requirements to alter or cease offering affected products and services, make them less attractive, and restrict our ability to offer them, in addition to increasing our regulatory and compliance costs. To the extent the Dodd-Frank Act impacts the operations, financial condition, liquidity and capital requirements of unaffiliated financial institutions with whom we transact business, those institutions may seek to pass on increased costs, reduce their capacity to transact, or otherwise present inefficiencies in their interactions with us.

In December 2013, the final version of the Volcker Rule was adopted (see Item 1, "Regulation," in this report for discussion of the Volcker Rule) and became effective April 1, 2014. We were required to comply with the Volcker Rule's provisions starting on July 21, 2015. Although we have not historically engaged in significant levels of proprietary trading for our own trading account, due to our underwriting and market making activities, the Volcker Rule will likely adversely affect our results of operations through increased operational and compliance costs, possible reductions in our trading revenues, and changes to our principal capital private equity investments.

The Basel III capital standards will impose additional capital and other requirements on us that could decrease our competitiveness and profitability.

In July 2013, the Fed, the OCC and the FDIC released final U.S. Basel III regulatory capital rules, which implemented the global regulatory capital reforms of Basel III and certain changes required by the Dodd-Frank Act. These rules increase the quantity and quality of regulatory capital, establish a capital conservation buffer, and make selected changes to the calculation of risk-weighted assets. The regulatory capital rule became effective for us January 1, 2015, subject to a phase-in period for several of its provisions, including the new minimum capital ratio requirements, the capital conservation buffer, and the regulatory capital adjustments and deductions. The increased capital requirements could restrict our ability to grow during favorable market conditions or require us to raise additional capital. As a result, our business, results of operations, financial condition or prospects could be adversely affected. We continue to evaluate the impact of the capital rules on both RJ Bank and RJF.

Failure to comply with regulatory capital requirements primarily applicable to RJF, RJ Bank or our broker-dealer subsidiaries would significantly harm our business.

RJF and RJ Bank are subject to various regulatory and capital requirements administered by various federal regulators, and, accordingly, must meet specific capital guidelines that involve quantitative measures of RJF and RJ Bank's assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting practices. The capital amounts and classification for both RJF and RJ Bank are also subject to qualitative judgments by U. S. federal regulators based on components of our capital, risk-weightings of assets, off-balance sheet transactions, and other factors. Quantitative measures established by regulation to ensure capital adequacy require RJF and RJ Bank to maintain minimum amounts and ratios of Total and Tier 1 capital to risk-weighted assets, Tier 1 capital to average assets (as defined in the regulations), and under rules defined in Basel III, Common equity Tier 1 capital to risk-weighted assets. Failure to meet minimum capital requirements can trigger certain mandatory and possibly additional discretionary, actions by regulators that, if undertaken, could harm either RJF or RJ Bank's operations and our financial condition.

As more fully discussed in Item 1, "Regulation," in this report, RJF is required to perform annual stress tests using certain scenarios provided by the Fed. While we believe that both the quality and magnitude of our capital base is sufficient to support our current operations given our risk profile, the results of the stress testing process may affect our approach to managing and deploying capital.

Additionally, as RJF is a holding company, it depends on dividends, distributions and other payments from its subsidiaries to fund payments of its obligations, including debt service. We are subject to the SEC's uniform net capital rule (Rule 15c3-1) and FINRA's net capital rule, which may limit our ability to make withdrawals of capital from our broker-dealer subsidiaries. The uniform net capital rule sets the minimum level of net capital that a broker-dealer must maintain and also requires that a portion of its assets be relatively liquid. FINRA may prohibit a member firm from expanding its business or paying cash dividends if resulting net capital falls below its requirements. In addition, our Canada-based broker-dealer subsidiary is subject to similar limitations under applicable regulation in that jurisdiction by IIROC. Regulatory capital requirements applicable to some of our significant subsidiaries may impede access to funds the holding company needs to make payments on any such obligations.

See Note 26 of the Notes to Consolidated Financial Statements in this Form 10-K for further information on regulations and capital requirements.

We operate in a highly regulated industry in which future developments could adversely affect our business and financial condition.

The securities industry is subject to extensive and constantly changing regulation, and broker-dealers and investment advisors are subject to regulations covering all aspects of the securities business, including, but not limited to, sales and trading methods, trade practices among broker-dealers, use and safekeeping of clients' funds and securities, capital structure of securities firms, anti-money laundering efforts, recordkeeping, and the conduct of directors, officers and employees. A violation of any of these laws or regulations could subject us to: civil and criminal liability; sanctions, which could include the revocation of our subsidiaries' registrations as investment advisors or broker-dealers; the revocation of the licenses of our financial advisors; censures; fines; or a temporary suspension or permanent bar from conducting business. Any of those events could have a material adverse effect on our business, financial condition and prospects.

The majority of our affiliated financial advisors are independent contractors. Legislative or regulatory action that redefines the criteria for determining whether a person is an employee or an independent contractor could materially impact our relationships with our advisors and our business, resulting in an adverse effect on our results of operations.

We are subject to financial holding company regulatory reporting requirements, including the maintenance of certain risk-based regulatory capital levels that could impact various capital allocation decisions of one or more of our businesses. A failure to satisfy the risk-based regulatory capital levels could require us to halt certain activities permitted under the Bank Holding Company Act of 1956. However, due to our strong current capital position, we do not anticipate that these capital level requirements will have any negative impact on our future business activities. See the section entitled "Business - Regulation" of Item 1 in this report for additional information.

As a financial holding company, we are regulated by the Fed. RJ Bank is regulated by the OCC, the Fed, the CFPB, and the FDIC. This oversight includes, but is not limited to, scrutiny with respect to affiliate transactions and compliance with consumer regulations. The economic and political environment over the past several years has caused increased attention on the regulation of the financial services industry, including many proposals for new rules. Any new rules issued by U.S. regulators that oversee the financial services industry could affect us in substantial and unpredictable ways and could have an adverse effect on our

business, financial condition, and results of operations. We also may be adversely affected as a result of changes in federal, state, or foreign tax laws, or by changes in the interpretation or enforcement of existing laws and regulations.

The SEC has proposed certain measures that would establish a new framework to replace the requirements of Rule 12b-1 under the 1940 Act, with respect to how mutual funds pay fees to cover the costs of selling and marketing their shares. The staff of the SEC's Office of Compliance, Inspections and Examinations has indicated that it is reviewing the use of fund assets to pay for fees to sub-transfer agents and sub-administrators for services that may be deemed to be distribution-related. Any adoption of such measures would be phased in over a number of years. As these measures are neither final nor undergoing implementation throughout the financial services industry, their impact cannot be predicted at this time. As this regulatory trend continues, it could adversely affect our operations and, in turn, our financial results.

Asset management businesses have experienced a number of highly publicized regulatory inquiries, which have resulted in increased scrutiny within the industry and new rules and regulations for mutual funds, investment advisors, and broker-dealers. As some of our wholly owned subsidiaries are registered as investment advisors with the SEC, increased regulatory scrutiny and rulemaking initiatives may result in augmented operational and compliance costs, or the assessment of significant fines or penalties against our asset management business, and may otherwise limit our ability to engage in certain activities. It is not possible to determine the extent of the impact of any new laws, regulations, or initiatives that may be proposed, or whether any of the proposals will become law. Conformance with any new laws or regulations could make compliance more difficult and expensive and affect the manner in which we conduct business. For example, pursuant to the Dodd-Frank Act, the SEC was charged with considering whether broker-dealers should be subject to a standard of care similar to the fiduciary standard applicable to registered investment advisors. It is not clear whether the SEC will determine that a heightened standard of conduct is appropriate for broker-dealers; however, any such standard, if mandated, would likely require us to review our product and service offerings and implement certain changes, as well as require that we incur additional regulatory costs in order to ensure compliance.

In addition, the U.S. and foreign governments have recently taken regulatory actions impacting the investment management industry, and may continue to take further actions, including expanding current or enacting new standards, requirements and rules that may be applicable to us and our subsidiaries. For example, several states and municipalities in the United States have recently adopted "pay-to-play" rules, which could limit our ability to charge advisory fees. Such "pay-to-play" rules could affect the profitability of that portion of our business. Additionally, the use of "soft dollars," where a portion of commissions paid to broker-dealers in connection with the execution of trades also pays for research and other services provided to advisors, is periodically reexamined and may in the future be limited or modified. A substantial portion of the research relied on by our investment management business in the investment decision making process is generated internally by our investment analysts and external research, including external research paid for with soft dollars. This external research generally is used for information gathering or verification purposes, and includes broker-provided research, as well as third party provided databases and research services. If the use of soft dollars is limited, we may have to bear some of these additional costs. Furthermore, new regulations regarding the management of hedge funds and the use of certain investment products may impact our investment management business and result in increased costs. For example, many regulators around the world adopted disclosure and reporting requirements relating to the hedge fund businesses or other businesses, and changes to the laws, rules and regulations in the United States related to the over-the-counter swaps and derivatives markets require additional registration, recordkeeping and reporting obligations.

See the section entitled "Business - Regulation" within Item 1 in this report for additional information regarding our regulatory environment and Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," in this report regarding our approaches to managing regulatory risk. Regulatory actions brought against us may result in judgments, settlements, fines, penalties or other results adverse to us, which could have a material adverse effect on our business, financial condition or results of operations.

RJ Bank is subject to the Community Reinvestment Act and fair lending laws, and failure to comply with these laws could lead to penalties.

The CRA, the Equal Credit Opportunity Act, the Fair Housing Act and other U.S. federal fair lending laws and regulations impose nondiscriminatory lending requirements on financial institutions. The U.S. Department of Justice and other federal agencies, including the CFPB, are responsible for enforcing these laws and regulations. A successful challenge to an institution's performance under the CRA or fair lending laws and regulations could result in a wide variety of sanctions, including the required payment of damages and civil monetary penalties, injunctive relief, imposition of restrictions on mergers and acquisitions activity and restrictions on expansion activity. Private parties may also have the ability to challenge an institution's performance under fair lending laws by bringing private class action litigation.

Item 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

Item 2. PROPERTIES

The RJF and RJ Bank corporate headquarters are located on land we own that is located within the Carillon Office Park in St. Petersburg, Florida. This office complex currently includes buildings which provide approximately 920,000 square feet of office space. At this location, we also have the necessary rights to add approximately 440,000 square feet of new office space on our existing parcel. To facilitate certain storage needs, we lease approximately 30,000 square feet of warehouse space near this headquarters complex.

We conduct employee-based branch office operations in various locations throughout the U.S. and in certain foreign countries. With the exception of one company-owned RJ&A branch located in Crystal River, Florida, and certain interests in real estate holdings held under Morgan Properties, LLC which are insignificant in the aggregate, RJ&A branches are leased from third parties under leases that contain various expiration dates through 2026. Leases for branch offices of RJFS, the independent contractors of RJ Ltd., and RJIS, are the responsibility of the respective independent contractor financial advisors.

We conduct certain operations from our 88,000 square foot office building located on land we own in Southfield, Michigan. We operate a 40,000 square foot information technology data center on land we own in the Denver, Colorado area. We also conduct certain operations in approximately 240,000 square feet of leased office space in the Raymond James Tower located in downtown Memphis, Tennessee.

RJ Ltd. leases its main office premises in Vancouver, Calgary and Toronto, as well as certain branch offices located throughout Canada. These leases have various expiration dates through 2026. RJ Ltd. does not own any land or buildings.

During fiscal year 2011, we entered into an agreement to purchase land located in Pasco County, Florida. As of September 30, 2015, the completion of this purchase transaction is subject to the satisfactory resolution of certain permitting matters.

See Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K for further information on our lease commitments.

Item 3. LEGAL PROCEEDINGS

Pre-Closing Date Morgan Keegan matters (all of which are subject to indemnification by Regions)

In July 2006, MK & Co. and a former MK & Co. analyst were named as defendants in a lawsuit filed by a Canadian insurance and financial services company, Fairfax Financial Holdings, and its American subsidiary in the Circuit Court of Morris County, New Jersey. Plaintiffs made claims under a civil Racketeer Influenced and Corrupt Organizations ("RICO") statute, for commercial disparagement, tortious interference with contractual relationships, tortious interference with prospective economic advantage and common law conspiracy. Plaintiffs alleged that defendants engaged in a multi-year conspiracy to publish and disseminate false and defamatory information about plaintiffs to improperly drive down plaintiff's stock price, so that others could profit from short positions. Plaintiffs alleged that defendants' actions damaged their reputations and harmed their business relationships. Plaintiffs alleged a number of categories of damages they sustained, including lost insurance business, lost financings and increased financing costs, increased audit fees and directors and officers insurance premiums and lost acquisitions, and have requested monetary damages. On May 11, 2012, the trial court ruled that New York law applied to plaintiff's RICO claims, therefore the claims were not subject to treble damages. On June 27, 2012, the trial court dismissed plaintiffs' tortious interference with prospective relations claim, but allowed other claims to go forward. A jury trial was set to begin on September 10, 2012. Prior to its commencement the court dismissed the remaining claims with prejudice. Plaintiffs have appealed the court's rulings.

Certain of the Morgan Keegan entities, along with Regions, have been named in class-action lawsuits filed in federal and state courts on behalf of shareholders of Regions and investors who purchased shares of certain mutual funds in the Regions Morgan Keegan Fund complex (the "Regions Funds"). The Regions Funds were formerly managed by Morgan Asset Management ("MAM"), an entity which was at one time a subsidiary of one of the Morgan Keegan affiliates, but an entity which was not part of our April 2, 2012 acquisition of Morgan Keegan. The complaints contain various allegations, including claims that the Regions Funds and the defendants misrepresented or failed to disclose material facts relating to the activities of the funds. In August 2013, the United States District Court for the Western District of Tennessee approved the settlement of the class action and the derivative action regarding the closed end funds for $62 million and $6 million, respectively. No class has been certified. Certain of the shareholders in the funds and other interested parties have entered into arbitration proceedings and individual civil claims, in lieu of participating in the class action lawsuits.

The SEC and the states of Missouri and Texas are investigating alleged securities law violations by MK & Co. in the underwriting and sale of certain municipal bonds. An enforcement action was brought by the Missouri Secretary of State in April

2013, seeking monetary penalties and other relief, was dismissed and refiled in November 2013. A Civil action was brought by institutional investors of the bonds in March 2012, seeking a return of their investment and unspecified compensatory and punitive damages, which has been resolved. A class action was brought on behalf of retail purchasers of the bonds in September 2012, seeking unspecified compensatory and punitive damages. In September 2014, the District Court for the Western District of Missouri granted class certification. The matter was resolved and the settlement approved by the District Court in January 2015. Other individual investors and investor groups have also filed arbitration claims or separate civil claims, which have been resolved.

Prior to the Closing Date, Morgan Keegan was involved in other litigation arising in the normal course of its business. On all such matters, RJF is subject to indemnification from Regions pursuant to the terms of the stock purchase agreement.

Indemnification from Regions

Under the terms of RJF's April 2, 2012 acquisition of Morgan Keegan, Regions has provided indemnification to RJF for losses it may incur in connection with any legal proceedings pending as of the closing date or commenced after the closing date related to pre-closing matters. The indemnification for legal proceedings related to pre-closing date activities of Morgan Keegan that commenced after the closing date and for a three year period that ended on April 2, 2015, are subject to an annual $2 million indemnification deductible, after which RJF is entitled to receive the full amount of all such losses incurred in excess of $2 million. All of the pre-Closing Date Morgan Keegan matters described above are subject to such indemnification provisions. See Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding Morgan Keegan's pre-Closing Date legal matter contingencies.

Other matters unrelated to Morgan Keegan

We are a defendant or co-defendant in various lawsuits and arbitrations incidental to our securities business as well as regulatory investigations and other corporate litigation, matters which are unrelated to the pre-Closing Date activities of Morgan Keegan. We are contesting the allegations in these matters and believe that there are meritorious defenses in each. In view of the number and diversity of claims against us, the number of jurisdictions in which litigation is pending and the inherent difficulty of predicting the outcome of litigation and other claims, we cannot state with certainty what the eventual outcome of pending litigation or other claims will be. In the opinion of management, based on current available information, review with outside legal counsel, and consideration of amounts provided for in the accompanying consolidated financial statements with respect to these matters, ultimate resolution of these matters will not have a material adverse impact on our financial position or cumulative results of operations. However, resolution of one or more of these matters may have a material effect on the results of operations in any future period, depending upon the ultimate resolution of those matters and upon the level of income for such period.

See Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding legal matter contingencies.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED SHAREHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the NYSE under the symbol "RJF." As of November 12, 2015, we had 362 holders of record of our common stock. A substantially greater number of shares of our common stock is held by beneficial owners, whose shares are held of record by banks, brokers, and other financial institutions. Our transfer agent is Computershare Inc. whose address is P.O. Box 30170, College Station, TX 77842-3170.

The following table sets forth for the periods indicated the high and low trades for our common stock:

	Fiscal year			
	2015		2014	
	High	Low	High	Low
First quarter	$ 58.18	$ 48.06	$ 52.47	$ 40.01
Second quarter	$ 59.77	$ 50.97	$ 56.31	$ 48.13
Third quarter	$ 61.46	$ 54.99	$ 56.32	$ 47.49
Fourth quarter	$ 61.82	$ 48.24	$ 56.61	$ 48.91

Cash dividends per share of common stock paid during the quarter are reflected below. The dividends were declared during the quarter preceding their payment.

	Fiscal year	
	2015	2014
First quarter	$ 0.16	$ 0.14
Second quarter	$ 0.18	$ 0.16
Third quarter	$ 0.18	$ 0.16
Fourth quarter	$ 0.18	$ 0.16

On August 19, 2015, our Board of Directors declared a quarterly dividend of $0.18 in cash per share of common stock which was paid on October 15, 2015. Additionally, on November 19, 2015, our Board of Directors declared a quarterly dividend of $0.20 in cash per share of common stock, to be paid January 15, 2016 to shareholders of record on January 4, 2016.

See Note 26 of the Notes to Consolidated Financial Statements in this Form 10-K for information regarding our intentions for paying cash dividends and the related capital restrictions.

We purchase our own stock from time to time in conjunction with a number of activities, each of which is described below. The following table presents information on our purchases of our own stock, on a monthly basis, for the twelve month period ended September 30, 2015:

	Total number of shares purchased [1]	Average price per share	Number of shares purchased as part of publicly announced plans or programs[2]	Approximate dollar value (in thousands) at each month-end, of securities that may yet be purchased under the plans or programs [3][4]
October 1, 2014 – October 31, 2014	8,894	$ 53.75	—	$ 49,357
November 1, 2014 – November 30, 2014	107,431	56.23	—	$ 49,357
December 1, 2014 – December 31, 2014	110,756	55.89	—	$ 49,357
First quarter	**227,081**	**$ 55.97**	**—**	
January 1, 2015 – January 31, 2015	26,254	$ 53.90	—	$ 49,357
February 1, 2015 – February 28, 2015	9,789	56.46	—	$ 49,357
March 1, 2015 – March 31, 2015	3,498	57.29	—	$ 49,357
Second quarter	**39,541**	**$ 54.84**	**—**	
April 1, 2015 – April 30, 2015	274,000	$ 56.56	—	$ 49,357
May 1, 2015 – May 31, 2015	4,895	58.44	—	$ 150,000
June 1, 2015 – June 30, 2015	3,930	58.12	—	$ 150,000
Third quarter	**282,825**	**$ 56.61**	**—**	
July 1, 2015 – July 31, 2015	127	$ 59.60	—	$ 150,000
August 1, 2015 – August 31, 2015	975,315	51.08	962,167	$ 100,877
September 1, 2015 – September 30, 2015	153,534	50.96	152,338	$ 93,112
Fourth quarter	**1,128,976**	**$ 51.07**	**1,114,505**	
Fiscal year total	**1,678,423**	**$ 52.75**	**1,114,505**	

(1) Of the total for the year ended September 30, 2015, share purchases for the trust fund established to acquire our common stock in the open market and used to settle restricted stock units granted as a retention vehicle for certain employees of our wholly owned Canadian subsidiaries amounted to 86,933 shares, for a total consideration of $4.9 million (for more information on this trust fund, see Note 2 and Note 11 of the Notes to Consolidated Financial Statements in this Form 10-K). These activities do not utilize the repurchase authority discussed in footnotes (3) and (4) below.

We also repurchase shares when employees surrender shares as payment for option exercises or withholding taxes. Of the total for the year ended September 30, 2015, 476,985 shares were surrendered to us by employees for such purposes, for a total consideration of $27 million. These activities do not utilize the repurchase authority discussed in footnotes (3) and (4) below.

Of the total for the year ended September 30, 2015, 1,114,505 shares were repurchased pursuant to our securities repurchase authorization, see footnotes (2) and (3) below for additional information.

(2) During August and September 2015, we purchased shares of our common stock in open market transactions, for a total purchase price of $56.9 million, which reflects an average purchase price per share of $51.04. These share repurchases were made pursuant to the RJF securities repurchase authorization described in footnote (3) below.

(3) On May 21, 2015, we announced an increase in the amount previously authorized by our Board of Directors to be used, at the discretion of our Securities Repurchase Committee, for open market repurchases of our common stock and certain senior notes. Such action increased the effective available authorization for such repurchases to $150 million subject to cash availability and other factors. After the effect of the August and September 2015 open market purchases of our common stock described in footnote (2) above, as of September 30, 2015, $93.1 million remained available for such purpose under the May 21, 2015 authorization.

(4) Subsequent to year-end, on November 19, 2015, we announced an increase in the amount previously authorized by our Board of Directors to be used, at the discretion of our Securities Repurchase Committee, for open market repurchases of our common stock and certain senior notes, to $150 million subject to cash availability and other factors.

Item 6. SELECTED FINANCIAL DATA

	Year ended September 30,				
	2015	2014	2013	2012	2011
	(in thousands, except per share data)				
Operating results:					
Total revenues	$ 5,308,164	$ 4,965,460	$ 4,595,798	$ 3,897,900	$ 3,399,886
Net revenues	$ 5,200,210	$ 4,861,369	$ 4,485,427	$ 3,806,531	$ 3,334,056
Net income attributable to RJF	$ 502,140	$ 480,248	$ 367,154	$ 295,869	$ 278,353
Net income per share - basic	$ 3.51	$ 3.41	$ 2.64	$ 2.22	$ 2.20
Net income per share - diluted	$ 3.43	$ 3.32	$ 2.58	$ 2.20	$ 2.19
Weighted-average common shares outstanding - basic	142,548	139,935	137,732	130,806	122,448
Weighted-average common and common equivalent shares outstanding - diluted	145,939	143,589	140,541	131,791	122,836
Cash dividends per common share - declared	$ 0.72	$ 0.64	$ 0.56	$ 0.52	$ 0.52
Financial condition:					
Total assets	$ 26,479,684	$ 23,325,652	$ 23,186,122	$ 21,160,265	$ 18,006,995
Senior notes maturing within twelve months	$ 249,946	$ —	$ —	$ —	$ —
Long-term obligations:					
Non-current portion of other borrowings	$ 583,740 (1)	$ 537,932 (1)	$ 47,132	$ 173,918	$ 52,622
Non-current portion of loans payable of consolidated variable interest entities (2)	$ 12,597	$ 25,928	$ 43,877	$ 62,938	$ 78,650
Non-current portion of senior notes payable	$ 899,276	$ 1,149,034	$ 1,148,846	$ 1,148,658	$ 549,505
Total long-term debt	$ 1,495,613	$ 1,712,894	$ 1,239,855	$ 1,385,514	$ 680,777
Equity attributable to Raymond James Financial, Inc.	$ 4,522,031	$ 4,141,236	$ 3,662,924	$ 3,268,940	$ 2,587,619
Shares outstanding (3)	142,751	140,836	138,750	136,076	123,273
Book value per share at end of year	$ 31.68	$ 29.40	$ 26.40	$ 24.02	$ 20.99
Tangible book value per share at end of year (a non-GAAP measure) (4)	$ 29.17	$ 26.98	$ 23.86	$ 21.42	$ 20.45

(1) At September 30, 2015 and 2014, the outstanding balances were primarily comprised of borrowings from the Federal Home Loan Bank ("FHLB") by RJ Bank and mortgage notes payable on our corporate headquarters offices.

(2) Loans payable of consolidated variable interest entities ("VIE") are non-recourse to us.

(3) Excludes non-vested shares.

(4) This non-GAAP measure is computed by dividing equity attributable to Raymond James Financial, Inc., less goodwill and net identifiable intangible assets, offset by their related deferred tax balances (which are $19 million, $13 million, $9 million, $8 million and $6 million as of September 30, 2015, 2014, 2013, 2012 and 2011 respectively), by the number of shares outstanding. Management believes tangible book value per share is a measure that is useful to assess capital strength and that the GAAP and non-GAAP measures should be considered together.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following Management's Discussion and Analysis ("MD&A") is intended to help the reader understand the results of our operations and financial condition. MD&A is provided as a supplement to, and should be read in conjunction with, our consolidated financial statements and accompanying notes to consolidated financial statements. Where "NM" is used in various percentage change computations, the computed percentage change has been determined not to be meaningful.

Executive overview

We operate as a financial services and bank holding company. Results in the businesses in which we operate are highly correlated to the general overall strength of economic conditions and, more specifically, to the direction of the U.S. equity and fixed income markets, the corporate and mortgage lending markets and commercial and residential credit trends. Overall market conditions, interest rates, economic, political and regulatory trends, and industry competition are among the factors which could affect us and which are unpredictable and beyond our control. These factors affect the financial decisions made by market participants which include investors, borrowers, and competitors, impacting their level of participation in the financial markets. These factors also impact the level of public offerings, trading profits, interest rate volatility and asset valuations, or a combination thereof. In turn, these decisions and factors affect our business results.

Year ended September 30, 2015 compared with the year ended September 30, 2014

For the sixth consecutive year we achieved record net revenues for the fiscal year, $5.2 billion in fiscal year 2015, a $339 million, or 7%, increase compared to the prior year. All four operating segments achieved record levels of net revenues. Total client assets under administration increased to $480 billion at September 30, 2015, a 1% increase over the prior year level. The increase in assets under administration is attributable to strong financial advisor recruiting results and high levels of retention of our existing financial advisors, which more than offset the decline in the U.S. equity markets for the year (primarily occurring in our fourth fiscal quarter).

We also achieved a record level of net income of $502 million, an increase of $22 million, or 5%, compared to the prior year. Three of our four operating segments achieved record levels of profitability. Fully diluted earnings per share of $3.43 increased $0.11, or 3%, over the prior year amount.

Non-interest expenses increased $278 million, or 7%, compared to the prior year. The increase is primarily due to the increase in compensation, commissions and benefits expenses associated with the increased revenues. In addition, as a result of various growth strategies across our businesses, we experienced an increase in our business development expenses. Our strategic efforts during the year to continually improve the technology available to our financial advisors, as well as the additional costs of compliance with various new rules and regulations impacting our industry, are factors impacting an increase in our communications and information processing expenses. The provision for loan losses increased significantly year over year, as the prior year benefited to a greater extent than the current year, from improved credit characteristics of the loan portfolio. The combination of the above noted factors, even after consideration of the incremental expenses resulting from activities associated with the strategic growth initiatives that should favorably impact future revenues, resulted in a pre-tax margin on net revenues of 15.3%, a level that is nearly equivalent to the 15.4% pre-tax margin on net revenues in the prior year.

A summary of the most significant items impacting our financial results as compared to the prior year are as follows:

- Our Private Client Group segment generated record net revenues of $3.5 billion, a $228 million, or 7%, increase over the prior year. Pre-tax income also established a record at $342 million, a $12 million, or 4%, increase over the prior year. The increase in revenues is primarily attributable to increased securities commissions and fee revenues, predominately arising from fee-based accounts, as well as an increase in mutual fund and annuity service fee revenues. Client assets under administration of the Private Client Group increased 1% over the prior year level, to $453.3 billion at September 30, 2015. The increase in commission revenues and client assets have resulted primarily from successful recruiting of financial advisors, and high levels of financial advisor retention. We had our second best financial advisor recruiting year ever in fiscal year 2015 with a net increase of 331 financial advisors over the year to 6,596 affiliated financial advisors as of September 30, 2015. There was an overall net increase in client assets despite the impact of the decline in the market value of assets that occurred during the fourth quarter of fiscal year 2015 as a result of declining equity market conditions. Commission expenses increased in proportion to the increase in commission revenues while all other components of non-interest expense increased 5% as we incurred increases in certain costs associated with the successful recruiting efforts and continued information system improvements. On July 31, 2015, we completed our

acquisition of The Producers Choice, LLC ("TPC"), a private insurance and annuity marketing organization based in Troy, Michigan. Our acquisition of TPC brings more life insurance and annuity experts to the firm to support financial advisors and their clients.

- The Capital Markets segment generated record net revenues of $960 million, a $7 million, or 1%, increase over the prior year. Pre-tax income was $107 million, a decrease of $24 million, or 18%, compared to the prior year. Fiscal year 2015 reflected new record levels of merger and acquisition fees and tax credit fund syndication fees. Commission revenues from fixed income institutional sales increased over the prior year level, resulting in part from growth in our public finance activities. However, equity underwriting revenues declined compared to the prior year as a result of weakness in both the energy and real estate sectors, which also led to a decline in commission revenues on equity products. The net profit generated by this segment was negatively impacted by increased costs, some of which result from our efforts during the year to broadly build out certain sector capabilities and to increase investment banking coverage in certain sectors, which we believe present solid long-term opportunities for future revenue growth. The continued difficult market environment in Canada negatively impacted this segment's revenues and profitability.

- Our Asset Management segment generated record net revenues of $392 million, a $23 million, or 6%, increase over the prior year. Pre-tax income was a record $135 million, a $7 million, or 5%, increase over the prior year. Financial assets under management increased 1% from the prior year, to $65.2 billion as of September 30, 2015. The increase resulted from net inflows of client assets, which more than offset the unfavorable impact of the decline in the market value of assets that occurred during the fourth quarter of fiscal year 2015 as a result of declining equity market conditions. On April 30, 2015, we completed our acquisition of Cougar Global Investments Limited ("Cougar"), an asset management firm based in Toronto, Canada that markets its investment services to high net worth individuals, families, foundations, trusts and institutions in Canada and the United States.

- RJ Bank generated record net revenues of $414 million, a $63 million, or 18%, increase over the prior year. Pre-tax income was a record $279 million, a $36 million, or 15% increase, over the prior year. Net interest income increased due to growth in average loans outstanding, coupled with a modest increase in net interest margin. Our provision for loan losses increased $10 million, or 74% compared to the prior year. We incurred substantial provision for loan losses associated with loan growth in both years, however the majority of the year-over-year increase resulted from the prior year benefiting to a greater extent than the current year, from improved credit characteristics of the loan portfolio. The credit characteristics of the loan portfolio generally improved over the year, reflecting the positive impact of improved economic conditions.

- Activities in our Other segment resulted in a pre-tax loss that was $19 million less than the prior year. Net revenues in this segment increased $25 million, resulting from increases in revenues associated with our private equity portfolio investments, and an increase in gains resulting from our auction rate securities portfolio sales and redemption activities. As a result of the increase in private equity investment revenues, the portion of this segment's pre-tax income that is attributable to noncontrolling interests also increased.

- Our fiscal year 2015 effective tax rate was 37.1%, up from the 35.8% in the prior year. As a result of the fiscal year 2015 decline in equity market values compared to positive markets in fiscal year 2014, the change in the amount of our non-taxable gains/losses arising from the value of our company-owned life insurance portfolio had the effect of increasing our effective tax rate by 1.2% compared to the prior year effective tax rate.

Consistent with our growth strategies, we completed two acquisitions during the year, Cougar and TPC. We continue to evaluate future opportunities, but remain committed to our strategy that our acquisitions must meet our strategic growth objectives, involve entities that share our culture of conservatism and "client-first" values, and be executed at purchase prices that provide us opportunities to increase our shareholders' value.

During the year we implemented the new Basel III regulatory capital rules, a change which did not have a significant impact on our regulatory capital ratios. We have published the results of the 2015 Dodd-Frank Act mandated Stress Test, the results of which indicated that both RJF and RJ Bank have sufficient capital to successfully navigate a severe and prolonged economic downturn while still maintaining capital levels that exceed both regulatory requirements and higher management thresholds throughout the course of the Severely Adverse Scenario.

The volume of possible regulatory changes that impact the businesses in which we operate continues to grow and evolve. Regulatory rule-making activities that have arisen during the year include the DOL proposed rule enhancing standards for individuals providing investment advice to retirement plans, their participants, or beneficiaries. We are continuing our study and evaluation of the proposal. The total impact of the standard, once finalized and implemented, on our business is unknown at this

time. We continue to monitor the impact of proposed future legislation while implementing new regulations. We presently do not expect currently enacted legislation to have a significant adverse direct impact on our operations as a whole, however, we continue to evaluate the specific impacts of each.

Year ended September 30, 2014 compared with the year ended September 30, 2013

We achieved record net revenues of $4.9 billion in fiscal year 2014, a $376 million or 8%, increase compared to the prior year. The increase generated by our on-going operations is even greater than that amount after factoring in the $74 million of revenue reflected in fiscal year 2013 that was associated with a private equity investment we sold in that year. All four operating segments achieved record levels of net revenues. Total client assets under administration increased to $475 billion at September 30, 2014, a 12% increase over the prior year level.

We also achieved a record level of net income in fiscal year 2014, to $480 million, an increase of $113 million, or 31%, compared to the prior year. Three of our four operating segments achieved record levels of profitability. Fully diluted earnings per share of $3.32 in fiscal year 2014 increased $0.74, or 29%, over the fiscal year 2013 amount. After excluding the acquisition related and other non-recurring expenses we incurred in fiscal year 2013, our adjusted net income in fiscal year 2014 increased $61 million, or 15%, compared to fiscal year 2013 (a non-GAAP measure).[(1)] The increase in net income in fiscal year 2014 over the prior year level is even more significant given that the fiscal year 2013 net income included $14 million (after the attribution to noncontrolling interests) arising from our indirect investment in Albion Medical Holdings, Inc. ("Albion"), a private equity holding which was sold during fiscal year 2013.

Non-interest expenses increased $254 million in fiscal year 2014, or 7%, compared to the prior year. The increase in fiscal year 2014 is primarily due to the increase in compensation, commissions and benefits expenses which were partially offset by the decrease in acquisition related expenses. Acquisition and integration related expenses in fiscal year 2014 were no longer material for separate reporting since our integration of Morgan Keegan was substantially complete as of September 30, 2013. The combination of increasing net revenues and overall expense control in fiscal year 2014 helped us achieve a 15.4% pre-tax margin on net revenues.

A summary of the most significant items impacting our financial results in fiscal year 2014 as compared to the prior year are as follows:

- Our Private Client Group segment generated record net revenues of $3.3 billion in fiscal year 2014, a 12% increase, while pre-tax income increased $100 million, or 43%, to a record $330 million. The increase in revenues is primarily attributable to increased securities commissions and fee revenues, predominately arising from fee-based accounts, as well as an increase in mutual fund and annuity service fee revenues. Commission expenses increased in proportion to the increase in corresponding commission revenues while all other components of non-interest expense increased by 3%. Client assets under administration of the Private Client Group increased 12% over the prior year level, to $450.6 billion at September 30, 2014. Net inflows of client assets in fiscal year 2014 were positively impacted by successful recruiting of financial advisors, among other favorable factors.

- The Capital Markets segment generated record net revenues of $953 million in fiscal year 2014, a 3% increase, while pre-tax income increased $28 million, or 28%, to a record $131 million. Increases in trading profits, merger and acquisition fee revenues, equity underwriting fee revenues and institutional sales commissions on equity products more than offset a decline in institutional sales commissions on fixed income products. The decline in institutional fixed income commission revenues results from challenging fixed income market conditions during fiscal year 2014 due to economic uncertainty, historically low interest rates, relatively low volatility of benchmark interest rates, and decreased customer trading volumes.

- Our Asset Management segment generated record net revenues of $370 million in fiscal year 2014, a 26% increase, while pre-tax income increased $32 million, or 33%, to a record $128 million. Financial assets under management increased 15% from the prior year, to $64.6 billion as of September 30, 2014. Both strong net inflows of client assets and market appreciation contributed to the increase. We also earned nearly $10 million in performance fees in fiscal year 2014 (compared to nearly $2 million in the prior year) as a result of positive net performance from certain of our managed funds (a portion of which are attributable to noncontrolling interests), which contributed to the increase in revenues and pre-tax income.

(1) Refer to the discussion and reconciliation of the GAAP results to the non-GAAP results in the "Reconciliation of the GAAP results to the non-GAAP measures" section of this MD&A.

- RJ Bank generated record net revenues of $352 million in fiscal year 2014, a 1% increase, while pre-tax income decreased $25 million, or 9%, to $243 million. Net interest income increased due to growth in average loans outstanding, offset in large part by a lower net interest margin. The provision for loan losses increased in fiscal year 2014 primarily as the result of significant loan portfolio growth, partially offset by decreases resulting from improved credit characteristics of the loan portfolio reflecting the positive impact from improved economic conditions. Non-interest expenses (excluding the provision for loan losses) increased $19 million.

- Activities in our Other segment resulted in a pre-tax loss that is $48 million less in fiscal year 2014 than the prior year. Our non-interest expenses decreased substantially as we are no longer incurring acquisition and integration related costs since our integration of Morgan Keegan was substantially complete as of September 30, 2013. In addition, fiscal year 2013 included significant revenues and pre-tax income associated with our indirect investment in Albion, which was sold in April 2013, thus having a significant impact on comparisons to the prior year.

- Our fiscal year 2014 effective tax rate was 35.8%, up from the 34.9% in fiscal year 2013. Our fiscal year 2013 effective tax rate included a nonrecurring tax benefit resulting from a change in management's repatriation strategy of certain foreign earnings. Both years included significant non-taxable gains in the value of our company-owned life insurance portfolio.

Segments

The following table presents our consolidated and segment gross revenues, net revenues and pre-tax income (loss), the latter excluding noncontrolling interests, for the years indicated:

	Year ended September 30,				
	2015	2014	% change	2013	% change
	($ in thousands)				
Total company					
Revenues	$ 5,308,164	$ 4,965,460	7 %	$ 4,595,798	8 %
Net revenues	5,200,210	4,861,369	7 %	4,485,427	8 %
Pre-tax income excluding noncontrolling interests	798,174	748,045	7 %	564,187	33 %
Private Client Group					
Revenues	3,519,558	3,289,503	7 %	2,930,603	12 %
Net revenues	3,507,806	3,279,883	7 %	2,918,978	12 %
Pre-tax income	342,243	330,278	4 %	230,315	43 %
Capital Markets					
Revenues	975,064	968,635	1 %	945,477	2 %
Net revenues	960,035	953,215	1 %	927,408	3 %
Pre-tax income	107,009	130,565	(18)%	102,171	28 %
Asset Management					
Revenues	392,378	369,690	6 %	292,817	26 %
Net revenues	392,301	369,666	6 %	292,809	26 %
Pre-tax income	135,050	128,286	5 %	96,300	33 %
RJ Bank					
Revenues	425,988	360,317	18 %	356,130	1 %
Net revenues	414,295	351,770	18 %	346,906	1 %
Pre-tax income	278,721	242,834	15 %	267,714	(9)%
Other					
Revenues	66,967	42,203	59 %	126,401	(67)%
Net revenues	(10,198)	(35,253)	71 %	45,923	(177)%
Pre-tax loss	(64,849)	(83,918)	23 %	(132,313)	37 %
Intersegment eliminations					
Revenues	(71,791)	(64,888)	(11)%	(55,630)	(17)%
Net revenues	(64,029)	(57,912)	(11)%	(46,597)	(24)%

Reconciliation of the GAAP results to the non-GAAP measures

We believe that the non-GAAP measures provide useful information by excluding material items that may not be indicative of our core operating results and that the GAAP and the non-GAAP measures should be considered together. There are no non-GAAP adjustments in either of the fiscal years ended September 30, 2015 or 2014, as we do not separately report acquisition and integration related costs in those years given that our integration of Morgan Keegan was substantially complete as of September 30, 2013. The non-GAAP adjustments in fiscal year 2013 were comprised of the acquisition and integration costs incurred during that fiscal year (primarily associated with the Morgan Keegan acquisition) as well as certain other non-recurring expenses, net of applicable taxes. Refer to the footnotes to the following table for further explanation of each fiscal year 2013 non-recurring item.

The following table provides a reconciliation of the fiscal year 2013 GAAP basis to the non-GAAP measures:

	Year ended September 30, 2013 ($ in thousands, except per share amounts)
Net income attributable to RJF, Inc. - GAAP basis	$ 367,154
Non-GAAP adjustments:	
Acquisition related expenses [1]	73,454
RJF's share of RJES goodwill impairment expense [2]	4,564
RJES restructuring expense [3]	1,902
Pre-tax non-GAAP adjustments	79,920
Tax effect of non-GAAP adjustments [4]	(27,908)
Adjusted net income attributable to RJF, Inc. - Non-GAAP basis	$ 419,166
Non-GAAP earnings per common share:	
Non-GAAP basic	$ 3.01
Non-GAAP diluted	$ 2.95
Average equity - GAAP basis [5]	$ 3,465,323
Average equity - non-GAAP basis [6]	$ 3,483,531
Return on equity	10.6%
Return on equity - non-GAAP basis [7]	12.0%

(1) The non-GAAP adjustment adds back to pre-tax income acquisition and integration expenses that were incurred during the fiscal year.

(2) The non-GAAP adjustment adds back to pre-tax income RJF's share of the total goodwill impairment expense associated with our Raymond James European Securities, Inc. ("RJES") reporting unit.

(3) The non-GAAP adjustment adds back to pre-tax income restructuring expenses associated with our RJES operations.

(4) The non-GAAP adjustment reduces net income for the income tax effect of all the pre-tax non-GAAP adjustments, utilizing the effective tax rate applicable in the fiscal year.

(5) Computed by adding the total equity attributable to RJF, Inc. as of each quarter-end date during the fiscal year, plus the beginning of the year total, divided by five.

(6) The calculation of non-GAAP average equity includes the impact on equity of the non-GAAP adjustments described in the table above.

(7) Computed by utilizing the adjusted net income attributable to RJF, Inc.-non-GAAP basis and the average equity-non-GAAP basis. See footnotes (5) and (6) above for the calculation of average equity-non-GAAP basis.

Net interest analysis

We have certain assets and liabilities, primarily held in our PCG and RJ Bank segments, which are subject to changes in interest rates, and would have a meaningful impact on our overall financial performance in the event of a change in short-term interest rates. A gradual increase in short-term interest rates would have the most significant favorable impact on our PCG and RJ Bank segments (refer to the table in Item 7A - Interest Rate Risk in this report, which presents an analysis of RJ Bank's estimated net interest income over a 12 month period based on instantaneous shifts in interest rates using the asset/liability model applied by RJ Bank).

Based upon our analysis performed as of September 30, 2015, we estimate that a 100 basis point instantaneous rise in short-term interest rates would result in an increase in our pre-tax income of approximately $150 million over the subsequent twelve month period. Approximately 55% of such an increase would be reflected in account and service fee revenues (resulting from an increase in the fees generated from unaffiliated banks in lieu of interest income from client cash balances in our multi-bank sweep program and the discontinuance of money market fund fee waivers) which are reported in the PCG segment, and the remaining portion of the increase would be reflected in net interest income reported primarily in our PCG and RJ Bank segments. This estimate is based on static balances as of September 30, 2015 and a conservative assumption related to interest credited to our clients on their cash balances in such an interest rate environment. The actual amount of any increase we would realize in the future will ultimately be based on a number of factors including, but not limited to, the actual change in balances, the rapidity and magnitude of the increase in interest rates, the competitive landscape at such time, and the returns on comparable investments, all of which will factor into the interest rates we pay on client cash balances. The great majority of the benefit to pre-tax income from an increase in short-term interest rates would be expected to arise from the first 100 basis point increase, as we presume any further increases in short-term interest rates would be passed along to clients through our various cash sweep programs, and thus such additional interest revenues and interest sensitive fees would be offset by increases of similar amounts in our interest expense.

The following table presents our consolidated average interest-earning asset and liability balances, interest income and expense balances, and the average yield/cost, for the years indicated:

	Year ended September 30,								
	2015			2014			2013		
	Average balance[1]	Interest inc./exp.	Average yield/ cost	Average balance[1]	Interest inc./exp.	Average yield/ cost	Average balance[1]	Interest inc./exp.	Average yield/ cost
	($ in thousands)								
Interest-earning assets:									
Margin balances	$ 1,805,312	$ 67,573	3.74%	$ 1,764,305	$ 68,454	3.88%	$ 1,775,251	$ 60,931	3.43%
Assets segregated pursuant to regulations and other segregated assets	2,498,357	13,792	0.55%	2,783,598	15,441	0.55%	3,554,917	17,251	0.49%
Bank loans, net of unearned income [2]	12,129,531	405,578	3.34%	10,048,719	343,942	3.39%	8,605,013	335,964	3.86%
Available for sale securities	508,223	5,100	1.00%	648,515	6,560	1.01%	739,976	8,005	1.08%
Trading instruments[3]	716,409	19,450	2.71%	630,295	17,883	2.84%	742,991	20,089	2.70%
Stock loan	433,642	12,036	2.78%	423,466	8,731	2.06%	349,285	8,271	2.37%
Loans to financial advisors [3]	457,797	7,056	1.54%	413,600	6,427	1.55%	421,645	6,510	1.54%
Corporate cash and all other [3]	2,917,208	12,622	0.43%	3,396,796	13,448	0.40%	3,178,925	16,578	0.52%
Total	$21,466,479	$543,207	2.53%	$20,109,294	$480,886	2.39%	$19,368,003	$473,599	2.45%
Interest-bearing liabilities:									
Brokerage client liabilities	$ 3,693,928	940	0.03%	$ 3,967,811	$ 1,269	0.03%	$ 4,866,091	$ 2,049	0.04%
Bank deposits [2]	11,199,242	8,382	0.08%	10,119,433	7,959	0.09%	9,133,260	9,032	0.10%
Trading instruments sold but not yet purchased [3]	294,256	4,503	1.53%	243,737	4,327	1.78%	241,334	3,595	1.49%
Stock borrow	135,027	5,237	3.88%	114,404	2,869	2.51%	125,507	2,158	1.72%
Borrowed funds	721,296	6,079	0.84%	485,594	3,939	0.81%	361,317	4,724	1.31%
Senior notes	1,149,136	76,088	6.62%	1,148,947	76,038	6.62%	1,148,759	76,113	6.63%
Loans payable of consolidated variable interest entities [3]	33,225	1,879	5.66%	51,518	2,900	5.63%	70,325	3,959	5.63%
Other [3]	271,476	4,846	1.79%	319,328	4,790	1.50%	336,226	8,741	2.60%
Total	$17,497,586	$107,954	0.62%	$16,450,772	$104,091	0.63%	$16,282,819	$110,371	0.68%
Net interest income		$435,253			$376,795			$363,228	

(1) Represents average daily balance, unless otherwise noted.

(2) See Results of Operations – RJ Bank in this MD&A for further information.

(3) Average balance is calculated based on the average of the end of month balances for each month within the period.

Year ended September 30, 2015 compared with the year ended September 30, 2014 – Net Interest Analysis

Net interest income increased $58 million, or 16%, compared to the prior year. Net interest income is earned primarily by our RJ Bank and PCG segments, which are discussed separately below.

The RJ Bank segment's net interest income increased $57 million, or 16%, primarily as a result of an increase in average loans outstanding as well as a modest increase in net interest margin. Refer to the discussion of the specific components of RJ Bank's net interest income in the RJ Bank section of this MD&A.

Net interest income in the PCG segment was nearly unchanged compared to the prior year. A decrease in net interest income arising from our broker-dealer margin lending activities, where a decline in margin interest rates more than offset the impact of slightly higher average client margin balances outstanding, was nearly offset by an increase in net interest revenue arising from our securities lending activities.

Net interest income arising from our securities lending activities increased $1 million, or 16%, due primarily to an increase in interest income associated with hard-to-borrow securities in our Box lending program. These revenues increased $3 million due to our ability to lend these securities at a premium. The increase in revenues was offset by a $2 million increase in interest expense associated with our stock borrow activities, as a result of additional expense associated with borrowing hard-to-borrow securities.

Interest income earned on the available for sale securities portfolio held in our RJ Bank and Other segments decreased $1 million, or 22%, due to lower average investment balances and a slight decrease in yields on the portfolio. The decrease in average balances outstanding is the result of sales and redemptions within the portfolio during the year (see Note 7 of our Notes to Consolidated Financial Statements in this Form 10-K for additional information on our available for sale securities).

Interest income earned on our trading instruments held in the Capital Markets segment increased $2 million, or 9%, due to slightly higher average trading security inventory levels, partially offset by the impact of lower yields (see Note 6 of our Notes to Consolidated Financial Statements in this Form 10-K for additional information on our trading instruments).

Year ended September 30, 2014 compared with the year ended September 30, 2013 – Net Interest Analysis

Net interest income increased $14 million, or 4%, in fiscal year 2014 compared to the prior year.

Net interest income in the PCG segment in fiscal year 2014 increased $4 million, or 5%, compared to the prior year primarily resulting from the increase in margin interest rates we implemented as of October 1, 2013, offset by a slight decrease in average client margin balances outstanding.

The RJ Bank segment's net interest income in fiscal year 2014 increased $8 million, or 2%, compared to the prior year primarily as a result of an increase in loans outstanding offset by a decrease in net interest margin. Refer to the discussion of the specific components of RJ Bank's net interest income in the RJ Bank section of this MD&A.

Interest income earned on the available for sale securities portfolio in fiscal year 2014 decreased $1 million, or 18%, from the prior year due to lower investment balances primarily resulting from sales and redemptions within the portfolio, and a slight decrease in yields (see Note 7 of our Notes to Consolidated Financial Statements in this Form 10-K for additional information on our available for sale securities).

Interest income earned on our trading instruments in fiscal year 2014 decreased $2 million, or 11%, compared to the prior year due to lower average trading security inventory levels (see Note 6 of our Notes to Consolidated Financial Statements in this Form 10-K for additional information on our trading instruments).

Results of Operations – Private Client Group

The following table presents consolidated financial information for our PCG segment for the years indicated:

	Year ended September 30,				
	2015	% change	2014	% change	2013
			($ in thousands)		
Revenues:					
Securities commissions and fees:					
Equities	$ 270,435	(9)%	$ 297,535	3 %	$ 289,395
Fixed income products	74,448	(5)%	78,082	(21)%	98,994
Mutual funds	680,375	—	678,577	9 %	621,459
Fee-based accounts	1,472,877	17 %	1,261,267	24 %	1,016,340
Insurance and annuity products	363,352	2 %	354,629	5 %	338,666
New issue sales credits	75,015	(15)%	88,341	(3)%	90,747
Sub-total securities commissions and fees	2,936,502	6 %	2,758,431	12 %	2,455,601
Interest	100,594	1 %	99,147	2 %	96,926
Account and service fees:					
Client account and service fees	176,175	9 %	162,057	—	162,283
Mutual fund and annuity service fees	249,232	17 %	212,342	26 %	168,055
Client transaction fees	18,971	11 %	17,124	1 %	16,932
Correspondent clearing fees	2,401	(21)%	3,022	(1)%	3,059
Account and service fees – all other	284	(3)%	293	4 %	282
Sub-total account and service fees	447,063	13 %	394,838	13 %	350,611
Other	35,399	(5)%	37,087	35 %	27,465
Total revenues	3,519,558	7 %	3,289,503	12 %	2,930,603
Interest expense	(11,752)	22 %	(9,620)	(17)%	(11,625)
Net revenues	3,507,806	7 %	3,279,883	12 %	2,918,978
Non-interest expenses:					
Sales commissions	2,169,823	8 %	2,002,831	13 %	1,765,933
Admin & incentive compensation and benefit costs	552,762	7 %	518,489	2 %	507,629
Communications and information processing	157,729	3 %	153,076	(6)%	163,125
Occupancy and equipment	121,115	2 %	118,503	4 %	113,573
Business development	92,473	14 %	80,950	23 %	65,679
Clearance and other	71,661	(5)%	75,756	4 %	72,724
Total non-interest expenses	3,165,563	7 %	2,949,605	10 %	2,688,663
Pre-tax income	$ 342,243	4 %	$ 330,278	43 %	$ 230,315
Margin on net revenues	9.8%		10.1%		7.9%

The success of the PCG segment is dependent upon the quality of our products, services, financial advisors and support personnel including our ability to attract, retain and motivate a sufficient number of these associates. We face competition for qualified associates from major financial services companies, including other brokerage firms, insurance companies, banking institutions and discount brokerage firms.

Revenues of the PCG segment are correlated with total PCG client assets under administration, which include assets in fee-based accounts, and the overall U.S. equities markets. RJ&A advisors operate under the RJ&A registered investment advisor ("RIA") license while independent contractors affiliated with RJFS may operate either under their own RIA license, or the RIA license of RJFSA. The investment advisory fee revenues associated with these activities are recorded within securities commissions and fee revenues on our consolidated financial statements. Refer to the securities commissions and fees section of our summary of significant accounting policies in Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K for our accounting policies on presenting these revenues in our consolidated financial statements.

Net interest revenue in the Private Client Group is generated by client balances, predominantly the earnings on margin loans and assets segregated pursuant to regulations, less interest paid on client cash balances (the "Client Interest Program"). We also utilize a multi-bank sweep program which generates fee revenue from unaffiliated banks in lieu of interest revenue. The cash sweep program, known as the Raymond James Bank Deposit Program ("RJBDP"), is a multi-bank (RJ Bank and several non-

affiliated banks) program under which clients' cash deposits in their brokerage accounts are re-deposited into interest-bearing deposit accounts (up to $250,000 per bank for individual accounts and up to $500,000 per bank for joint accounts) at various third party banks. This program enables clients to obtain up to $2.5 million in individual FDIC deposit insurance coverage ($5 million for joint accounts) while earning competitive rates for their cash balances.

Clients' transactions in securities are affected on either a cash or margin basis. Margin loans to clients are collateralized by the securities purchased or by other securities owned by the client. Interest is charged to clients on the amount borrowed. The interest rate charged to a client on a margin loan is based on current interest rates and on the outstanding amount of the loan.

Typically, broker-dealers utilize bank borrowings and equity capital as the primary sources of funds to finance clients' margin account borrowings. RJ&A's source of funds to finance clients' margin account balances has been cash balances in brokerage clients' accounts, which are funds awaiting investment. In addition, pursuant to written agreements with clients, broker-dealers are permitted by the SEC and FINRA rules to lend client securities in margin accounts to other financial institutions. SEC regulations, however, restrict the use of clients' funds derived from pledging and lending clients' securities, as well as funds awaiting investment, to the financing of margin account balances; to the extent not so used, such funds are required to be deposited in a special segregated account for the benefit of clients. The regulations also require broker-dealers, within designated periods of time, to obtain possession or control of, and to segregate, clients' fully paid and excess margin securities.

No single client accounts for a material percentage of this segment's total business.

PCG client asset balances are as follows as of the dates indicated:

	As of September 30,						
	2015	% change	2014	% change	2013
	($ in billions)				
Total PCG assets under administration	$ 453.3	1%	$ 450.6	12%	$ 402.6
PCG assets in fee-based accounts	$ 179.4	7%	$ 167.7	20%	$ 139.9

Total PCG assets under administration increased 1% over September 30, 2014 as a result of net client inflows as equity markets reflect a slight decline at September 30, 2015 compared to the prior year. Total PCG assets in fee-based accounts increased 7% compared to September 30, 2014. Increased client assets under administration typically result in higher fee-based account revenues and mutual fund and annuity service fees. In periods where equity markets improve, assets under administration increase and generally, client activity increases, thereby having a favorable impact on financial advisor productivity. Generally, assets under administration, client activity, and financial advisor productivity decline in periods where equity markets reflect downward trends. Higher client cash balances generally lead to increased interest income and account fee revenues, depending upon spreads realized in our Client Interest Program and RJBDP.

The following table presents a summary of PCG financial advisors and the total number of PCG branch locations as of the periods indicated:

	Employees	Independent contractors	September 30, 2015 total	September 30, 2014 total	September 30, 2013 total
RJ&A	2,571	—	2,571	2,462	2,443
RJFS	—	3,544	3,544	3,329	3,275
RJ Ltd.	167	216	383	391	406
RJIS	—	98	98	83	73
Total financial advisors	2,738	3,858	6,596	6,265	6,197
Total branch locations			2,702	2,569	2,518

The number of financial advisors as of September 30, 2015 reflects a net increase of 331 individuals, or a 5% net increase, over the number of financial advisors as of September 30, 2014. Importantly, the client asset levels and productivity measures associated with those financial advisors recruited during the fiscal year exceed our historical benchmark averages. Nothwithstanding the future impact of changes in the overall economy and more specifically their impact on future equity markets and fixed income markets, factors which we have no control, we believe that this increase in productive financial advisors is a positive indication of potential future revenue growth in this segment.

Year ended September 30, 2015 compared with the year ended September 30, 2014 – Private Client Group

Net revenues increased $228 million, or 7%, to a record $3.5 billion while pre-tax income increased $12 million, or 4%, to a record $342 million. PCG's pre-tax margin on net revenues decreased slightly to 9.8% as compared to 10.1% in fiscal year 2014.

Securities commissions and fees increased $178 million, or 6%. Client assets under administration increased to $453.3 billion, an increase of $2.7 billion, or 1%, compared to September 30, 2014. The year over year increase in client assets was driven by positive net inflows generated by financial advisor retention and recruiting results, as the equity markets in the U.S. were down compared to the prior year. The most significant increase in these revenues arose from revenues earned on fee-based accounts, which increased $212 million, or 17%, and was partially offset by a $27 million, or 9%, decrease in commissions on equity products, a $13 million, or 15%, decrease in new issue sales credits due to a decrease in equity underwritings, and a $4 million, or 5%, decrease in commissions on fixed income products. Fiscal year 2015 includes a $7 million decrease in mutual fund commission revenues due to the resolution of a mutual fund share class issue that resulted in refunds of commissions being paid during the year to certain of our clients. Despite this unusual item, mutual fund commission revenues still increased $2 million. Commission revenues on equity products have decreased in our Canadian broker-dealer subsidiary as a result of the weaker Canadian currency compared to the U.S. dollar, as well as the overall challenging Canadian market conditions that existed throughout the fiscal year. Commission earnings on fixed income products decreased primarily due to the continuation of historically low interest rates which continue to result in challenging fixed income market conditions.

Total account and service fee revenues increased $52 million, or 13%. Mutual fund and annuity service fees increased $37 million, or 17%, primarily as a result of an increase in education and marketing support ("EMS") fees (which include no-transaction-fee ("NTF") program revenues), and mutual fund omnibus fees, all of which are paid to us by the mutual fund companies whose products we distribute. During fiscal year 2014, we implemented technology changes in our EMS program and standardized tiered service levels provided to many mutual fund companies, resulting in increased fees earned from EMS arrangements. Omnibus fees are generally based on the number of positions held in our client portfolios. Increases in such revenues are a result of increases in the number of positions for existing fund families on the omnibus platform as well as new fund families joining the omnibus program. Client account and service fees increased $14 million, or 9%, as a result of the changes made in many of our fee schedules implemented since December 2013. In addition, transaction handling fees in fee-based accounts increased due to the increased number of transactions, fees generated in lieu of interest income from our multi-bank sweep program with unaffiliated banks increased due to higher average balances in the program, and SBL affiliate servicing fees increased (refer to the RJ Bank results of operations in this report for additional information on SBL activities) as SBL balances have continued to grow.

PCG net interest is relatively unchanged compared to the prior year. Net interest income arising from our broker-dealer margin lending activities decreased slightly compared to the prior year level, a slight decline in margin interest rates more than offset the impact of slightly higher average margin loan balances outstanding. The rate of growth in margin loan balances in fiscal year 2015 has been negatively impacted by the popularity of our SBL product offered by RJ Bank. As a result of the extremely low rate interest rate environment that existed during fiscal year 2015 and the related low net interest spreads earned, there was only a nominal impact on our net interest revenues resulting from changes in client cash balances. Refer to the discussion of how the pre-tax income of this segment could be favorably impacted by a 100 basis point instantaneous rise in short-term interest rates, in the net interest section of this MD&A.

Total segment revenues increased 7%. The portion of total segment revenues that we consider to be recurring is approximately 75% at September 30, 2015, an increase from 72% at September 30, 2014. Recurring commission and fee revenues include asset-based fees, trailing commissions from mutual funds and variable annuities/insurance products, mutual fund service fees, fees earned on funds in our multi-bank sweep program, and interest. Assets in fee-based accounts increased more than average PCG client assets as clients continue to elect fee-based alternatives versus traditional transaction-based accounts. At September 30, 2015, such assets were $179.4 billion, an increase of 7% compared to the $167.7 billion as of September 30, 2014.

Non-interest expenses increased $216 million, or 7%. Sales commission expense increased $167 million, or 8%, largely consistent with the 6% increase in commission and fee revenues, coupled with increased hiring bonuses resulting from the high level of recruiting activity. Administrative and incentive compensation and benefits expense increased $34 million, or 7%, in part from annual increases in salary expenses, increases in employee benefit plan costs, and additional staffing levels, primarily in information technology functions, to support our continuing growth. Business development expenses increased $12 million, or 14%, due to increased recruiting activity and the related incoming account transfer fee expenses, and conference and travel related expenses.

Year ended September 30, 2014 compared with the year ended September 30, 2013 – Private Client Group

Net revenues in fiscal year 2014 increased $361 million, or 12%, to $3.3 billion while pre-tax income increased $100 million, or 43%, to $330 million. PCG's pre-tax margin on net revenues in fiscal year 2014 increased to 10.1% as compared to 7.9% in fiscal year 2013.

Securities commissions and fees in fiscal year 2014 increased $303 million, or 12%. The increase results predominately from growth in client assets under administration. The year over year increase in client assets in fiscal year 2014 was driven by the equity market conditions in the U.S., which were generally improved as compared to fiscal year 2013, and increased financial advisor productivity. The most significant increases in these revenues in fiscal year 2014 arose from revenues earned on fee-based accounts, which increased $245 million, or 24%, and commission revenues on mutual fund products which increased $57 million, or 9% (primarily due to increases in trailing commissions on mutual fund products), partially offset by a $21 million, or 21%, decrease in commissions on fixed income products. Commission earnings on fixed income products in fiscal year 2014 decreased primarily due to historically low interest rates and a general lack of volatility of benchmark interest rates. Securities commissions and fee revenues generated by our Canadian operations in fiscal year 2014 increased 5% over fiscal year 2013.

Total account and service fee revenues in fiscal year 2014 increased $44 million, or 13%, over fiscal year 2013. Mutual fund and annuity service fees increased $44 million, or 26%, primarily as a result of an increase in mutual fund omnibus fees and EMS fees (which include NTF program revenues), all of which are paid to us by the mutual fund companies whose products we distribute. In fiscal year 2014 we continued to implement changes in the data sharing arrangements with many mutual fund companies, converting from a networking to an omnibus arrangement. The fees earned from omnibus arrangements are greater than those under networking arrangements in order to compensate us for the additional reporting requirements performed by the broker-dealer under omnibus arrangements. During fiscal year 2014, we implemented technology changes in our EMS program and standardized tiered service levels provided to many mutual fund companies, resulting in increased fees earned from EMS arrangements. In addition, effective with our mid-February 2013 platform integration, the former Morgan Keegan client mutual fund investments became eligible for our omnibus and EMS programs resulting in an increase in this fee revenue.

PCG net interest in fiscal year 2014 increased $4 million, or 5%, primarily resulting from an increase in margin interest rates despite a slight decrease in average margin balances. Growth in margin loans in fiscal year 2014 was negatively impacted by the popularity of our SBL product offered by RJ Bank. As a result of the extremely low rate interest environment that existed during fiscal year 2014 and the related low net interest spreads earned, there was only a nominal impact on our net interest revenues resulting from changes in client cash balances.

Total segment revenues in fiscal year 2014 increased 12%. The portion of total segment revenues that we consider to be recurring was approximately 72% at September 30, 2014, as contrasted to 68% at September 30, 2013.

Non-interest expenses in fiscal year 2014 increased $261 million, or 10%, over fiscal year 2013. Sales commission expense increased $237 million, or 13%, consistent with the 12% increase in commission and fee revenues. Business development expenses in fiscal year 2014 increased $15 million, or 23%, due to increases in advertising, recruiting, incoming account transfer fee expenses, and conference costs.

Results of Operations – Capital Markets

The following table presents consolidated financial information for our Capital Markets segment for the years indicated:

	Year ended September 30,				
	2015	% change	2014	% change	2013
	($ in thousands)				
Revenues:					
Institutional sales commissions:					
Equity	$ 247,414	(5)%	$ 260,934	6 %	$ 246,588
Fixed income	283,828	15 %	246,131	(25)%	326,792
Sub-total institutional sales commissions	531,242	5 %	507,065	(12)%	573,380
Equity underwriting fees	74,229	(26)%	100,091	14 %	87,466
Merger and acquisitions fees	162,270	7 %	151,000	19 %	126,864
Fixed income investment banking revenues	42,149	(24)%	55,275	15 %	48,133
Tax credit funds syndication fees	44,608	29 %	34,473	40 %	24,656
Investment advisory fees	26,766	17 %	22,966	20 %	19,202
Net trading profit	55,021	(8)%	59,701	112 %	28,117
Interest	22,663	9 %	20,746	(6)%	22,145
Other	16,116	(7)%	17,318	12 %	15,514
Total revenues	975,064	1 %	968,635	2 %	945,477
Interest expense	(15,029)	(3)%	(15,420)	(15)%	(18,069)
Net revenues	960,035	1 %	953,215	3 %	927,408
Non-interest expenses:					
Sales commissions	198,691	3 %	192,774	(13)%	222,424
Admin & incentive compensation and benefit costs	428,501	1 %	425,153	6 %	401,838
Communications and information processing	71,630	6 %	67,835	3 %	65,728
Occupancy and equipment	34,006	(2)%	34,859	(4)%	36,435
Business development	44,058	9 %	40,409	3 %	39,308
Losses and non-interest expenses of real estate partnerships held by consolidated VIEs	38,553	(6)%	41,072	57 %	26,083
Impairment of goodwill associated with RJES	—	—	—	(100)%	6,933
Clearance and all other	77,801	19 %	65,160	7 %	60,673
Total non-interest expenses	893,240	3 %	867,262	1 %	859,422
Income before taxes and including noncontrolling interests	66,795	(22)%	85,953	26 %	67,986
Noncontrolling interests	(40,214)		(44,612)		(34,185)
Pre-tax income excluding noncontrolling interests	$ 107,009	(18)%	$ 130,565	28 %	$ 102,171

The Capital Markets segment consists primarily of equity and fixed income products and services. The activities include institutional sales and trading in the U.S., Canada and Europe; management of and participation in public offerings; financial advisory services, including private placements and merger and acquisition services; public finance activities; and the syndication and related management of investment partnerships designed to yield returns in the form of low-income housing tax credits to institutions. We provide securities brokerage services to institutions with an emphasis on the sale of U.S. and Canadian equities and fixed income products. Institutional sales commissions for both equity and fixed income products are driven primarily through trade volume, resulting from a combination of participation in public offerings, general market activity, and by the Capital Markets group's ability to find attractive investment opportunities and promote those opportunities to potential and existing clients. Revenues from investment banking activities are driven principally by our role in the offering and the number and dollar value of the transactions with which we are involved. This segment also includes trading of taxable and tax-exempt fixed income products, as well as equity securities in the over-the-counter ("OTC") and Canadian markets. This trading involves the purchase of securities from, and the sale of securities to, our clients as well as other dealers who may be purchasing or selling securities for their own account or acting as agent for their clients. Profits and losses related to this trading activity are primarily derived from the spreads between bid and ask prices, as well as market trends for the individual securities during the period we hold them. This segment also includes the results of the operations we conduct in Latin American countries including Argentina and Uruguay.

During fiscal year 2015, we made investments in our domestic equity capital markets business through successful recruiting of experienced professionals to broadly build out our life sciences sector capabilities and to increase investment banking coverage in the financial services, energy and government services sectors. While the immediate impact of these hires results in an increase in compensation expense, we believe the long-term result of these efforts will have a favorable impact on both revenues and net profits of the segment.

No single client accounts for a material percentage of this segment's total business.

Year ended September 30, 2015 compared with the year ended September 30, 2014 – Capital Markets

Net revenues increased $7 million, or 1%, while pre-tax income decreased $24 million, or 18%.

Institutional fixed income sales commissions increased $38 million, or 15%, benefiting from increased interest rate volatility and public finance activities during the year. Offsetting this increase, institutional equity sales commissions decreased $14 million, or 5%, resulting primarily from decreased equity underwriting activities throughout fiscal year 2015, particularly in the energy and real estate sectors.

Merger and acquisitions and advisory fee revenues increased $11 million, or 7%, reaching a record $162 million. We experienced significant increases in these revenues in fiscal year 2015 arising from our U.S. operations, led by our technology services sector and reflecting the benefit of prior years' investments in other business sectors. The portion of these revenues arising from our Canadian operations decreased significantly due to the difficult Canadian equity market conditions throughout fiscal year 2015, especially in the natural resources sector.

Our net trading profits decreased $5 million, or 8%. Typically, our trading profits are generated primarily from fixed income securities. However, in fiscal year 2015, the primary reason for the decrease is $5 million of realized trading losses arising in our Canadian operations, primarily attributable to a loss on an equity underwriting position. Despite the continuation of the challenging fixed income market conditions throughout fiscal year 2015, fixed income trading results were solid and steady throughout the year, assisted by the trading profits generated on GNMA and FNMA MBS.

Underwriting fee revenues decreased $26 million, or 26%. Equity underwriting activities related to both initial public offerings and follow-on offerings declined significantly in the fiscal year. The market sectors that historically represent our areas of strength had relatively lower activity levels.

We experienced growth in our public finance underwritings with a 63% increase in the par value of lead managed new issues compared to the prior year. This increase favorably impacts both our securities commissions and fees revenues and our investment banking revenues. The combined revenues resulting from our public finance business activities increased $11 million, or 17%.

Tax credit fund syndication fee revenues increased by $10 million, or 29%, due to a 17% increase in the volume of tax credit fund partnership interests sold during the current year. Our continued growth in this business over the past several years has resulted in our ascension to a market leading position amongst syndicators of Low-Income Housing Tax Credit Fund ("LIHTC") investments.

Non-interest expenses increased $26 million, or 3%. Sales commissions expense increased $6 million, or 3%, which is correlated with the 5% increase in overall institutional sales commission revenues. Business development expenses increased $4 million, or 9%, predominately in our equity capital markets operations, representing recruiting and other costs as they pursue opportunities for future growth and revenues. Clearance and other expense increased $13 million, or 19%, primarily due to a higher volume of trades, as reflected by the increase in institutional sales commission revenues, and $3 million of expense related to historical European trading activities.

Losses of real estate partnerships held by consolidated VIEs result directly from the consolidation of certain low-income housing tax credit funds, and decreased $3 million, or 6%, compared to the prior year. Since we only hold an insignificant interest in these consolidated funds, nearly all of these losses are attributable to others and are therefore included in the offsetting noncontrolling interests. Refer to Note 11 of the Notes to Consolidated Financial Statements in this Form 10-K for further information on the consolidation of VIEs.

Noncontrolling interests includes the impact of consolidating certain low-income housing tax credit funds, which impacts other revenue, interest expense, and the losses of real estate partnerships held by consolidated VIEs (as described in the preceding paragraph), and reflects the portion of these consolidated entities which we do not own. Total segment expenses attributable to

others decreased by $4 million, corresponding with the reduction in losses of real estate partnerships held by consolidated VIEs discussed in the preceding paragraph.

Year ended September 30, 2014 compared with the year ended September 30, 2013 – Capital Markets

Net revenues in fiscal year 2014 increased $26 million, or 3%, while pre-tax income increased $28 million, or 28%.

Institutional equity sales commissions in fiscal year 2014 increased $14 million, or 6%, resulting from both favorable equity markets throughout the year, and an active new issue market environment at certain times during fiscal year 2014. The active new issue market resulted in a 14% increase in equity underwriting fee revenues to $100 million. Underwriting fee revenues increased in both our domestic as well as our Canadian equity capital markets operations. The sectors in which we generated the most significant amounts of underwriting fee revenues in fiscal year 2014 were real estate, financial services and energy.

Institutional fixed income sales commissions in fiscal year 2014 decreased $81 million, or 25%, primarily due to the challenging fixed income market conditions throughout fiscal year 2014 resulting from economic uncertainty, the continuation of historically low interest rates, periods of relatively low volatility of benchmark interest rates, and the resulting decreased customer trading volumes. Despite such conditions, trading results were solid and steady during fiscal year 2014, resulting in a $32 million, or 112%, improvement over fiscal year 2013, which included a quarter (the third quarter of fiscal year 2013) which was particularly negative. These trading profits were generated primarily from fixed income securities. These favorable trading results in fiscal year 2014 were achieved even as we continued to maintain relatively lower average balances of trading securities in response to the market uncertainty (refer to the table of average interest earning asset and liability balances in the net interest section of this MD&A for information on our average levels of trading instruments held during each respective fiscal year).

Merger and acquisitions and advisory fee revenues in fiscal year 2014 increased $24 million, or 19%, compared to fiscal year 2013. Fiscal year 2014 includes increases in revenues in both our domestic and Canadian operations. The sectors in which we generated the most significant amounts of such fee revenues in fiscal year 2014 were technology services, healthcare, energy, financial services, technology, and general industrials.

Tax credit fund syndication fee revenues in fiscal year 2014 increased by $10 million, or 40%, due to a 16% increase in the volume of tax credit fund partnership interests sold during fiscal year 2014 and the recognition of certain revenues in fiscal year 2014 that were associated with partnership interests sold in prior years which had been deferred in those years. Fiscal year 2014 recognition of these previously deferred revenues result from the favorable resolution of certain conditions associated with the partnership interests which, once favorably resolved, result in the recognition of previously deferred revenues.

Non-interest expenses in fiscal year 2014 increased $8 million, or 1%, compared to fiscal year 2013. Administrative and incentive compensation and benefit expense in fiscal year 2014 increased $23 million, or 6%, compared to fiscal year 2013 offset by a decrease in sales commission expense of $30 million, or 13%, which is directly correlated with the 12% decrease in overall institutional sales commission revenues. Incentive compensation expense increases in fiscal year 2014 were primarily the result of higher volumes of underwriting, mergers & acquisitions and advisory fees, investment banking and tax credit fund syndication fee revenues, as well as to a lesser extent, annual salary increases applicable to all of our operations. Fiscal year 2013 included goodwill impairment expense of $7 million related to our RJES operations which did not recur in fiscal year 2014.

Losses of real estate partnerships held by consolidated VIEs result directly from the consolidation of certain low-income housing tax credit funds, and in fiscal year 2014 reflect an increase of $15 million, or 57%, over fiscal year 2013. Since we only hold an insignificant interest in these consolidated funds, nearly all of these losses are attributable to others and are therefore included in the offsetting noncontrolling interests. Refer to Note 11 of the Notes to Consolidated Financial Statements in this Form 10-K for further information on the consolidation of VIEs.

Noncontrolling interests includes the impact of consolidating certain low-income housing tax credit funds, which impacts other revenue, interest expense, and the losses of real estate partnerships held by consolidated VIEs (as described in the preceding paragraph), and RJES for the first six months of the fiscal year 2013 period (thereafter, we acquired the interests previously held by others), and reflects the portion of these consolidated entities which we do not own. Total segment expenses attributable to others in fiscal year 2014 increased by $10 million compared to fiscal year 2013. The increase in expenses associated with noncontrolling interests resulting from losses of real estate partnerships held by consolidated VIEs discussed above, are offset by the impact of the fiscal year 2013 consolidation of RJES. As a result of our April 2013 acquisition of the RJES interest previously held by others, there is no comparable noncontrolling interest impact from the consolidation of RJES in fiscal year 2014.

Results of Operations – Asset Management

The following table presents consolidated financial information for our Asset Management segment for the years indicated:

	Year ended September 30,				
	2015	% change	2014	% change	2013
			($ in thousands)		
Revenues:					
Investment advisory fees	$ 338,895	6 %	$ 318,244	29%	$ 247,162
Other	53,483	4 %	51,446	13%	45,655
Total revenues	392,378	6 %	369,690	26%	292,817
Expenses:					
Admin & incentive compensation and benefit costs	101,723	(1)%	102,674	12%	91,994
Communications and information processing	25,286	16 %	21,861	15%	19,056
Occupancy and equipment	4,564	(1)%	4,587	5%	4,364
Business development	9,911	8 %	9,208	11%	8,288
Investment sub-advisory fees	54,938	18 %	46,674	41%	33,183
Other	56,254	14 %	49,495	33%	37,342
Total expenses	252,676	8 %	234,499	21%	194,227
Income before taxes and including noncontrolling interests	139,702	3 %	135,191	37%	98,590
Noncontrolling interests	4,652		6,905		2,290
Pre-tax income excluding noncontrolling interests	$ 135,050	5 %	$ 128,286	33%	$ 96,300

The Asset Management segment includes the operations of Eagle, the Eagle Funds, AMS, RJ Trust, and other fee-based programs. Revenues for this segment are primarily generated by the investment advisory fees related to asset management services provided for individual and institutional investment portfolios, along with mutual funds. We generate revenues in this segment by providing investment advisory and asset management services to either individual or institutional investment portfolios, along with mutual funds. Investment advisory fee revenues are earned on the assets held in either managed or non-discretionary asset-based programs. These fees are computed based on balances either at the beginning of the quarter, the end of the quarter, or average daily assets. Asset balances are impacted by both the performance of the market and the new sales and redemptions of client accounts/funds. Rising markets have historically had a positive impact on investment advisory fee revenues as existing accounts increase in value, and individuals and institutions may commit incremental funds in rising markets.

No single client accounts for a material percentage of this segment's total business.

Managed Programs

As of September 30, 2015, approximately 80% of investment advisory fees recorded in this segment are earned from assets held in managed programs. Of these revenues, approximately 60% of our investment advisory fees recorded each quarter are determined based on balances at the beginning of a quarter, approximately 25% are based on balances at the end of the quarter and the remaining 15% are computed based on average assets throughout the quarter.

On April 30, 2015, RJF acquired Cougar. Eagle now offers Cougar's global asset allocation strategies to its clients worldwide. Cougar has a substantial amount of assets under advisement, which are non-discretionary advised assets. See Note 3 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding the Cougar acquisition. The majority of the assets managed by Cougar are reflected in non-discretionary asset-based program balances.

On December 24, 2012, Eagle acquired a 45% interest in ClariVest Asset Management, LLC ("ClariVest"), an acquisition that bolstered our platform in the large-cap investment objective. See Note 3 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding the ClariVest acquisition.

The following table reflects fee-billable financial assets under management in managed programs at the dates indicated:

	September 30,		
	2015	2014	2013
		(in millions)	
Assets under management:			
Eagle Asset Management, Inc.	$ 25,692	$ 28,752	$ 27,886
Raymond James Consulting Services	13,484	13,085	11,385
Unified Managed Accounts ("UMA")	8,613	7,587	4,962
Cougar Global Investments Limited	136	—	—
Freedom Accounts & other managed programs	21,168	19,944	16,555
Sub-total assets under management	69,093	69,368	60,788
Less: Assets managed for affiliated entities	(3,916)	(4,811)	(4,799)
Total financial assets under management	$ 65,177	$ 64,557	$ 55,989

The following table summarizes the activity impacting the total financial assets under management in managed programs (excluding activity in assets managed for affiliated entities and MK & Co. managed fee-based assets for the periods prior to the conversion of MK & Co. accounts to the RJ&A platform) for the years indicated:

	Year ended September 30,		
	2015	2014	2013
		(in millions)	
Assets under management at beginning of year	$ 69,368	$ 60,788	$ 44,168
Net inflows of client assets	2,797	3,865 [1]	4,032 [1]
Net market (depreciation) appreciation in asset values	(2,170)	4,715 [1]	7,074 [1]
Inflows resulting from the Cougar acquisition [2]	150	—	—
Inflow resulting from the ClariVest acquisition [3]	—	—	3,113
Inflows resulting from the conversion of MK & Co. accounts to the RJ&A platform [4]	—	—	2,401
Other	(1,052) [5]	—	—
Assets under management at end of year	$ 69,093	$ 69,368	$ 60,788

(1) Revised from the amounts reported in the prior year in order to present on a basis consistent with the current year. In the prior years, the presentation of net inflows only included the asset flows associated with new clients, and cancellations associated with existing clients, to certain programs.

(2) See Note 3 of the Notes to the Consolidated Financial Statements in this Form 10-K for additional information on this acquisition.

(3) Eagle acquired a 45% interest in ClariVest on December 24, 2012.

(4) In mid-February 2013, the client accounts of MK & Co. were converted onto the RJ&A platform.

(5) During fiscal year 2015, certain assets that were previously included in Eagle's programs were transferred into non-discretionary asset-based programs. The inflow of assets into the non-discretionary asset-based programs is discussed below.

Non-discretionary asset-based programs

As of September 30, 2015, approximately 20% of investment advisory fees revenue recorded in this segment are earned for administrative services on assets held in non-discretionary asset-based programs. Nearly all investment advisory fees associated with these programs are determined based on balances at the beginning of the quarter.

Fee-billable assets in non-discretionary asset-based programs as of September 30, 2015 were $91.0 billion, an increase of $9.7 billion, or 12%, over the $81.3 billion total as of September 30, 2014. The increase during the current year is attributable to: net inflows which out-paced market depreciation (most of the market depreciation occurred during the fourth quarter of fiscal year 2015 as a result of declining equity markets); inflows resulting from our acquisition of Cougar (see Note 3 of the Notes to the Consolidated Financial Statements in this Form 10-K for additional information on this acquisition); and the movement of certain assets during the year that were previously included in Eagle managed programs which were transferred into non-discretionary asset-based programs (the offsetting outflows are reflected in the assets under management table above).

Fee-billable assets in non-discretionary asset-based programs as of September 30, 2014 were $81.3 billion, an increase of $16.6 billion, or 26%, over the $64.7 billion total as of September 30, 2013. The increase in the prior year was primarily driven by both net inflows and market appreciation during fiscal year 2014.

Year ended September 30, 2015 compared with the year ended September 30, 2014 – Asset Management

Pre-tax income in the Asset Management segment increased $7 million, or 5%.

Investment advisory fee revenue increased by $21 million, or 6%, generated by an increase in assets under management that resulted from net inflows of client assets. Market values depreciated primarily as a result of the equity market decline that occurred during the fourth quarter of fiscal year 2015. Performance fees, which are earned by managed funds for exceeding certain performance targets, amounted to $5 million, a decrease of $5 million from the amount earned in the prior year. Refer to the information presented above regarding the increases in the balances of assets held in our programs.

Other revenue increased by $2 million, or 4%, primarily resulting from an increase in fee income generated by RJ Trust, reflecting a 4% increase in RJ Trust client assets compared to the prior year, to $3.51 billion as of September 30, 2015.

Expenses increased by approximately $18 million, or 8%, primarily resulting from a $8 million, or 18%, increase in investment sub-advisory fees, a $3 million, or 16%, increase in communications and information support processing expense, and a $7 million, or 14%, increase in other expenses. The increase in investment sub-advisory fee expense is primarily attributable to increased fees paid to external managers for Raymond James Consulting Services and UMA programs, which have both experienced increases in asset levels compared to the prior year. The increase in communications and information processing expense result from additional costs associated with supporting the steadily increasing levels of assets under management as well as the growth in asset levels in our non-discretionary asset-based programs. The increase in other expense is primarily due to Eagle's share of certain costs incurred in the organization and start-up of a new fund in which Eagle serves as the sub-advisor.

Noncontrolling interests includes the impact of the consolidation of certain subsidiary investment advisors and other subsidiaries (including ClariVest). Total segment net income attributable to others decreased $2 million compared to the prior year primarily as a result of a reduction in the amount of performance fee revenues earned in the current year that were attributable to others.

Year ended September 30, 2014 compared to the year ended September 30, 2013 – Asset Management

Pre-tax income in the Asset Management segment in fiscal year 2014 increased $32 million, or 33%, over the prior year.

Investment advisory fee revenue in fiscal year 2014 increased by $71 million, or 29%, primarily generated by an increase in assets under management and increased performance fees from certain managed funds. Performance fees, which are earned by managed funds for exceeding certain performance targets, increased $8 million over the amount earned in fiscal year 2013. Assets in both managed and non-discretionary asset-based programs in fiscal year 2014 increased substantially since the prior year. Refer to the information presented above regarding the increases in the balances of assets held in our programs.

Other revenue in fiscal year 2014 increased by $6 million, or 13%, primarily resulting from an increase in fee income generated by our RJ Trust subsidiary reflecting a 16% increase in RJ Trust client assets compared to the prior year, to $3.38 billion as of September 30, 2014.

Expenses in fiscal year 2014 increased by approximately $40 million, or 21%, primarily resulting from a $13 million, or 41%, increase in investment sub-advisory fees, a $12 million, or 33%, increase in other expenses, and an $11 million, or 12%, increase in administrative and performance based incentive compensation. The increase in investment sub-advisory fee expense in fiscal year 2014 is directly related to the increase in assets in programs managed by external managers. Such assets are included within the UMA and Raymond James Consulting Services program asset under management balances. The increase in other expense in fiscal year 2014 is primarily due to increases in the costs incurred so that certain funds sponsored by Eagle are available as investment choices on the platforms of other broker-dealers and increases in expenses of RJ Trust resulting from the increase in client assets. The increase in administrative and performance based incentive compensation in fiscal year 2014 is a result of: the combination of increases in performance compensation which is directly related to the increase in investment advisory fee revenues and the performance fees earned during the year; increases in salary and related expenses resulting from the addition of ClariVest on December 24, 2012; and annual salary increases and certain additions to staff associated with our operations.

Noncontrolling interests includes the impact of the consolidation of certain subsidiary investment advisors and other subsidiaries (including ClariVest). Total segment net income attributable to others in fiscal year 2014 increased by $5 million as

compared to fiscal year 2013 since certain of the current year performance fees were earned by certain of these subsidiaries, and therefore a portion is attributable to others.

Results of Operations – RJ Bank

The following table presents consolidated financial information for RJ Bank for the years indicated:

	Year ended September 30,				
	2015	% change	2014	% change	2013
			($ in thousands)		
Revenues:					
Interest income	$ 415,271	17 %	$ 355,304	2 %	$ 348,068
Interest expense	(11,693)	37 %	(8,547)	(7)%	(9,224)
Net interest income	403,578	16 %	346,757	2 %	338,844
Other income	10,717	114 %	5,013	(38)%	8,062
Net revenues	414,295	18 %	351,770	1 %	346,906
Non-interest expenses:					
Compensation and benefits	27,843	9 %	25,430	16 %	21,835
Communications and information processing	5,186	22 %	4,234	39 %	3,043
Occupancy and equipment	1,256	(1)%	1,274	9 %	1,168
Loan loss provision	23,570	74 %	13,565	429 %	2,565
FDIC insurance premiums	11,746	17 %	10,026	75 %	5,716
Affiliate deposit account servicing fees	35,429	5 %	33,758	14 %	29,650
Other	30,544	48 %	20,649	36 %	15,215
Total non-interest expenses	135,574	24 %	108,936	38 %	79,192
Pre-tax income	$ 278,721	15 %	$ 242,834	(9)%	$ 267,714

RJ Bank provides corporate loans, residential loans and securities based loans, as well as FDIC-insured deposit accounts, to clients of our broker-dealer subsidiaries and to the general public. RJ Bank is active in corporate loan syndications and participations. RJ Bank generates net interest revenue principally through the interest income earned on loans and investments, which is offset by the interest expense it pays on client deposits and on its borrowings.

No single client accounts for a material percentage of this segment's total business.

The tables below present certain credit quality trends for loans held by RJ Bank:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Net loan recoveries/(charge-offs):			
C&I loans	$ (580)	$ (1,829)	$ (696)
Commercial real estate ("CRE") loans	3,773	64	(7,919)
Residential mortgage loans	(461)	(17)	(4,472)
SBL	25	35	(222)
Total	$ 2,757	$ (1,747)	$ (13,309)

	As of September 30,		
	2015	2014	2013
		(in thousands)	
Allowance for loan losses:			
Loans held for investment:			
C&I loans	$ 117,623	$ 103,179	$ 95,994
CRE construction loans	2,707	1,594	1,000
CRE loans	30,486	25,022	19,266
Tax-exempt loans	5,949	1,380	—
Residential mortgage loans	12,526	14,350	19,126
SBL	2,966	2,049	1,115
Total	$ 172,257	$ 147,574	$ 136,501
Nonperforming assets:			
Nonperforming loans:			
C&I loans	$ —	$ —	$ 89
CRE loans	4,796	18,876	25,512
Residential mortgage loans:			
Residential mortgage loans	47,504	61,391	75,889
Home equity loans/lines	319	398	468
Total nonperforming loans	52,619	80,665	101,958
Other real estate owned:			
Residential first mortgage	4,631	5,380	2,434
Total other real estate owned	4,631	5,380	2,434
Total nonperforming assets	$ 57,250	$ 86,045	$ 104,392
Total nonperforming assets as a % of RJ Bank total assets	0.39%	0.69%	0.99%
Total loans:			
Loans held for sale, net[1]	$ 119,519	$ 45,988	$ 110,292
Loans held for investment:			
C&I loans	6,928,018	6,422,347	5,246,005
CRE construction loans	162,356	94,195	60,840
CRE loans	2,054,154	1,689,163	1,283,046
Tax-exempt loans	484,537	122,218	—
Residential mortgage loans	1,962,614	1,751,747	1,745,650
SBL	1,481,504	1,023,748	555,805
Net unearned income and deferred expenses	(32,424)	(37,533)	(43,936)
Total loans held for investment[1]	13,040,759	11,065,885	8,847,410
Total loans[1]	$ 13,160,278	$ 11,111,873	$ 8,957,702

(1) Net of unearned income and deferred expenses.

The following table presents RJ Bank's allowance for loan losses by loan category:

	As of September 30,					
	2015		2014		2013	
	Allowance	Loan category as a % of total loans receivable	Allowance	Loan category as a % of total loans receivable	Allowance	Loan category as a % of total loans receivable
	($ in thousands)					
Loans held for sale	$ —	1%	$ —	—	$ —	1%
C&I loans	98,447	44%	87,551	49%	81,733	50%
CRE construction loans	2,148	1%	1,307	1%	674	—
CRE loans	24,064	13%	21,061	13%	16,566	12%
Tax-exempt loans	5,949	4%	1,380	1%	—	—
Residential mortgage loans	12,513	15%	14,340	16%	19,117	20%
SBL	2,962	11%	2,044	9%	1,112	6%
Foreign loans	26,174	11%	19,891	11%	17,299	11%
Total	$ 172,257	100%	$ 147,574	100%	$ 136,501	100%

	As of September 30,			
	2012		2011	
	Allowance	Loan category as a % of total loans receivable	Allowance	Loan category as a % of total loans receivable
	($ in thousands)			
Loans held for sale	$ —	2%	$ 5	2%
C&I loans	85,916	56%	79,687	59%
CRE construction loans	458	—	490	—
CRE loans	26,381	10%	30,752	11%
Residential mortgage loans	26,126	21%	33,194	26%
SBL	705	4%	20	—
Foreign loans	7,955	7%	1,596	2%
Total	$ 147,541	100%	$ 145,744	100%

Information on foreign assets held by RJ Bank:

Changes in the allowance for loan losses with respect to loans RJ Bank has made to borrowers who are not domiciled in the U.S. are as follows:

	Year ended September 30,				
	2015	2014	2013	2012	2011
	(in thousands)				
Allowance for loan losses attributable to foreign loans, beginning of year:	$ 19,891	$ 17,299	$ 7,955	$ 1,596	$ 734
Provision for loan losses - foreign loans	7,927	3,337	9,696	6,242	862
Foreign loan charge-offs:					
C&I loans	—	—	(56)	—	—
Foreign exchange translation adjustment	(1,644)	(745)	(296)	117	—
Allowance for loan losses attributable to foreign loans, end of year	$ 26,174	$ 19,891	$ 17,299	$ 7,955	$ 1,596

Cross-border outstandings represent loans (including accrued interest), interest-bearing deposits with other banks, and any other monetary assets which are cross-border claims according to bank regulatory guidelines for the country exposure report. The following table sets forth the country where RJ Bank's total cross-border outstandings exceeded 1% of total RJF assets as of each respective period:

	Deposits with other banks	C&I loans	CRE construction loans	CRE loans	Residential mortgage loans	SBL	Total cross-border outstandings [1]
				(in thousands)			
September 30, 2015							
Canada	$ 122,810	$ 456,602	$ —	$ 178,230	$ 557	$ 328	$ 758,527
September 30, 2014							
Canada	$ 64,363	$ 397,743	$ —	$ 112,325	$ 586	$ 37	$ 575,054
September 30, 2013							
Canada	$ 44,196	$ 352,221	$ 8,093	$ 63,456	$ 1,013	$ 48	$ 469,027

(1) Excludes any hedged, non-U.S. currency amounts.

Year ended September 30, 2015 compared with the year ended September 30, 2014 – RJ Bank

Pre-tax income in the RJ Bank segment increased $36 million, or 15%. The increase in pre-tax income was primarily attributable to a $63 million, or 18%, increase in net revenues, offset by an increase of $10 million, or 74%, in the provision for loan losses and a $17 million, or 17%, increase in non-interest expenses (excluding the provision for loan losses). The increase in net revenues was attributable to a $57 million increase in net interest income and a $6 million increase in other income.

The $57 million increase in net interest income was the result of a $1.6 billion increase in average interest-earning banking assets and an increase in the net interest margin. The increase in average interest-earning banking assets was primarily driven by a $2.1 billion increase in average loans offset by a $440 million decrease in average cash and investments. Average corporate loans increased $1.4 billion, or 19%, average SBL balances increased $488 million, or 62%, and average residential mortgage loans increased $173 million, or 10%. The yield on interest-earning banking assets increased to 3.15% from 3.04% due to an improvement in the earning-asset composition from lower-yielding cash and investments to a larger percentage of higher yielding loans. The loan portfolio yield decreased slightly to 3.34% from 3.39%. Primarily as a result of the increase in the yield of the average interest-earning banking assets, the net interest margin increased to 3.07% from 2.98%.

Corresponding to the increase in average interest-earning banking assets, average interest-bearing banking liabilities increased $1.4 billion to $11.9 billion.

The increase in other income was due to a decrease of $4 million in foreign currency losses, a $1 million increase resulting from held for sale loan activities, and a $1 million increase in gains from the sale of foreclosed properties.

A significant portion of the provision for loan losses in both fiscal year 2015 and 2014 resulted from loan portfolio growth in each year. The primary factors impacting the year over year increase in provision for loan losses in the current year results from the varying impact of credit characteristics which were particular to each respective year. The current year provision for loan losses was impacted by an increase in corporate criticized loans, which was partially offset by the impact of improved credit characteristics of the residential mortgage loan portfolio. Fiscal year 2014 benefited to a greater extent than the current year from the improved credit characteristics of the loan portfolio including a decrease in corporate criticized loans.

The $17 million increase in non-interest expenses (excluding the provision for loan losses) was primarily attributable to a $3 million, or 68%, increase in SBL affiliate fees due to increases in SBL balances; a $2 million, or 5%, increase in affiliate deposit account servicing fees related to increased deposit balances; a $2 million increase in expenses related to the reserve for unfunded lending commitments; a $2 million or 17% increase in FDIC insurance premiums; a $2 million, or 9%, increase in compensation and benefits resulting from annual raises and increases in the costs of certain employee benefit programs coupled with increases in the number of personnel; a $1 million, or 22%, increase in communications and information processing expense; and a $1 million increase of expense related to other taxes.

Year ended September 30, 2014 compared to the year ended September 30, 2013 – RJ Bank

Pre-tax income in the RJ Bank segment in fiscal year 2014 decreased $25 million, or 9%, compared to fiscal year 2013. The decrease in pre-tax income in fiscal year 2014 was primarily attributable to a $19 million, or 24%, increase in non-interest expenses (excluding the provision for loan losses) and an increase of $11 million, or 429%, in the provision for loan losses, offset by a $5 million increase in net revenues. The increase in net revenues in fiscal year 2014 was attributable to an $8 million increase in net interest income offset by a $3 million decrease in other income.

Net interest income in fiscal year 2014 increased $8 million as a result of a $1.2 billion increase in average interest-earning banking assets offset by a decrease in the net interest margin. The increase in average interest-earning banking assets was driven by a $1.4 billion increase in average loans with average corporate loans increasing $1.1 billion, or 17%, and average SBL increasing $337 million, or 76%. The net interest margin decreased to 2.98% from 3.25% primarily as a result of the decrease in the yield of the average interest-earning assets. The yield on interest-earning banking assets decreased to 3.04% from 3.34% due to a decline in the loan portfolio yield. The loan portfolio yield decreased primarily due to a reduction in the corporate loan portfolio yield resulting from lower yields on new loans and refinancings as well as lower corporate loan fee income. The residential mortgage loan portfolio yield declined due to adjustable rate loans resetting at lower rates.

Corresponding to the increase in average interest-earning banking assets in fiscal year 2014, average interest-bearing banking liabilities increased $1.2 billion to $10.5 billion.

The decrease in other income in fiscal year 2014 compared to fiscal year 2013 was primarily due to a $3 million decline in gains from the sale of held for sale loans due to lower residential mortgage loan originations, and a $2 million increase in foreign currency losses, which were partially offset by a $2 million increase in bank-owned life insurance valuation gains.

The increase in provision for loan losses in fiscal year 2014 resulted from significant loan portfolio growth, which was partially offset by a decrease in corporate criticized loans, the favorable resolution of corporate problem loans, lower loan-to-value ("LTV") ratios in the residential mortgage loan portfolio, and a reduction in delinquent residential mortgage loans. These credit characteristics reflected the positive impact from improved economic conditions in fiscal year 2014, which resulted in a decline in the criticized loan balance and nonperforming assets as a percentage of total assets. In addition, net loan charge-offs decreased $12 million, or 87%, to $2 million, which was primarily attributable to improved credit characteristics within both the CRE and residential mortgage loan portfolios.

The $19 million increase in non-interest expenses in fiscal year 2014 (excluding the provision for loan losses) compared to fiscal year 2013 was primarily attributable to a $4 million, or 14%, increase in affiliate deposit account servicing fees related to increased deposit balances, a $4 million or 75% increase in FDIC insurance premiums due to higher deposit balances and assessment rates, a $4 million, or 16%, increase in compensation and benefits related to staff additions, a $2 million increase in SBL affiliate fees, and a $1 million, or 39%, increase in communications and information processing expense.

The following table presents average balance, interest income and expense, the related interest yields and rates, and interest spreads for RJ Bank for the years indicated:

	Year ended September 30,								
	2015			2014			2013		
	Average balance	Interest inc./exp.	Average yield/ cost	Average balance	Interest inc./exp.	Average yield/ cost	Average balance	Interest inc./exp.	Average yield/ cost
	($ in thousands)								
Interest-earning banking assets:									
Loans, net of unearned income [1]									
Loans held for sale - all domestic	$ 107,255	$ 2,686	2.64%	$ 107,898	$ 2,705	2.51%	$ 155,901	$ 3,519	2.26%
Loans held for investment:									
Domestic:									
C&I loans	5,672,456	205,673	3.59%	4,854,911	176,820	3.61%	4,520,070	190,910	4.19%
CRE construction loans	95,609	4,105	4.23%	51,361	2,346	4.50%	41,928	2,140	5.03%
CRE loans	1,462,690	44,367	2.99%	1,249,124	37,156	2.93%	935,058	30,515	3.22%
Tax-exempt loans [2]	301,767	8,812	4.49%	44,150	1,454	5.07%	—	—	—
Residential mortgage loans	1,924,408	55,286	2.83%	1,751,584	51,409	2.90%	1,711,968	52,285	3.01%
SBL	1,267,401	35,242	2.74%	779,872	21,843	2.76%	443,042	13,143	2.93%
Foreign:									
C&I loans	1,004,661	39,313	3.86%	945,799	38,778	4.04%	623,554	31,799	5.01%
CRE construction loans	23,017	937	4.01%	42,594	2,763	6.40%	21,240	1,488	6.91%
CRE loans	265,634	9,002	3.34%	217,461	8,537	3.87%	148,768	10,036	6.65%
Residential mortgage loans	2,697	84	3.06%	2,099	64	3.00%	1,869	66	3.49%
SBL	1,936	71	3.60%	1,866	67	3.57%	1,615	63	3.88%
Total loans, net	12,129,531	405,578	3.34%	10,048,719	343,942	3.39%	8,605,013	335,964	3.86%
Agency MBS	248,408	2,446	0.98%	297,933	2,622	0.88%	346,665	2,902	0.84%
Non-agency collateralized mortgage obligations	89,336	2,178	2.44%	127,022	3,164	2.49%	154,933	4,155	2.68%
Cash	611,375	1,344	0.22%	979,978	2,558	0.28%	1,109,857	2,812	0.25%
FHLB stock, Federal Reserve Bank of Atlanta ("FRB") stock, and other	111,891	3,725	3.33%	95,806	3,018	3.15%	85,811	2,235	2.60%
Total interest-earning banking assets	13,190,541	$415,271	3.15%	11,549,458	$355,304	3.04%	10,302,279	$348,068	3.34%
Non-interest-earning banking assets:									
Allowance for loan losses	(158,373)			(140,544)			(146,474)		
Unrealized loss on available for sale securities	(4,666)			(9,338)			(11,723)		
Other assets	321,919			289,322			268,471		
Total non-interest-earning banking assets	158,880			139,440			110,274		
Total banking assets	$13,349,421			$11,688,898			$10,412,553		

(continued on next page)

	Year ended September 30,								
	2015			2014			2013		
	Average balance	Interest inc./exp.	Average yield/ cost	Average balance	Interest inc./exp.	Average yield/ cost	Average balance	Interest inc./exp.	Average yield/ cost
	($ in thousands) (continued from previous page)								
Interest-bearing banking liabilities:									
Deposits:									
Certificates of deposit	$ 347,748	$ 5,839	1.68%	$ 329,176	$ 6,126	1.86%	$ 305,293	$ 6,239	2.04%
Money market, savings, and NOW accounts [3]	10,851,494	2,543	0.02%	9,790,257	1,833	0.02%	8,827,966	2,793	0.03%
FHLB advances and other	664,387	3,311	0.49%	337,603	588	0.17%	129,144	192	0.15%
Total interest-bearing banking liabilities	11,863,629	$ 11,693	0.10%	10,457,036	$ 8,547	0.08%	9,262,403	$ 9,224	0.10%
Non-interest-bearing banking liabilities	52,933			36,827			57,604		
Total banking liabilities	11,916,562			10,493,863			9,320,007		
Total banking shareholder's equity	1,432,859			1,195,035			1,092,546		
Total banking liabilities and shareholders' equity	$13,349,421			$11,688,898			$10,412,553		
Excess of interest-earning banking assets over interest-bearing banking liabilities/net interest income	$ 1,326,912	$403,578		$ 1,092,422	$346,757		$ 1,039,876	$338,844	
Bank net interest:									
Spread			3.05%			2.97%			3.24%
Margin (net yield on interest-earning banking assets)			3.07%			2.98%			3.25%
Ratio of interest-earning banking assets to interest-bearing banking liabilities			111.18%			110.45%			111.23%
Return on average:									
Total banking assets			1.34%			1.35%			1.63%
Total banking shareholder's equity			12.52%			13.21%			15.49%
Average equity to average total banking assets			10.73%			10.22%			10.49%

(1) Nonaccrual loans are included in the average loan balances. Payment or income received on impaired nonaccrual loans are applied to principal. Income on other nonaccrual loans is recognized on a cash basis. Fee income on loans included in interest income for the years ended September 30, 2015, 2014 and 2013 was $30 million, $34 million, and $48 million, respectively.

(2) The yield is presented on a tax-equivalent basis utilizing the federal statutory tax rate of 35%.

(3) Negotiable Order of Withdrawal ("NOW") account.

Increases and decreases in interest income and interest expense result from changes in average balances (volume) of interest-earning banking assets and liabilities, as well as changes in average interest rates. The following table shows the effect that these factors had on the interest earned on RJ Bank's interest-earning assets and the interest incurred on its interest-bearing liabilities. The effect of changes in volume is determined by multiplying the change in volume by the previous period's average yield/cost. Similarly, the effect of rate changes is calculated by multiplying the change in average yield/cost by the previous year's volume. Changes applicable to both volume and rate have been allocated proportionately.

	Year ended September 30,					
	2015 compared to 2014			2014 compared to 2013		
	Increase (decrease) due to			Increase (decrease) due to		
	Volume	Rate	Total	Volume	Rate	Total
	(in thousands)					
Interest revenue:						
Interest-earning banking assets:						
Loans, net of unearned income:						
Loans held for sale - all domestic	$ (16)	$ (3)	$ (19)	$ (1,084)	$ 270	$ (814)
Loans held for investment:						
Domestic:						
C&I loans	29,775	(922)	28,853	14,142	(28,232)	(14,090)
CRE construction loans	2,021	(262)	1,759	482	(276)	206
CRE loans	6,353	858	7,211	10,249	(3,608)	6,641
Tax-exempt loans	8,484	(1,126)	7,358	1,454	—	1,454
Residential mortgage loans	5,073	(1,196)	3,877	1,210	(2,086)	(876)
SBL	13,655	(256)	13,399	9,992	(1,292)	8,700
Foreign:						
C&I loans	2,414	(1,879)	535	16,433	(9,454)	6,979
CRE construction loans	(1,269)	(557)	(1,826)	1,496	(221)	1,275
CRE loans	1,891	(1,426)	465	4,634	(6,133)	(1,499)
Residential mortgage loans	18	2	20	8	(10)	(2)
SBL	3	1	4	9	(5)	4
Agency MBS	(436)	260	(176)	(408)	128	(280)
Non-agency collateralized mortgage obligations	(939)	(47)	(986)	(748)	(243)	(991)
Cash	(962)	(252)	(1,214)	(329)	75	(254)
FHLB stock, FRB stock, and other	507	200	707	260	523	783
Total interest-earning banking assets	66,572	(6,605)	59,967	57,800	(50,564)	7,236
Interest expense:						
Interest-bearing banking liabilities:						
Deposits:						
Certificates of deposit	346	(633)	(287)	488	(601)	(113)
Money market, savings and NOW accounts	199	511	710	304	(1,264)	(960)
FHLB advances and other	569	2,154	2,723	310	86	396
Total interest-bearing banking liabilities	1,114	2,032	3,146	1,102	(1,779)	(677)
Change in net interest income	$ 65,458	$ (8,637)	$ 56,821	$ 56,698	$ (48,785)	$ 7,913

Results of Operations – Other

The following table presents consolidated financial information for the Other segment for the years indicated:

	Year ended September 30,				
	2015	% change	2014	% change	2013
	($ in thousands)				
Revenues:					
Interest income	$ 12,237	(2)%	$ 12,549	(19)%	$ 15,404
Investment banking	—	—	—	(100)%	3,000
Investment advisory fees	1,644	23 %	1,340	6 %	1,262
Other	53,086	87 %	28,314	(73)%	106,735
Total revenues	66,967	59 %	42,203	(67)%	126,401
Interest expense	(77,165)	—	(77,456)	(4)%	(80,478)
Net revenues	(10,198)	71 %	(35,253)	(177)%	45,923
Non-interest expenses:					
Compensation and other expenses	40,551	(6)%	43,055	—	43,164
Acquisition related expenses	—	—	—	(100)%	73,454
Total non-interest expenses	40,551	(6)%	43,055	(63)%	116,618
Loss before taxes and including noncontrolling interests:	(50,749)	35 %	(78,308)	(11)%	(70,695)
Noncontrolling interests	14,100		5,610		61,618
Pre-tax loss excluding noncontrolling interests	$ (64,849)	23 %	$ (83,918)	37 %	$ (132,313)

This segment results include our principal capital and private equity activities, certain corporate overhead costs of RJF including the interest cost on our public debt, and the acquisition and integration costs associated with our material acquisitions including, most significantly in fiscal year 2013, the costs associated with our integration of Morgan Keegan.

Year ended September 30, 2015 compared to the year ended September 30, 2014 – Other

The pre-tax loss generated by this segment decreased by approximately $19 million, or 23%.

Net revenues in this segment increased $25 million, or 71%. The increase results from a $25 million increase in revenues arising from our principal capital and private equity portfolio investments. We also realized an increase in revenues arising from the sale or redemption activities in our ARS portfolio of $4 million, which were offset by certain foreign currency translation losses that primarily result from the weakened Canadian dollar, and decreases in the valuation of other investments (primarily in managed equities). The current year ARS portfolio gain is primarily the result of an $11 million gain on the sale of all of our Jefferson County, Alabama Limited Obligation School Warrants ARS. In the prior year, gains resulting from sales and redemption activities in our ARS portfolio were primarily comprised of a $5.5 million gain on the redemption of Jefferson County Alabama Sewer Revenue Refunding Warrants ARS.

The portion of revenue attributable to noncontrolling interests increased $8 million, as the increase in revenues generated by our private equity portfolio resulted in higher amounts of such revenues that are attributable to others.

Year ended September 30, 2014 compared to the year ended September 30, 2013 – Other

The pre-tax loss generated by this segment in fiscal year 2014 decreased by approximately $48 million, or 37%, compared to fiscal year 2013.

Net revenues in this segment in fiscal year 2014 decreased $81 million, or 177%. The decrease is primarily attributable to a decrease in revenues in fiscal year 2014 arising from our private equity portfolio investments. Approximately $74 million of fiscal year 2013 revenues were associated with our indirect investment in Albion, an investment which was sold in April 2013 and therefore such revenues did not recur in fiscal year 2014. Revenues associated with the remainder of our private equity portfolio in fiscal year 2014 decreased $6 million compared to fiscal year 2013. Offsetting these decreases, in fiscal year 2014 we realized a $6 million increase from gains on redemptions or sales of ARS, most notably arising from the fiscal year 2014 redemption of Jefferson County Alabama Sewer Revenue Refunding Warrants ARS.

Non-interest expenses in fiscal year 2014 decreased $74 million, or 63%. The decrease is primarily a result of a decrease in acquisition related expenses since our integration of Morgan Keegan was substantially complete as of September 30, 2013. The acquisition related expenses incurred in fiscal year 2013 were primarily comprised of expenses associated with the integration of Morgan Keegan's operations into our own (see Note 3 of our Notes to Consolidated Financial Statements in this Form 10-K for additional information on the components of the fiscal year 2013 expense).

The portion of revenue attributable to noncontrolling interests decreased in fiscal year 2014 by nearly $56 million compared to fiscal year 2013. Of the fiscal year 2013 Albion revenues received, approximately $51 million related to the portion of that investment which we did not own.

Certain statistical disclosures by bank holding companies

As a financial holding company, we are required to provide certain statistical disclosures by bank holding companies pursuant to the SEC's Industry Guide 3. Certain of those disclosures are as follows for the fiscal year indicated:

	Year ended September 30,		
	2015	**2014**	**2013**
RJF return on average assets [1]	2.0%	2.1%	1.7%
RJF return on average equity [2]	11.5%	12.3%	10.6%
Average equity to average assets [3]	18.5%	18.1%	17.3%
Dividend payout ratio[4]	21.0%	19.3%	21.7%

(1) Computed as net income attributable to RJF for the year indicated, divided by average assets (the sum of total assets at the beginning and end of the year, divided by two).

(2) Computed by utilizing the net income attributable to RJF and the average equity for each respective fiscal year. Average equity is computed by adding the total equity attributable to RJF as of each quarter-end date during the indicated fiscal year, plus the beginning of the year total, divided by five.

(3) Computed as average equity (the sum of total equity at the beginning and end of the fiscal year, divided by two), divided by average assets (the sum of total assets at the beginning and end of the fiscal year, divided by two).

(4) Computed as dividends declared per common share during the fiscal year as a percentage of diluted earnings per common share.

Refer to the RJ Bank section of this MD&A and the Notes to Consolidated Financial Statements in this Form 10-K for the other required disclosures.

Liquidity and Capital Resources

Liquidity is essential to our business. The primary goal of our liquidity management activities is to ensure adequate funding to conduct our business over a range of market environments.

Senior management establishes our liquidity and capital policies. These policies include senior management's review of short- and long-term cash flow forecasts, review of monthly capital expenditures, the monitoring of the availability of alternative sources of financing, and the daily monitoring of liquidity in our significant subsidiaries. Our decisions on the allocation of capital to our business units consider, among other factors, projected profitability and cash flow, risk and impact on future liquidity needs. Our treasury operations assist in evaluating, monitoring and controlling the impact that our business activities have on our financial condition, liquidity and capital structure as well as maintain our relationships with various lenders. The objectives of these policies are to support the successful execution of our business strategies while ensuring ongoing and sufficient liquidity.

Liquidity is provided primarily through our business operations and financing activities. Financing activities could include bank borrowings, repurchase agreement transactions or additional capital raising activities under our "universal" shelf registration statement.

Cash provided by operating activities during the year ended September 30, 2015 was $899 million. Cash generated by successful operating results over the year resulted in a $638 million increase in cash. Significant changes in various other asset and liability balances which increased cash include: brokerage client payables and other accounts payable increased $594 million, which results in an increase in cash; an increase in the stock loaned, net of stock borrowed balances resulted in a $96 million increase in cash; a decrease in securities purchased under agreements to resell, net of securities sold under agreements to repurchase, resulted in a $60 million increase in cash; the decrease in the prepaid expenses and other asset balance generated by cash transactions

resulted in a $47 million increase in cash; a decrease in our net trading instruments resulted in a $41 million increase in cash; accrued compensation, commissions and benefits balances increased resulting in a $29 million increase in cash. The increased accrual primarily results from the increase in both revenues and profits over the prior year. Partially offsetting these activities which resulted in increases of cash, decreases in cash resulted from the following activities: a $416 million increase in assets segregated pursuant to regulations and other segregated assets, primarily resulting from the increase in brokerage client payables previously described above; in support of our strong recruiting results, we used $82 million in cash to fund loans provided to financial advisors, net of repayments; purchases of loans held for sale, net of sales, resulted in a $60 million decrease; and brokerage client receivables increased $56 million. All other components of operating activities combined to net a $8 million source of cash.

Investing activities resulted in the use of $2.17 billion of cash during the year ended September 30, 2015. The primary investing activity was the use of $2.09 billion in cash to fund an increase in bank loans, net of the proceeds from sales of loans held for investment. RJ Bank made purchases of available for sale securities of $92 million. We used $74 million to fund investments in technology and equipment, primarily comprised of computer software enhancements. We used $45 million to fund other investments, primarily comprised of investments in company owned life insurance. Offsetting the impact of these investments on cash, we received proceeds from the maturation, repayment, redemption or sale of securities in our available for sale security portfolio of $155 million, nearly $64 million of which arose from the sale of all of our Jefferson County, Alabama Limited Obligation School Warrants ARS. All other components of investing activities combined to net a $22 million use of cash.

Financing activities provided $1.73 billion of cash during the year ended September 30, 2015. Increases in RJ Bank deposits provided $1.89 billion. We used $103 million in payment of dividends to our shareholders. We used $89 million to repurchase shares of our stock, $57 million of this total resulting from the fourth quarter fiscal year 2015 open market repurchases (refer to Item 5, “Issuers Purchases of Equity Securities” in this report, for additional information on our share repurchases). Proceeds from all of our sources of borrowed funds, net of repayments, resulted in a $6 million increase in cash. A $50 million net increase in RJ Bank’s advances from the FHLB during the year is the primary source of these borrowings, as the amount of our short-term borrowings outstanding on our domestic financing facilities decreased compared to September 30, 2014 (see Note 15 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding these borrowings). All other components of financing activities combined to net a $20 million source of cash.

The effect of currency exchange rates on our cash balances resulted in a $55 million decrease in our U.S. dollar denominated cash balance. The most significant component of this decrease results from the substantial cash balances held by RJ Ltd. as part of their Canadian brokerage operations, which are denominated in Canadian currency (this cash is utilized to fund Canadian currency denominated liabilities), and the 16% decrease in the value of the Canadian dollar to the U.S. dollar since September 30, 2014.

We believe our existing assets, most of which are liquid in nature, together with funds generated from operations and committed and uncommitted financing facilities, should provide adequate funds for continuing operations at current levels of activity.

Sources of Liquidity

Approximately $1.22 billion of our total September 30, 2015 cash and cash equivalents (a portion of which is invested on behalf of the parent company by RJ&A, and a portion of which is maintained in a deposit account at RJ Bank) was available to us without restrictions. The cash and cash equivalents held were as follows:

Cash and cash equivalents:	September 30, 2015
	(in thousands)
RJF [1]	$ 746,042
RJ&A [2]	830,887
RJ Bank	464,462
RJ Ltd.	246,992
RJFS	111,682
RJFSA	48,569
Other subsidiaries	152,372
Total cash and cash equivalents	$ 2,601,006

(1) RJF maintains a depository account at RJ Bank which has a balance of $451 million as of September 30, 2015. This cash balance is reflected in the RJF total, and is excluded from the RJ Bank total, since this balance is available to RJF on-demand and without restriction.

(2) RJF has loaned $494 million to RJ&A as of September 30, 2015, which RJ&A has invested on behalf of RJF in cash and cash equivalents or otherwise deployed in its normal business activities.

In addition to the liquidity on hand described above, we have other various potential sources of liquidity which are described below.

Liquidity Available from Subsidiaries

Liquidity is principally available to the parent company from RJ&A and RJ Bank.

RJ&A is required to maintain net capital equal to the greater of $1 million or 2% of aggregate debit items arising from client transactions. Covenants in RJ&A's committed secured financing facilities require its net capital to be a minimum of 10% of aggregate debit items. At September 30, 2015, RJ&A significantly exceeded both the minimum regulatory and its financing covenants net capital requirements. At that date, RJ&A had excess net capital of approximately $372 million, of which approximately $115 million is available for dividend while still maintaining the internally-imposed net capital ratio of 15% of aggregate debit items. There are also limitations on the amount of dividends that may be declared by a broker-dealer without FINRA approval.

RJ Bank may pay dividends to the parent company without prior approval by its regulator as long as the dividend does not exceed the sum of RJ Bank's current calendar year and the previous two calendar years' retained net income, and RJ Bank maintains its targeted capital to risk-weighted assets ratios. At September 30, 2015, RJ Bank had approximately $210 million of capital in excess of the amount it would need at September 30, 2015 to maintain its targeted risk-weighted assets ratio of 12.5%.

Although we have liquidity available to us from our other subsidiaries, the available amounts are not as significant as the amounts described above, and in certain instances may be subject to regulatory requirements.

Borrowings and Financing Arrangements

The following table presents our committed and uncommitted financing arrangements with third party lenders and the outstanding balances related thereto, as of September 30, 2015.

	As of September 30, 2015				
	RJ&A[3]	RJ Ltd.	RJF	Total	Total number of counterparties
	($ in thousands)				
Financing arrangement:					
Committed secured [1]	$ 300,000	$ —	$ —	$ 300,000	3
Committed unsecured	—	—	300,000 [5]	300,000	1
Uncommitted secured[1][2]	2,400,000	33,974 [4]	—	2,433,974	10
Uncommitted unsecured[1][2]	375,000	—	50,000	425,000	7
Total financing arrangements	$ 3,075,000	$ 33,974	$ 350,000	$ 3,458,974	21
Outstanding borrowing amount:					
Committed secured [1]	$ 65,000	$ —	$ —	$ 65,000	
Committed unsecured	—	—	—	—	
Uncommitted secured[1][2]	374,535	—	—	374,535	
Uncommitted unsecured[1][2]	—	—	—	—	
Total outstanding borrowing amount	$ 439,535	$ —	$ —	$ 439,535	

(1) Our ability to borrow is dependent upon compliance with the conditions in the various committed loan agreements and collateral eligibility requirements.

(2) Lenders are under no contractual obligation to lend to us under uncommitted credit facilities.

(3) We generally utilize the RJ&A facilities to finance a portion of our fixed income securities trading instruments.

(4) This financing arrangement is primarily denominated in Canadian currency, amounts presented in the table have been converted to U.S. dollars at the currency exchange rate in effect as of September 30, 2015.

(5) On August 6, 2015, RJF entered into a revolving credit facility agreement in which the lenders are a number of financial institutions. This unsecured borrowing facility provides for maximum borrowings of up to $300 million, at variable rates, with a facility maturity date of August 6, 2020 (see Note 15 of our Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding this borrowing arrangement).

The committed financing arrangements are in the form of either tri-party repurchase agreements or secured lines of credit. The uncommitted financing arrangements are in the form of secured lines of credit, secured bilateral or tri-party repurchase agreements, or unsecured lines of credit.

We maintain three unsecured settlement lines of credit available to our Argentine joint venture in the aggregate amount of $11.3 million. Of the aggregate amount, one settlement line for $9 million is guaranteed by RJF. There were no borrowings outstanding on these lines of credit as of September 30, 2015.

RJ Bank had $550 million in FHLB advances outstanding at September 30, 2015, comprised of two floating-rate advances, one in the amount of $250 million and the second in the amount of $300 million. Both FHLB advances are secured by a blanket lien on RJ Bank's residential loan portfolio (see Note 15 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding these borrowings). RJ Bank has an additional $878 million in immediate credit available from the FHLB as of September 30, 2015 and total available credit of 30% of total assets with the pledge of additional collateral to the FHLB. On October 9, 2013, RJ Bank entered into a forward-starting advance transaction with the FHLB to borrow $25 million on October 13, 2015. This borrowing was funded subsequent to our year-end, bears interest at the rate of 3.4%, and matures on October 13, 2020.

RJ Bank is eligible to participate in the Fed's discount-window program; however, RJ Bank does not view borrowings from the Fed as a primary means of funding. The credit available in this program is subject to periodic review, may be terminated or reduced at the discretion of the Fed, and would be secured by pledged C&I loans.

From time to time we purchase short-term securities under agreements to resell ("Reverse Repurchase Agreements") and sell securities under agreements to repurchase ("Repurchase Agreements"). We account for each of these types of transactions as collateralized financings with the outstanding balances on the Repurchase Agreements included in securities sold under agreements to repurchase. At September 30, 2015, collateralized financings outstanding in the amount of $333 million are included in securities sold under agreements to repurchase on the Consolidated Statements of Financial Condition. Of this total, outstanding balances on the committed and uncommitted Repurchase Agreements (which are reflected in the table of financing arrangements above) were $65 million and $260 million, respectively, as of September 30, 2015. Such financings are generally collateralized by non-customer, RJ&A owned securities. The required market value of the collateral associated with the committed secured facilities ranges from 102% to 140% of the amount financed.

The average daily balance outstanding during the five most recent successive quarters, the maximum month-end balance outstanding during the quarter and the period end balances for Repurchase Agreements and Reverse Repurchase Agreements of RJF are as follows:

	Repurchase transactions			Reverse repurchase transactions		
For the quarter ended:	Average daily balance outstanding	Maximum month-end balance outstanding during the quarter	End of period balance outstanding	Average daily balance outstanding	Maximum month-end balance outstanding during the quarter	End of period balance outstanding
	(in thousands)					
September 30, 2015	$ 280,934	$ 332,536	$ 332,536	$ 432,131	$ 498,871	$ 474,144
June 30, 2015	233,451	255,870	251,769	425,342	445,591	416,516
March 31, 2015	253,328	351,168	277,383	446,965	537,919	469,503
December 31, 2014	252,981	337,107	337,107	479,851	576,249	384,129
September 30, 2014	238,841	260,323	244,495	458,158	495,286	446,016

At September 30, 2015, in addition to the financing arrangements described above, we had $38 million outstanding on a mortgage loan for our St. Petersburg, Florida home-office complex, that we include in other borrowings on our Consolidated Statements of Financial Condition.

At September 30, 2015 we have senior notes payable of $1.15 billion. The balance is comprised of $350 million outstanding on our 6.90% senior notes due 2042, $249 million outstanding on our 5.625% senior notes due 2024, $300 million outstanding on our 8.60% senior notes due August 2019, and $250 million outstanding on our 4.25% senior notes due April 2016.

Our current senior long-term debt ratings are:

Rating Agency	Rating	Outlook
Standard & Poor's Ratings Services ("S&P")	BBB	Positive
Moody's Investors Services ("Moody's")	Baa2	Positive

The S&P rating and outlook reflected above are as presented in their December, 2014 report.

The Moody's rating and outlook reflected above are as presented in their June, 2015 report.

Our current long-term debt ratings depend upon a number of factors including industry dynamics, operating and economic environment, operating results, operating margins, earnings trends and volatility, balance sheet composition, liquidity and liquidity management, our capital structure, our overall risk management, business diversification and our market share, and competitive position in the markets in which we operate. Deteriorations in any of these factors could impact our credit ratings. Any rating downgrades could increase our costs in the event we were to pursue obtaining additional financing.

Should our credit rating be downgraded prior to a public debt offering it is probable that we would have to offer a higher rate of interest to bond holders. A downgrade to below investment grade may make a public debt offering difficult to execute on terms we would consider to be favorable. A downgrade below investment grade could also result in the termination of certain derivative contracts and the counterparties to the derivative instruments could request immediate payment or demand immediate and ongoing overnight collateralization on our derivative instruments in liability positions (see Note 18 of our Notes to Consolidated Financial Statements in this Form 10-K for additional information). A credit downgrade could create a reputational issue and could also result in certain counterparties limiting their business with us, result in negative comments by analysts and potentially impact

investor perception of us, and resultantly impact our stock price and/or our clients' perception of us. A credit downgrade would result in RJF incurring a higher commitment fee on any unused balance on its $300 million revolving credit facility executed on August 6, 2015, in addition to triggering a higher interest rate applicable to any borrowings outstanding on the line as of and subsequent to such downgrade. Conversely, an improvement in RJF's current credit rating would have a favorable impact on the commitment fee as well as the interest rate applicable to any borrowings on such line. None of our credit agreements contain a condition or event of default related to our credit ratings.

Other sources of liquidity

We own life insurance policies which are utilized to fund certain non-qualified deferred compensation plans and other employee benefit plans. The policies which we could readily borrow against have a cash surrender value of approximately $252 million as of September 30, 2015 and we are able to borrow up to 90%, or $226 million of the total, without restriction. There are no borrowings outstanding against any of these policies as of September 30, 2015.

On May 22, 2015 we filed a "universal" shelf registration statement with the SEC to be in a position to access the capital markets if and when necessary or perceived by us to be opportune.

See the "contractual obligations" section below for information regarding our contractual obligations.

Potential impact of Morgan Keegan matters subject to indemnification by Regions on our liquidity

As more fully described in Note 21 in the Notes to Consolidated Financial Statements in this Form 10-K, the Stock Purchase Agreement effective on the Closing Date between RJF and Regions regarding our acquisition of all of the issued and outstanding shares of Morgan Keegan provides that in addition to customary indemnity for breaches of representations and warranties and covenants, Regions will indemnify RJF for losses incurred in connection with any litigation or similar matter related to pre-closing activities. For matters that are received within three years from the closing date, or through April 2, 2015, the indemnifications survive until such matters are resolved. As a result of these indemnifications and after consideration of the expiration of certain of these indemnification provisions, we do not anticipate the resolution of any pre-Closing Date Morgan Keegan litigation matters to negatively impact our liquidity (see Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K, and Part I Item 3 - Legal Proceedings, in this report, for further information regarding the nature of the pre-Closing Date matters).

Potential impact of on our liquidity from the scheduled maturity of senior notes payable

One of our senior note issuances, the 4.25% senior notes with an aggregate principal amount of $250 million, matures in April, 2016. Should we ultimately elect not to refinance, the repayment of the principal on the maturity date would reduce our liquidity.

Statement of financial condition analysis

The assets on our consolidated statement of financial condition consist primarily of cash and cash equivalents (a large portion of which is segregated for the benefit of clients), receivables including bank loans, financial instruments held for either trading purposes or as investments, and other assets. A significant portion of our assets are liquid in nature, providing us with flexibility in financing our business.

Total assets of $26.5 billion at September 30, 2015 are approximately $3.15 billion, or 14%, more than our total assets as of September 30, 2014. Net bank loans receivable increased $2.02 billion due to significant growth of RJ Bank's net loan portfolio during the year. Assets segregated pursuant to regulations and other segregated assets, which are primarily comprised of cash or qualified securities in segregated reserve accounts for the exclusive benefit of clients, increased $416 million at September 30, 2015 compared to September 30, 2014, resulting from an increase brokerage client payables (refer to the discussion of the increase in the related payable balance in the following paragraph). Cash and cash equivalents increased $402 million, refer to the discussion of the various sources and uses of cash during the period in the preceding liquidity and capital resources section of this MD&A. Loans to financial advisors increased $64 million, net of repayments, reflecting successful recruiting results over the year. The investment balance associated with our available for sale securities portfolio decreased $49 million primarily as a result of redemptions, maturations, or sales of certain securities in the portfolio offset by additional investments made in such securities by RJ Bank during the year.

Our liabilities at September 30, 2015 of $21.7 billion are $2.80 billion, or 15%, more than our liabilities as of September 30, 2014. The increase in liabilities is primarily due to the following: an increase in bank deposit liabilities of $1.89 billion, reflecting

increased deposits at RJ Bank, a $715 million increase in brokerage client payables (refer to the related increase in assets segregated pursuant to regulations and other segregated assets discussed in the preceding paragraph).

Contractual obligations

The following table sets forth our contractual obligations:

		Year ended September 30,					
	Total	2016	2017	2018	2019	2020	Thereafter
		(in thousands)					
Long-term debt obligations:							
Senior notes payable [1]	$ 1,149,222	$ 249,946	$ —	$ —	$ 299,980	$ —	$ 599,296
Loans payable of consolidated variable interest entities[2]	25,960	13,363	8,240	3,668	689	—	—
Long-term portion of other borrowings[3]	588,065	4,325	554,578	5,195	5,130	5,430	13,407
Committed borrowing by RJ Bank [4]	—	(25,000)	—	—	—	—	25,000
Sub-total long-term debt obligations	1,763,247	242,634	562,818	8,863	305,799	5,430	637,703
Estimated interest on long-term debt [5]	907,957	85,794	71,076	67,151	66,868	40,655	576,413
Operating lease obligations [6]	369,198	79,758	69,834	57,851	49,003	40,027	72,725
Purchase obligations [7]	222,496	122,762	47,427	29,662	19,190	2,033	1,422
Other long-term liabilities:[8]							
Time deposits [9]	354,917	65,999	76,296	44,381	74,756	93,485	—
Deferred compensation programs [10]	329,588	52,131	55,239	51,387	53,996	47,175	69,660
Legal liabilities associated with matters subject to indemnification [11]	142,856	64,285	64,285	14,286	—	—	—
Low income housing tax credit guarantee obligation [12]	24,452	3,910	4,757	5,247	5,388	2,372	2,778
Sub-total long-term liabilities	851,813	186,325	200,577	115,301	134,140	143,032	72,438
Total contractual obligations	$ 4,114,711	$ 717,273	$ 951,732	$ 278,828	$ 575,000	$ 231,177	$ 1,360,701

(1) See Note 17 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information.

(2) Loans which are non-recourse to us. See further discussion in Note 16 of the Notes to Consolidated Financial Statements in this Form 10-K.

(3) See Note 15 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information.

(4) RJ Bank entered into a forward-starting advance transaction with the FHLB to borrow $25 million on October 13, 2015, this borrowing matures on October 13, 2020.

(5) Interest computation includes scheduled interest on our senior notes, the mortgage note payable, RJ Bank's FHLB advances (assuming no change in the variable interest rate from that as of September 30, 2015, but factoring into the computation the effect of certain interest rate swap contracts that swap variable interest rate payments to fixed interest payments), and RJ Bank's committed borrowing from the FHLB, see Note 15 and Note 17 of the Notes to Consolidated Financial Statements in this Form 10-K for information regarding the borrowings.

(6) Primarily comprised of outstanding obligations on long-term leases for office space.

(7) In the normal course of our business, we enter into contractual arrangements whereby we commit to future purchases of products or services from unaffiliated parties. Purchase obligations for purposes of this table, include amounts associated with agreements to purchase goods or services that are enforceable and legally binding and that specify all significant terms including: minimum quantities to be purchased, fixed, minimum or variable price provisions, and the approximate timing of the transaction. Our most significant purchase obligations are vendor contracts for data services, communication services, processing services and computer software contracts. Most of our contracts have provisions for early termination, for purposes of this table we have assumed we would not pursue early termination of such contracts.

See the following page for the continuation of the explanations to the footnotes in the above table.

Continuation of the footnote explanations pertaining to the table on the previous page.

(8) The table does not include any amounts for uncertain tax positions because we are unable to reasonably predict the timing of future payments, if any, to respective taxing authorities. We have recorded a liability of $22.5 million as of September 30, 2015 which is included in trade and other payables on our Consolidated Statements of Financial Condition related to such positions (see Note 20 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information).

(9) See Note 14 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information.

(10) Includes obligations, presented on a gross basis, of our Long-Term Incentive Plan, our Wealth Accumulation Plan, our Voluntary Deferred Compensation Program, and certain historic deferred compensation plans of MK & Co. See Notes 24 and 25 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding such plans. We own life insurance policies that are not presented in this table which are utilized to fund certain of these obligations. See Note 10 of the Notes to Consolidated Financial Statements in this Form 10-K for information regarding our investments in company-owned life insurance. We also hold other investments that are not presented in this table to fund obligations of the historic deferred compensation plans of MK & Co., see Note 5 of the Notes to Consolidated Financial Statements in this Form 10-K for information regarding the fair value of such investments.

(11) Regions has provided an indemnification to RJF for losses incurred in connection with Morgan Keegan legal proceedings pending as of the closing date of our Morgan Keegan acquisition, or commenced after the closing date and related to pre-closing date matters. See Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K for further discussion. Amounts presented in this table represent the gross liabilities for such matters, and do not reflect the related and offsetting indemnification asset. See Note 10 of the Notes to Consolidated Financial Statements in this Form 10-K for information regarding the indemnification asset. These liabilities do not have defined maturity dates, however we expect that all such matters will be resolved within three years. We have estimated the timing associated with the resolution of such matters.

(12) RJTCF has provided a guaranteed return on investment to a third party investor in one of its fund offerings, see Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K for further discussion. Amounts presented in this table represent the gross liability associated with this guarantee obligation, and do not reflect the related and offsetting financing asset. See Note 10 of the Notes to Consolidated Financial Statements in this Form 10-K for information regarding the offsetting financing asset.

We have made a number of investment commitments, either as commitments to fund LIHTC project partnerships, or to venture capital or private equity partnerships. We have also made commitments to provide loans to prospective financial advisors who have either accepted our offer, or recently recruited advisors, which have not yet been funded. See Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K for further information on these and other commitments.

RJ Bank has entered into commitments to extend credit such as unfunded loan commitments, standby letters of credit, open end consumer and commercial lines of credit. See Note 27 of the Notes to Consolidated Financial Statements in this Form 10-K for further information on these and other outstanding off-balance credit-related commitments.

We are authorized by the Board of Directors to execute open market purchases of our common stock and certain of our senior notes, at the discretion of the Securities Repurchase Committee. See Item 5 in this Form 10-K for additional information regarding this authorization.

In the normal course of business, certain of our subsidiaries act as general partner and may be contingently liable for activities of various limited partnerships. These partnerships engage primarily in real estate activities. In our opinion, such liabilities, if any, for the obligations of the partnerships will not in the aggregate have a material adverse effect on our consolidated financial position.

Regulatory

Refer to the discussion of the regulatory environment in which RJF and its subsidiaries operate, and the impact on our operations of certain new rules and regulations arising from the Dodd-Frank Act which have been implemented to-date, as well as a discussion of the potential impact that certain proposed rules may have on our business, in the Item 1 Business, Regulation section in this report.

RJ&A, RJFS, Eagle Fund Distributors, Inc. and Raymond James (USA) Ltd. all had net capital in excess of minimum requirements as of September 30, 2015.

RJ Ltd. is subject to the Minimum Capital Rule (Dealer Member Rule No. 17 of IIROC and the Early Warning System (Dealer Member Rule No. 30 of IIROC)). See the discussion in Note 26 of the Notes to Consolidated Financial Statements in this Form 10-K, where each of these rules is described. RJ Ltd. is not in Early Warning Level 1 or Level 2 at September 30, 2015.

RJF and RJ Bank are subject to various regulatory and capital requirements. RJF and RJ Bank met the requirements to be categorized as "well capitalized" as of September 30, 2015. One of RJ Bank's U.S. subsidiaries is an agreement corporation and is also subject to regulation by the Fed. As of September 30, 2015, this RJ Bank subsidiary met the capital adequacy guideline requirements.

The maintenance of certain risk-based regulatory capital levels could impact various capital allocation decisions impacting one or more of our businesses. However, due to the strong capital position of RJF and its regulated subsidiaries, we do not anticipate these capital requirements will have any negative impact on our future business activities.

See Note 26 of the Notes to Consolidated Financial Statements in this Form 10-K for further information on regulatory and capital requirements.

Critical accounting estimates

The consolidated financial statements are prepared in accordance with GAAP, which require us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the reported amounts of revenues and expenses during any reporting period in our consolidated financial statements. Management has established detailed policies and control procedures intended to ensure the appropriateness of such estimates and assumptions and their consistent application from period to period. For a description of our significant accounting policies, see Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K.

We believe that of our accounting estimates and assumptions, those described below involve a high degree of judgment and complexity. Due to their nature, estimates involve judgment based upon available information. Actual results or amounts could differ from estimates and the difference could have a material impact on the consolidated financial statements. Therefore, understanding these critical accounting estimates is important in understanding the reported results of our operations and our financial position.

Valuation of certain financial instruments, investments and other assets

The use of fair value to measure financial instruments, with related gains or losses recognized in our Consolidated Statements of Income and Comprehensive Income, is fundamental to our financial statements and our risk management processes.

"Trading instruments" and "available for sale securities" are reflected in the Consolidated Statements of Financial Condition at fair value or amounts that approximate fair value. Unrealized gains and losses related to these financial instruments are reflected in our net income or our total comprehensive income, depending on the underlying purpose of the instrument.

We measure the fair value of our financial instruments in accordance with GAAP, which defines fair value, establishes a framework that we use to measure fair value and provides for certain disclosures we provide about our fair value measurements included in our financial statements. Refer to Notes 5 and 6 in our Notes to Consolidated Financial Statements in this Form 10-K for these disclosures.

Fair value is defined by GAAP as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between willing market participants on the measurement date. We determine the fair values of our financial instruments and any other assets and liabilities required by GAAP to be recognized at fair value in the financial statements as of the close of business of each financial statement reporting period. These fair value determination processes also apply to any of our impairment tests or assessments performed for nonfinancial instruments such as goodwill, identifiable intangible assets, certain real estate owned and other long-lived assets.

In determining the fair value of our financial instruments in accordance with GAAP, we use various valuation approaches, including market and/or income approaches. Fair value is a market-based measure considered from the perspective of a market participant. As such, even when assumptions from market participants are not readily available, our own assumptions reflect those that we believe market participants would use in pricing the asset or liability at the measurement date. GAAP provides for the following three levels to be used to classify our fair value measurements:

Level 1-Financial instruments included in Level 1 are highly liquid instruments with quoted prices in active markets for identical assets or liabilities. These include equity securities traded in active markets and certain U. S. Treasury securities, other governmental obligations, or publicly traded corporate debt securities.

Level 2-Financial instruments reported in Level 2 include those that have pricing inputs that are other than quoted prices in active markets, but which are either directly or indirectly observable as of the reporting date (i.e. prices for similar instruments). Instruments that are generally included in this category are equity securities that are not actively traded, corporate obligations infrequently traded, certain government and municipal obligations, interest rate swaps, certain asset-backed securities ("ABS"), certain collateralized mortgage obligations ("CMOs"), certain MBS, our derivative instruments, corporate loans and nonrecurring fair value measurements for certain loans held for sale, impaired loans and other real estate owned ("OREO").

Level 3-Financial instruments reported in Level 3 have little, if any, market activity and are measured using our best estimate of fair value, where the inputs into the determination of fair value are both significant to the fair value measurement and unobservable. These valuations require significant judgment or estimation. Instruments in this category generally include: equity securities with unobservable inputs such as those investments made in our principal capital activities, certain non-agency ABS, pools of interest-only Small Business Administration ("SBA") loan strips ("I/O Strips"), certain municipal and corporate obligations which include ARS, and nonrecurring fair value measurements for certain impaired loans.

GAAP requires that we maximize the use of observable inputs and minimize the use of unobservable inputs when performing our fair value measurements. The availability of observable inputs can vary from instrument to instrument and in certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, an instrument's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement of an instrument requires judgment and consideration of factors specific to the instrument.

See Notes 5, 6, 7 and 18 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information on our financial instruments.

Level 3 assets and liabilities

As of September 30, 2015, 7.9% of our total assets and 3.2% of our total liabilities are financial instruments measured at fair value on a recurring basis. As of September 30, 2014, financial instruments measured at fair value on a recurring basis represented 8.6% of our total assets and 3% of our total liabilities.

Financial instruments measured at fair value on a recurring basis categorized as Level 3 amount to $356 million as of September 30, 2015 and represent 17% of our assets measured at fair value. Of the Level 3 assets as of September 30, 2015, our private equity investments comprise $209 million, or 59%, of the total, and our ARS positions comprise $139 million, or 39%, of the total. Our Level 3 assets decreased $62 million, or 15%, as compared to the September 30, 2014 level, primarily as a result of sales and redemptions of ARS which generated proceeds of $64 million and a gain of $11 million in the year ended September 30, 2015 (see Note 7 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information). Level 3 assets represent 7.4% of total equity as of September 30, 2015, reflecting a decrease from the 9.4% of total equity measure as of September 30, 2014.

Financial instruments which are liabilities categorized as Level 3 amount to $58 thousand as of September 30, 2015 and represent less than 1% of liabilities measured at fair value, which is unchanged from such measure at September 30, 2014.

Valuation techniques

The fair value for certain of our financial instruments is derived using pricing models and other valuation techniques that involve significant management judgment. The price transparency of financial instruments is a key determinant of the degree of judgment involved in determining the fair value of our financial instruments. Financial instruments for which actively quoted prices or pricing parameters are available will generally have a higher degree of price transparency than financial instruments that are thinly traded or not quoted. In accordance with GAAP, the criteria used to determine whether the market for a financial

instrument is active or inactive is based on the particular asset or liability. For equity securities, our definition of actively traded is based on average daily volume and other market trading statistics. We have determined the market for certain other types of financial instruments, including certain CMOs, ABS, certain collateralized debt obligations and ARS, to be volatile, uncertain or inactive as of both September 30, 2015 and 2014. As a result, the valuation of these financial instruments included significant management judgment in determining the relevance and reliability of market information available. We considered the inactivity of the market to be evidenced by several factors, including a continued decreased price transparency caused by decreased volume of trades relative to historical levels, stale transaction prices and transaction prices that varied significantly either over time or among market makers.

The specific valuation techniques utilized for the categorization of certain financial instruments with the most significant carrying values that are presented in our Consolidated Statements of Financial Condition as of September 30, 2015 are described below.

Trading instruments and trading instruments sold but not yet purchased

Trading securities are comprised primarily of the financial instruments held by our broker-dealer subsidiaries (see Note 6 of the Notes to Consolidated Financial Statements in this Form 10-K for more information). When available, we use quoted prices in active markets to determine the fair value of these securities. Such instruments are classified within Level 1 of the fair value hierarchy. Examples include exchange traded equity securities and liquid government debt securities. As of September 30, 2015, 7% of our gross trading security assets and 62% of our gross trading securities sold but not yet purchased, are classified as Level 1 of the fair value hierarchy.

When instruments are traded in secondary markets and quoted market prices do not exist for such securities, we utilize valuation techniques, including matrix pricing, to estimate fair value. Matrix pricing generally utilizes spread-based models periodically re-calibrated to observable inputs such as market trades, or to dealer price bids in similar securities in order to derive the fair value of the instruments. Valuation techniques may also rely on other observable inputs such as yield curves, interest rates and expected principal repayments, and default probabilities. Instruments valued using these inputs are typically classified within Level 2 of the fair value hierarchy. Examples include certain municipal debt securities, corporate debt securities, agency MBS, and restricted equity securities in public companies. We utilize prices from independent services to corroborate our estimate of fair value. Depending upon the type of security, the pricing service may provide a listed price, a matrix price, or use other methods including broker-dealer price quotations. As of September 30, 2015, 93% of our gross trading security assets and 38% of our gross trading securities sold but not yet purchased, are classified as Level 2 of the fair value hierarchy.

Positions in illiquid trading securities that do not have readily determinable fair values require significant judgment or estimation. For these securities, we use pricing models, discounted cash flow methodologies, or similar techniques. Assumptions utilized by these techniques include estimates of future delinquencies, loss severities, defaults and prepayments, or redemptions. Securities valued using these techniques are classified within Level 3 of the fair value hierarchy. For certain CMOs, where there has been limited activity or less transparency around significant inputs to the valuation, such as assumptions regarding performance of the underlying mortgages, these securities are currently classified within Level 3 of the fair value hierarchy. As of September 30, 2015, less than 1% of our gross trading security assets, and none of our trading instruments sold but not yet purchased, are classified as Level 3 of the fair value hierarchy.

We enter into derivatives contracts as part of our fixed income operations in either over-the-counter market activities, or through "matched book" activities. See Note 18 of the Notes to Consolidated Financial Statements in this Form 10-K for more information.

Fair values for the interest rate derivative contracts arising from our over-the-counter market activities are obtained from internal pricing models that consider current market trading levels and the contractual prices for the underlying financial instruments, as well as time value, yield curve and other volatility factors underlying the positions. Since our model inputs can be observed in a liquid market and the models do not require significant judgment, such derivative contracts are classified within Level 2 of the fair value hierarchy. We utilize values obtained from third party counterparty derivatives dealers to corroborate the output of our internal pricing models. The fair value of any cash collateral exchanged as part of the interest rate swap contract is netted, by counterparty, against the fair value of the derivative instrument.

Fair value for our matched book derivatives are determined using an internal model which includes inputs from independent pricing sources to project future cash flows under each underlying derivative contract. The cash flows are discounted to determine the present value. Since any changes in fair value are completely offset by an opposite change in the offsetting transaction position, there is no net impact on our Consolidated Statements of Income and Comprehensive Income from changes in the fair value of these derivative instruments. We record the value of each matched book derivative position held at fair value, as either an asset

or an offsetting liability, presented as "derivative instruments associated with offsetting matched book positions" as applicable, on our Consolidated Statements of Financial Condition.

RJ Bank enters into three month forward foreign exchange contracts to hedge the risk related to their investment in their Canadian subsidiary. These derivatives are recorded at fair value on the Consolidated Statements of Financial Condition, the majority of which are designated as net investment hedges. The fair value of RJ Bank's forward foreign exchange contracts is determined by obtaining valuations from a third party pricing service. These third party valuations are based on observable inputs such as spot rates, foreign exchange rates and both U.S. and Canadian interest rate curves. We validate the observable inputs utilized in the third party valuation model by preparing an independent calculation using a secondary, third party valuation model. These forward foreign exchange contracts are classified within Level 2 of the fair value hierarchy.

We enter into certain interest rate swap contracts (the "RJ Bank Interest Hedges") which swap variable interest payments on debt for fixed interest payments. Through the RJ Bank Interest Hedges, RJ Bank is able to mitigate a portion of the market risk associated with certain fixed rate interest earning assets held by RJ Bank. The RJ Bank Interest Hedges are recorded at fair value on the Consolidated Statements of Financial Condition and are designated as cash flow hedges. The fair value of RJ Bank Interest Hedges is obtained from internal pricing models that consider current market trading levels and the contractual prices for the underlying financial instruments, as well as time value, yield curve and other volatility factors underlying the positions. Since our model inputs can be observed in a liquid market and the models do not require significant judgment, such derivative contracts are classified within Level 2 of the fair value hierarchy. We utilize values obtained from a third party to corroborate the output of our internal pricing models.

Available for sale securities

Available for sale securities are comprised primarily of MBS, CMOs, and other equity securities held predominately by RJ Bank (the "RJ Bank AFS Securities"), and ARS held by a non-broker-dealer subsidiary of RJF (collectively referred to as the "RJF AFS Securities"). Of the RJF AFS Securities, 73% of the portfolio is classified as Level 2 and 27% is classified as Level 3, of the fair value hierarchy.

Debt and equity securities classified as available for sale are reported at fair value with unrealized gains and losses, net of deferred taxes, recorded through other comprehensive (loss) income and thereafter presented in shareholders' equity as a component of accumulated other comprehensive (loss) income ("AOCI") unless the loss is considered to be other-than-temporary, in which case the related credit loss portion is recognized as a loss in other revenue. Realized gains and losses on sales of such securities are recognized using the specific identification method and reflected in other revenue in the period they are sold.

The fair value of agency and non-agency securities included within the RJ Bank AFS Securities is determined by obtaining third party pricing service bid quotations from two independent pricing services. Third party pricing service bid quotations are based on either current market data, or for any securities traded in markets where the trading activity has slowed such as the CMO market, the most recently available market data. The third party pricing services provide comparable price evaluations utilizing available market data for similar securities. The market data the third party pricing services utilize for these price evaluations includes observable data comprised of benchmark yields, reported trades, broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, reference data including market research publications, and loan performance experience. In order to validate that the pricing information used by the primary third party pricing service is observable, we request, on a quarterly basis, some of the key market data available for a sample of securities and compare this data to that which we observed in our independent accumulation of market information. Securities valued using these valuation techniques are classified within Level 2 of the fair value hierarchy.

For non-agency securities within the RJ Bank AFS Securities where a significant difference exists between the primary third party pricing service bid quotation and the secondary third party pricing service, we utilize a discounted cash flow analysis to determine which third party price quote is more representative of fair value under the current market conditions. The fair values for most non-agency securities at September 30, 2015 were based on the respective primary third party pricing service bid quotation. Securities measured using these valuation techniques are generally classified within Level 2 of the fair value hierarchy.

ARS are long-term variable rate securities tied to short-term interest rates that were intended to be reset through a "Dutch auction" process, which generally occurs every seven to 35 days. Holders of ARS were previously able to liquidate their holdings to prospective buyers by participating in the auctions. During 2008, the Dutch auction process failed and holders were no longer able to liquidate their holdings through the auction process. The fair value of the ARS holdings is estimated based on internal pricing models. The pricing model takes into consideration the characteristics of the underlying securities, as well as multiple inputs including the issuer and its credit quality, data from any recent trades, the expected timing of redemptions and an estimated yield premium that a market participant would require over otherwise comparable securities to compensate for the illiquidity of

the ARS. These inputs require significant management judgment and, accordingly, these securities are classified within Level 3 of the fair value hierarchy.

For any RJF AFS Securities in an unrealized loss position at the reporting period end, we make an assessment whether these securities are impaired on an other-than-temporary basis. In order to evaluate our risk exposure and any potential impairment of these securities, on at least a quarterly basis, we review the characteristics of each security owned such as, where applicable, collateral type, delinquency and foreclosure levels, credit enhancement, projected loan losses, collateral coverage, the presence of U.S. government or government agency guarantees, and issuer credit rating. The following factors are considered to determine whether an impairment is other-than-temporary: our intention to sell the security, our assessment of whether it is more likely than not that we will be required to sell the security before the recovery of its amortized cost basis, and whether the evidence indicating that we will recover the amortized cost basis of a security in full outweighs evidence to the contrary. Evidence considered in this assessment includes the reasons for the impairment, the severity and duration of the impairment, changes in value subsequent to period end, recent events specific to the issuer or industry, and forecasted performance of the security. Securities on which there is an unrealized loss that is deemed to be other-than-temporary are written-down to fair value with the credit loss portion of the write-down recorded as a realized loss in other revenue and the non-credit portion of the write-down recorded net of deferred taxes in other comprehensive (loss) income and are thereafter presented in equity as a component of AOCI. The credit loss portion of the write-down is the difference between the present value of the cash flows expected to be collected and the amortized cost basis of the security. The previous amortized cost basis of the security less the other-than-temporary impairment recognized in earnings establishes the new cost basis for the security.

For any RJF AFS Securities, we estimate the portion of loss attributable to credit using a discounted cash flow model. For RJ Bank AFS Securities, our discounted cash flow model utilizes relevant assumptions such as prepayment rate, default rate, and loss severity on a loan level basis. These assumptions are subject to change depending on a number of factors such as economic conditions, changes in home prices, and delinquency and foreclosure statistics, among others. Events that may trigger material declines in fair values or additional credit losses for these securities in the future would include, but are not limited to, deterioration of credit metrics, significantly higher levels of default and severity of loss on the underlying collateral, deteriorating credit enhancement and loss coverage ratios, or further illiquidity.

Private equity investments

Private equity investments, held in our Other segment, consist of various direct and third party private equity investments and comprise 59% of all of our Level 3 assets as of September 30, 2015. The valuation of these investments requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and long-term nature of these assets. As a result, these values cannot be determined with precision and the calculated fair value estimates may not be realizable in a current sale or immediate settlement of the instrument.

Private equity investments are carried at estimated fair value. They are valued initially at the transaction price until significant transactions or developments indicate that a change in the carrying values of these investments is appropriate. The carrying values of these investments are adjusted based on financial performance, investment-specific events, financing and sales transactions with third parties and/or discounted cash flow models incorporating changes in market outlook. Investments in funds structured as limited partnerships are generally valued based on our proportionate share of the net assets of the partnership as provided by the fund manager. Investments valued using these valuation techniques are classified within Level 3 of the fair value hierarchy.

Goodwill impairment

Goodwill, under GAAP, must be allocated to reporting units and tested for impairment at least annually. The annual goodwill impairment testing involves the application of significant management judgment, especially when estimating the fair value of its reporting units.

We perform goodwill testing on an annual basis or when an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying value. We have elected December 31 as our annual goodwill impairment evaluation date. During the quarter ended March 31, 2015, we performed a qualitative assessment evaluating the balances as of December 31, 2014 for each reporting unit that includes an allocation of goodwill to determine whether it is more likely than not that the carrying value of such reporting unit, including the recorded goodwill, is in excess of the fair value of the reporting unit. In any instance in which we are unable to qualitatively conclude that it is more likely than not that the fair value of the reporting unit exceeds the reporting unit carrying value including goodwill, a quantitative analysis of the fair value of the reporting unit would be performed. Based upon the outcome of our qualitative assessment, we determined that no quantitative analysis of the fair value of any reporting unit as of December 31, 2014 was required, and we concluded that none of the goodwill

allocated to any of our reporting units as of December 31, 2014 was impaired. No events have occurred since December 31, 2014 that would cause us to update our latest annual impairment testing.

Of our total September 30, 2015 goodwill balance of $308 million: $230 million arose from our fiscal year 2012 acquisition of Morgan Keegan, $33 million arose from our fiscal year 2001 acquisition of Goepel McDermid, Inc. (now RJ Ltd.), $30 million arose from our fiscal year 1999 acquisition of Roney & Co. (now part of RJ&A), $2 million arose from our fiscal year 2011 acquisition of Howe Barnes Hoefer & Arnett, and $12 million arose from our fiscal year 2015 acquisition of TPC (refer to Note 13 of the Notes to Consolidated Financial Statements in this Form 10-K for more information). This goodwill was allocated to reporting units; $187 million is included in the PCG segment and $121 million is included in the Capital Markets segment.

Deterioration in economic market conditions, especially those impacting revenues reported in our PCG and Capital Markets segments, as well as increased costs arising from the effects of recent regulatory or legislative changes, may result in declines in reporting unit performance beyond management's current expectations. Declines in reporting unit performance, increases in equity capital requirements, or increases in the estimated cost of equity, could cause the estimated fair values of our reporting units or their associated goodwill to decline, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

Loss provisions

Loss provisions arising from legal proceedings

The recorded amount of liabilities related to legal proceedings is subject to significant management judgment. For a description of the significant estimates and judgments associated with establishing legal liabilities, see the "Legal liabilities" section of Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K.

Loss provisions arising from operations of our Broker-Dealers

The recorded amount of liabilities associated with brokerage client receivables and loans to financial advisors and certain key revenue producers, is subject to significant management judgment. For a description of the significant estimates and judgments associated with establishing these broker-dealer related liabilities, see the "Brokerage client receivables, loans to financial advisors and allowance for doubtful accounts" section of Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K.

Loan loss provisions arising from operations of RJ Bank

RJ Bank provides an allowance for loan losses which reflects our continuing evaluation of the probable losses inherent in the loan portfolio. Refer to Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K for discussion of RJ Bank's policies regarding the allowance for loan losses, and refer to Note 9 of the Notes to Consolidated Financial Statements in this Form 10-K for quantitative information regarding the allowance balances as of September 30, 2015.

At September 30, 2015, the amortized cost of all RJ Bank loans was $13.2 billion and an allowance for loan losses of $172.3 million was recorded against that balance. The total allowance for loan losses is equal to 1.32% of the amortized cost of the loan portfolio.

The uncertainty of the real estate and credit markets continues to influence the complexity involved in estimating the losses inherent in RJ Bank's loan portfolio. If our underlying assumptions and judgments prove to be inaccurate, the allowance for loan losses could be insufficient to cover actual losses. In such an event, any losses would result in a decrease in our net income as well as a decrease in the level of regulatory capital at RJ Bank.

Income taxes

The objectives of accounting for income taxes are to recognize the amount of taxes payable or refundable for the current year. We utilize the asset and liability method to provide income taxes on all transactions recorded in the consolidated financial statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that we expect to be in effect when the underlying items of income and expense are realized. Judgment is required in assessing the future tax consequences of events that have been recognized in our financial statements or tax returns, including the repatriation of undistributed earnings of foreign subsidiaries. Variations in the actual outcome of these future tax consequences could materially impact our financial position, results of operations, or liquidity.

We have provided for U.S. deferred income taxes on undistributed earnings not considered permanently reinvested in our non-U.S. subsidiaries. To the extent that the cumulative undistributed earnings of non-U.S. subsidiaries are considered to be permanently invested, no deferred U.S. federal income taxes have been provided. Because the time or manner of repatriation is uncertain, we cannot determine the impact of local taxes, withholding taxes and foreign tax credits associated with the future repatriation of such earnings, and therefore cannot quantify the tax liability that would be payable in the event all such foreign earnings are repatriated. At the present time, we have no plans or intentions to repatriate funds for which no U.S. income tax has been provided.

See Note 20 of the Notes to Consolidated Financial Statements in this Form 10-K for further information.

Effects of recently issued accounting standards, and accounting standards not yet adopted

In March 2013, the FASB issued new guidance intended to clarify the applicable guidance for the release of the cumulative translation adjustment when either an entity ceases to have a controlling financial interest in a subsidiary or involving an equity method investment that is a foreign entity. The new guidance is intended to resolve the diversity in current practice in the accounting for the release of the cumulative translation adjustment into net income for sales or transfers of a controlling financial interest that is in a foreign entity. This new guidance first became effective for our financial report covering the quarter ended December 31, 2014. Given that this guidance applies to entity specific transactions and we have had no transactions during fiscal year 2015 which it applies, this guidance has had no impact on our financial position or results of operations.

In June 2013, the FASB issued new guidance intended to amend the scope, measurement and disclosure requirements for investment companies. The new guidance is intended to change the approach to the investment company assessment, clarify the characteristics of an investment company, require an investment company to measure noncontrolling ownership interests in other investment companies at fair value and requires additional disclosures about the investment company. This new guidance became effective for our financial report covering the quarter ending December 31, 2014. The adoption of this new guidance did not have any material impact on our financial position, results of operations or disclosures.

In January 2014, the FASB issued new guidance which allows investors in Low Income Housing Tax Credit programs that meet specified conditions to present the net tax benefits (net of amortization of the cost of the investment) within income tax expense. The cost of the investments that meet the specified conditions will be amortized in proportion to (and over the same period as) the total expected tax benefits, including tax credits and other tax benefits as they are realized on the tax return. This new guidance is first effective for our financial report covering the quarter ending December 31, 2015, early adoption is permitted. Based upon the nature of our current investments in LIHTC structures, we do not meet the specified conditions which allow for election of this accounting treatment and thus this new guidance will not have any direct impact on our financial position or results of operations.

In January 2014, the FASB issued new guidance which clarifies when banks and similar institutions (creditors) should reclassify mortgage loans collateralized by residential real estate properties from the loan portfolio to OREO. This guidance defines when an in-substance repossession or foreclosure has occurred and when a creditor is considered to have received physical possession of residential real estate property collateralizing a consumer mortgage loan. This new guidance is first effective for our financial report covering the quarter ending December 31, 2015, early adoption is permitted. We do not anticipate that this new guidance will have any material impact on our financial position and results of operations, however, depending on the materiality upon the adoption of this new guidance, it may impact certain of our OREO disclosures.

In April 2014, the FASB issued new guidance which changes the prior guidance regarding the requirements for reporting discontinued operations. Under the new guidance, a disposal of a component of an entity or a group of components of an entity, are required to be reported in discontinued operations if the disposal represents a strategic shift that has (or will have) a major effect on an entity's operations and financial results when any of the following occurs: 1) the component of an entity or group of components of an entity meets certain criteria to be classified as held for sale. 2) The component of an entity or group of components of an entity is disposed of by sale. 3) The component of an entity or group of components of an entity is disposed of other than by sale (for example by abandonment or in a distribution to owners in a spinoff). The new guidance requires additional disclosures about discontinued operations that meet the above criteria. This new guidance is first effective prospectively, for all disposals of components of an entity that occur commencing with the beginning of our fiscal year 2016, however early adoption is permitted in certain circumstances. We have not had any disposals of an entity or a group of components of an entity that fall within the scope of this clarifying guidance, that would have provided us the opportunity to consider adopting this guidance early. Given that this guidance applies to entity specific transactions, we are unable to estimate the impact, if any, this new guidance may have on our financial position or results of operations.

In May 2014, the FASB issued new guidance regarding revenue recognition. In August 2015, the FASB amended this new guidance by deferring the initial required implementation date by one year. The new guidance is a comprehensive new revenue recognition model that requires a company to recognize revenue to depict the transfer of goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. This new guidance is first effective, after the effect of the August 2015 one-year deferral, for our financial report covering the quarter ending December 31, 2018, early adoption is permitted in certain circumstances. Upon adoption, we may use either a full retrospective or a modified retrospective approach with respect to presentation of comparable periods prior to the effective date, we are still evaluating which transition approach to use. In addition, we are continuing our evaluation of the impact the adoption of this new guidance will have on our financial position and results of operations.

In June 2014, the FASB issued amended guidance regarding "repo-to-maturity" transactions, as well as repurchase agreements and securities lending agreements accounted for as secured borrowings. The amended guidance requires a transferor to account for repo-to-maturity transactions as secured borrowings. This element of the new guidance was first effective for our interim report covering the period ended March 31, 2015, and based upon the nature of the terms of our repurchase agreements, the amended guidance had no impact on our financial position or results of operations as we have historically accounted for our repurchase transactions as secured borrowings. In addition to the accounting aspects of the amended guidance, there are also additional disclosures of certain information regarding repurchase and securities lending transactions required by the amended guidance. The new disclosures required under the guidance were first effective for our interim report covering the period ended June 30, 2015. See Note 19 of the Notes to Consolidated Financial Statements in this Form 10-K for the required disclosures.

In June 2014, the FASB issued amended guidance for the accounting for share-based payments when the terms of an award provide that a performance target could be achieved after the requisite service period. The new guidance requires that a performance target that affects vesting of an award and that could be achieved after the requisite service period be treated as a performance condition. This new guidance is first effective for our interim financial report covering the quarter ending December 31, 2016, early adoption is permitted. We are currently evaluating the impact the adoption of this new guidance will have on our financial position and results of operations.

In August 2014, the FASB issued amended guidance that requires an entity's management to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern. The new guidance: (1) provides for a definition of substantial doubt, (2) requires an evaluation every reporting period including interim periods, (3) provides principles for considering the mitigating effect of management's plans, (4) require certain disclosures when substantial doubt is alleviated as a result of consideration of managements plans, (5) require an express statement and other disclosures when substantial doubt is not alleviated, and (6) require an assessment for a period of one year after the date that the financial statements are issued (or available to be issued). This new guidance is first effective for our interim financial report covering the quarter ending after December 31, 2016, with early adoption permitted. The adoption of this guidance is not anticipated to have any impact on our consolidated financial statements or related disclosures.

In November 2014, the FASB issued amended guidance regarding the accounting for hybrid financial instruments (which in this context would apply to any shares of RJF stock that include embedded derivative features such as conversion rights, redemption rights, voting rights, and liquidation and dividend payment preferences) issued in the form of a share. The new guidance clarifies how current GAAP should be interpreted in evaluating the economic characteristics and risks of a host contract in a hybrid financial instrument that is issued in the form of a share. This new guidance is first effective for our interim financial report covering the quarter ending December 31, 2016, early adoption is permitted. The adoption of this guidance is not anticipated to have any impact on our financial position and results of operations.

In November 2014, the FASB issued guidance that provides an acquired entity with an option to apply pushdown accounting in its separate financial statements in the reporting period in which a change-in-control event occurs. This new guidance is now effective and requires an acquired entity to make an election to apply the guidance to future change-in-control events. The adoption of this guidance has had no impact on our consolidated financial statements or related disclosures.

In January 2015, the FASB issued guidance that eliminates from GAAP the concept of extraordinary items. This new guidance is effective for us for our fiscal year commencing on October 1, 2016, however, early adoption is permitted provided that the guidance is applied from the beginning of the fiscal year of adoption. The adoption of this new guidance could impact certain presentations in our consolidated statements of income, depending upon the nature of future events and circumstances, but would not impact our determinations of net income presented in such statements.

In February 2015, the FASB issued amended guidance to the consolidation model. This amended guidance: 1) eliminates the deferral of the application of the new consolidation model, which had resulted in the application of prior accounting guidance to consolidation determinations of certain investment funds (see Note 2 of the Notes to Consolidated Financial Statements in this

Form 10-K for a discussion of how this deferral is applicable to our Managed Funds). 2) Makes certain changes to the variable interest consolidation model. 3) Makes certain changes to the voting interest consolidation model. This amended guidance is effective for us for our fiscal year commencing on October 1, 2016, however, early adoption is permitted, including adoption in any interim period. The adoption of this new guidance is likely to impact our financial statements in the following manner: 1) will likely change certain historical conclusions that we are the primary beneficiary of certain LIHTC Funds. We currently anticipate that we will deconsolidate each of the non-guaranteed LIHTC Funds we currently consolidate. 2) We will apply this new guidance to our Managed Funds, but do not anticipate that we will conclude that we are the primary beneficiary of such Managed Funds. Accordingly, we believe that our historical practice of not consolidating the Managed Funds will continue after the adoption of this amended guidance. Given that we believe the application of this amended guidance will significantly improve the meaningfulness of our consolidated financial statements, we plan early adoption of this amended guidance in the first reporting period after which we have completed all the necessary analysis and documentation of all our investments that are within the scope of this guidance.

In April 2015, the FASB issued guidance governing the presentation of debt issuance costs in the consolidated financial statements. Under the new guidance, debt issuance costs related to a recognized debt liability are required to be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. This new guidance is effective for us for our fiscal year commencing on October 1, 2016, and early adoption is permitted. In August 2015, the FASB issued additional clarifying guidance indicating that for debt issuance costs related to line-of-credit arrangements, the SEC staff would not object to an entity deferring and presenting debt issuance costs ratably over the term of the line-of-credit arrangement, regardless of whether there are any outstanding borrowings on the line-of-credit arrangement. Although the new guidance is to be applied on a retrospective basis with the transition amount being reported as a change in accounting principle, given the costs and remaining term associated with our debt issuances to-date, we do not expect the adoption of this new guidance to have a material impact on our consolidated financial statements. With respect to the debt issuance costs associated with our August 2015 line-of-credit (see Note 15 of the Notes to Consolidated Financial Statements in this Form 10-K for information on this arrangement), we have applied the clarified guidance discussed above by deferring and amortizing the debt issuance costs associated with this line-of-credit over its term.

In April 2015, the FASB issued guidance governing a customer's accounting for fees paid in a cloud computing arrangement. Under the new guidance, if a cloud computing arrangement includes a software license, then the customer should account for the software license element of the arrangement consistent with the acquisition of other software licenses. If a cloud computing arrangement does not include a software license, the customer should account for the arrangement as a service contract. This new guidance is effective for us for our fiscal year commencing on October 1, 2016, and may be adopted either prospectively, or retrospectively, as of such date. Given that we have a limited number of cloud computing arrangements, we do not expect the adoption of this new guidance to have a material impact on our consolidated financial statements.

In June 2015, the FASB issued amended guidance related to technical corrections and improvements. This amended guidance: 1) includes amendments related to differences between the original guidance and the codification. 2) Provides guidance clarification and reference corrections. 3) Streamlines or simplifies the codification through minor structural changes to headings or minor edits of text to improve the usefulness and understandability of the codification. 4) Makes minor improvements to the guidance. The amendments that require transition guidance are effective for our fiscal year commencing on October 1, 2016 and early adoption is permitted. All other amendments will be effective upon issuance of the amended guidance. We are currently evaluating the impact, if any, the adoption of this new guidance will have on our consolidated financial statements.

In September 2015, the FASB issued guidance governing adjustments to the provisional amounts recognized at the acquisition date with a corresponding adjustment to goodwill. Such adjustments are required when new information is obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement amounts initially recognized or would have resulted in the recognition of additional assets and liabilities. This new guidance eliminates the requirement to retrospectively account for such adjustments. This new guidance is effective for our fiscal year commencing on October 1, 2016, and early adoption is permitted in certain circumstances. We do not expect the adoption of this new guidance to have a material impact on our consolidated financial statements. Where possible, we plan on adopting this simplifying guidance early. Given that this guidance applies to entity specific transactions and would only become relevant in certain circumstances, we are unable to estimate the impact, if any, this new guidance may have on our financial position.

Off-Balance Sheet arrangements

Information concerning our off-balance sheet arrangements is included in Note 27 of the Notes to Consolidated Financial Statements in this Form 10-K.

Effects of inflation

Our assets are primarily liquid in nature and are not significantly affected by inflation. However, the rate of inflation affects our expenses, including employee compensation, communications and occupancy, which may not be readily recoverable through charges for services we provide to our clients.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

RISK MANAGEMENT

Risks are an inherent part of our business and activities. Management of these risks is critical to our fiscal soundness and profitability. Our risk management processes are multi-faceted and require communication, judgment and knowledge of financial products and markets. We have a formal Enterprise Risk Management ("ERM") program to assess and review aggregate risks across the firm. Our management takes an active role in the ERM process which requires specific administrative and business functions to participate in the identification, assessment, monitoring and control of various risks. The results of this process are extensively documented and reported to executive management and the RJF Audit and Risk Committee of the Board of Directors.

The principal risks involved in our business activities are market, credit, liquidity, operational, and regulatory and legal.

Market risk

Market risk is our risk of loss resulting from changes in market prices of our inventory, hedge, interest-rate derivative and investment positions. We have exposure to market risk primarily through our broker-dealer trading operations and, to a lesser extent, through our banking operations. Our broker-dealer subsidiaries, primarily RJ&A, trade taxable and tax-exempt debt obligations and act as an active market maker in over-the-counter equity securities. In connection with these activities, we maintain inventories in order to ensure availability of securities and to facilitate client transactions. RJ Bank holds investments in MBS, residential mortgage-backed securities, CMOs and equity securities within its available for sale securities portfolio, and also from time-to-time may hold SBA loan securitizations not yet transferred. Additionally, we hold certain ARS in a non-broker-dealer subsidiary of RJF.

See Notes 2, 5, 6 and 7 of the Notes to Consolidated Financial Statements in this Form 10-K for fair value and other information regarding our trading inventories and available for sale securities.

Changes in value of our trading inventory may result from fluctuations in interest rates, obligor creditworthiness equity prices, macroeconomic factors, risk aversion, investor expectations, asset liquidity, and dynamic relationships among these factors. We manage our trading inventory by product type and have established trading divisions with responsibility for particular product types. Our primary method of controlling risk in our trading inventory is through the establishment and monitoring of risk-based limits and limits on the dollar amount of securities positions held overnight in inventory. A hierarchy of limits exists at levels including firm, division, asset type (organized as trading desks, e.g., for OTC equities, corporate bonds, municipal bonds) asset sub-type (e.g. below-investment grade positions), and individual trader. Position limits in trading inventory accounts are monitored on a daily basis. Consolidated position and exposure reports are prepared and distributed daily to senior management. Trading positions are carefully monitored for potential limit violations. Management likewise monitors inventory levels and trading results, as well as inventory aging, pricing, concentration and securities ratings. For our derivatives positions, which are composed primarily of interest rate swaps but include futures contracts and forward foreign exchange contracts, we monitor daily their exposure in our derivatives subsidiary against established limits with respect to a number of factors, including interest rate, spread, ratio, basis, and volatility risk. These derivative exposures are monitored both on a total portfolio basis and separately for selected maturity periods.

In the normal course of business, we enter into underwriting commitments. RJ&A and RJ Ltd., as a lead, co-lead or syndicate member in the underwriting deal, may be subject to market risk on any unsold shares issued in the offering to which we are committed. Risk exposure is controlled by limiting participation, the deal size or through the syndication process.

Interest rate risk

Trading activities

We are exposed to interest rate risk as a result of our trading inventories (primarily comprised of fixed income instruments) in our Capital Markets segment, as well as our RJ Bank operations.

We actively manage the interest rate risk arising from our fixed income trading securities through the use of hedging techniques that involve U.S. Treasury securities and futures contracts, liquid spread products, and swaps.

We monitor daily, the Value-at-Risk ("VaR") for all of our trading portfolios. VaR is an appropriate statistical technique for estimating potential losses in trading portfolios due to typical adverse market movements over a specified time horizon with a suitable confidence level.

We apply the Fed's Market Risk Rule ("MRR") for the purpose of calculating our capital ratios. The MRR, also known as the "Risk-Based Capital Guidelines: Market Risk" rule released by the Fed, OCC and FDIC, requires us to calculate VaR numbers for all of our trading portfolios, including fixed income, equity, foreign exchange, and derivative instruments.

To calculate VaR, we use historical simulation. This approach assumes that historical changes in market conditions, such as in interest rates and equity prices, are representative of future changes. The simulation is based on daily market data for the previous twelve months. VaR is reported at a 99% confidence level for a one-day time horizon. Assuming that future market conditions change as they have in the past twelve months, we would expect to incur losses greater than those predicted by our one-day VaR estimates about once every 100 trading days, or about three times per year on average. For regulatory capital calculation purposes, we also report VaR numbers for a ten-day time horizon.

We continually monitor our VaR computational model to ensure its calculated results accurately portray risks within our trading portfolios. During the quarter ended March 31, 2015, after independent validation and regulatory approval, we implemented a new VaR model for measuring the market risk of all of our trading portfolios. In comparing VaR results from the old model versus the new one, all else equal, the VaR from the new model is higher than that from the old model because the new model incorporates an expanded set of risk factors, including those captured previously within stress testing.

The Fed's MRR requires us to perform daily back testing procedures of our VaR model, whereby we compare each day's projected VaR to its regulatory-defined daily trading losses, which excludes fees, commissions, reserves, net interest income, and intraday trading. Based on these daily "ex ante" versus "ex post" comparisons, we verify that the number of times that regulatory-defined daily trading losses exceed VaR is consistent with our expectations at a 99% confidence level. During the twelve months ended September 30, 2015, our regulatory-defined daily loss in our trading portfolios exceeded our predicted VaR four times.

The following table sets forth the high, low, and daily average VaR for all of our trading portfolios, including fixed income, equity, and derivative instruments, as of the period and dates indicated:

	Year ended September 30, 2015			VaR at September 30,	
	High	Low	Daily Average	2015	2014
	(in thousands)				
Daily VaR	$ 2,040	$ 253	$ 946	$ 1,173	$ 565 [(1)]

(1) As more fully discussed above, VaR at this date was computed under a previous historical computational model.

The modeling of the risk characteristics of trading positions involves a number of assumptions and approximations. While management believes that its assumptions and approximations are reasonable, there is no uniform industry methodology for estimating VaR, and different assumptions or approximations could produce materially different VaR estimates. As a result, VaR statistics are more reliable when used as indicators of risk levels and trends within a firm than as a basis for inferring differences in risk-taking across firms.

Separately, RJF provides additional market risk disclosures to comply with the MRR. The results of the application of this market risk capital rule are available on our website under "Our Company - Financial Reports - Market Risk Rule Disclosure" within 45 days after the end of each of our reporting periods (the information on our website is not incorporated by reference into this report).

Should markets suddenly become more volatile, actual trading losses may exceed VaR results presented on a single day and might accumulate over a longer time horizon, such as a number of consecutive trading days. Accordingly, management applies additional controls including position limits, a daily review of trading results, review of the status of aged inventory, independent controls on pricing, monitoring of concentration risk, and review of issuer ratings, as well as stress testing. We utilize stress testing to complement our VaR analysis so as to measure risk under historical and hypothetical adverse scenarios. During volatile markets we may choose to pare our trading inventories to reduce risk.

As a part of our fixed income public finance operations, RJ&A enters into forward commitments to purchase GNMA or FNMA MBS which are issued on behalf of various state and local HFA (see further description of these activities in the Item 1 Business, Capital Markets section in this report). These activities result in exposure to interest rate risk. In order to hedge the interest rate risk to which RJ&A would otherwise be exposed between the date of the commitment and the date of sale of the MBS, RJ&A enters into to be announced ("TBA") security contracts with investors for generic MBS securities at specific rates and prices to be delivered on settlement dates in the future. See Notes 2 and 21 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding these activities and the related balances outstanding as of September 30, 2015.

See Note 18 of the Notes to Consolidated Financial Statements in this Form 10-K for additional information regarding our derivative financial instruments.

Banking operations

RJ Bank maintains an earning asset portfolio that is comprised of C&I loans, tax-exempt loans, SBL, and commercial and residential real estate loans, as well as MBS, CMO's, SBA loan securitizations and a trading portfolio of corporate loans. Those earning assets are primarily funded by RJ Bank's obligations to customers (i.e. customer deposits). Based on its current earning asset portfolio, RJ Bank is subject to interest rate risk. The current economic environment has led to an extended period of low market interest rates. As a result, the majority of RJ Bank's adjustable rate assets and liabilities have experienced a reduction in interest rate yields and costs that reflect these very low market interest rates. During the year, RJ Bank has focused its interest rate risk analysis on the risk of market interest rates rising. RJ Bank analyzes interest rate risk based on forecasted net interest income, which is the net amount of interest received and interest paid, and the net portfolio valuation, both in a range of interest rate scenarios.

One of the objectives of RJ Bank's Asset Liability Management Committee is to manage the sensitivity of net interest income to changes in market interest rates. This committee uses several measures to monitor and limit RJ Bank's interest rate risk including scenario analysis and economic value of equity ("EVE").

Simulation models and estimation techniques are used to assess the sensitivity of the net interest income stream to movements in interest rates. Assumptions about consumer behavior play an important role in these calculations; this is particularly relevant for loans such as mortgages where the client has the right, but not the obligation, to repay before the scheduled maturity. To ensure that RJ Bank is within its limits established for net interest income, a sensitivity analysis of net interest income to interest rate conditions is estimated for a variety of scenarios. RJ Bank utilizes an internally developed asset/liability model using standard industry software to analyze the available data. The model estimates changes in net interest income by calculating interest income and interest expense from existing assets and liabilities using current repricing, prepayment, and volume assumptions. Various interest rate scenarios are modeled in order to determine the effect those scenarios may have on net interest income.

In February 2015, we implemented a hedging strategy using interest rate swaps as a result of RJ Bank's asset and liability management process described above. For further information regarding this risk management objective, see the discussion of the RJ Bank Interest Hedges in the derivative contracts section of Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K, and additional information in Note 18 of the Notes to Consolidated Financial Statements in this Form 10-K.

The following table is an analysis of RJ Bank's estimated net interest income over a 12 month period based on instantaneous shifts in interest rates (expressed in basis points) using RJ Bank's own internal asset/liability model:

Instantaneous changes in rate	Net interest income	Projected change in net interest income
	($ in thousands)	
+300	$476,122	7.52%
+200	$474,199	7.08%
+100	$474,138	7.07%
0	$442,836	—
-25	$427,767	(3.40)%

Refer to the Net Interest section of MD&A, in Item 7 of this report, for a discussion and estimate of the potential favorable impact on RJF's pre-tax income that could result from a 100 basis point instantaneous rise in short-term interest rates applicable to RJF's entire operations.

The EVE analysis is a point in time analysis of current interest-earning assets and interest-bearing liabilities, which incorporates all cash flows over their estimated remaining lives, discounted at current rates. The EVE approach is based on a static balance sheet and provides an indicator of future earnings and capital levels as the changes in EVE indicate the anticipated change in the value of future cash flows. RJ Bank monitors sensitivity to changes in EVE utilizing board approved limits. These limits set a risk tolerance to changing interest rates and assist RJ Bank in determining strategies for mitigating this risk as it approaches these limits.

The following table presents an analysis of RJ Bank's estimated EVE sensitivity based on instantaneous shifts in interest rates (expressed in basis points) using RJ Bank's own internal asset/liability model:

Instantaneous changes in rate	Projected change in EVE
+300	(5.85)%
+200	(1.76)%
+100	3.45%
0	—
-25	(3.40)%

The following table shows the contractual maturities of RJ Bank's loan portfolio at September 30, 2015, including contractual principal repayments. This table does not, however, include any estimates of prepayments. These prepayments could shorten the average loan lives and cause the actual timing of the loan repayments to differ significantly from those shown in the following table:

	Due in			
	One year or less	>One year – five years	> 5 years	Total[1]
	(in thousands)			
Loans held for sale	$ —	$ —	$ 108,872	$ 108,872
Loans held for investment:				
C&I loans	112,772	3,866,299	2,948,947	6,928,018
CRE construction loans	35,634	80,211	46,511	162,356
CRE loans	192,588	1,543,623	317,943	2,054,154
Tax-exempt loans	—	—	484,537	484,537
Residential mortgage loans	2,365	17,669	1,942,580	1,962,614
SBL	1,475,361	6,103	40	1,481,504
Total loans held for investment	1,818,720	5,513,905	5,740,558	13,073,183
Total loans	$ 1,818,720	$ 5,513,905	$ 5,849,430	$ 13,182,055

(1) Excludes any net unearned income and deferred expenses.

The following table shows the distribution of the recorded investment of those RJ Bank loans that mature in more than one year between fixed and adjustable interest rate loans at September 30, 2015:

	Interest rate type		
	Fixed	Adjustable	Total[1]
		(in thousands)	
Loans held for sale	$ 4,186	$ 104,686	$ 108,872
Loans held for investment:			
C&I loans	—	6,815,246	6,815,246
CRE construction loans	—	126,722	126,722
CRE loans	85,941	1,775,625	1,861,566
Tax-exempt loans	484,537	—	484,537
Residential mortgage loans	235,076	1,725,173 [2]	1,960,249
SBL	6,044	99	6,143
Total loans held for investment	811,598	10,442,865	11,254,463
Total loans	$ 815,784	$ 10,547,551	$ 11,363,335

(1) Excludes any net unearned income and deferred expenses.

(2) See the discussion within the "Risk Monitoring process" section in Item 7A of this report for additional information regarding RJ Bank's interest-only loan portfolio and related repricing schedule.

Equity price risk

We are exposed to equity price risk as a consequence of making markets in equity securities and the investment activities of RJ&A and RJ Ltd. RJ&A's broker-dealer activities are primarily client-driven, with the objective of meeting clients' needs while earning a trading profit to compensate for the risk associated with carrying inventory. We attempt to reduce the risk of loss inherent in our inventory of equity securities by monitoring those security positions constantly throughout each day and establishing position limits.

Foreign exchange risk

We are subject to foreign exchange risk due to our investments in foreign subsidiaries as well as transactions denominated in a currency other than the U.S. dollar.

RJ Bank has an investment in a Canadian subsidiary, resulting in foreign exchange risk. To mitigate this risk, RJ Bank utilizes short-term, forward foreign exchange contracts. These derivative agreements are primarily accounted for as net investment hedges in the consolidated financial statements. See Notes 2 and 18 of the Notes to Consolidated Financial Statements in this Form 10-K for further information regarding these derivative contracts.

We have foreign exchange risk in our investment in RJ Ltd., of approximately CDN $261 million at September 30, 2015, which is not hedged. Foreign exchange gains/losses related to this investment are primarily reflected in other comprehensive (loss) income ("OCI") on our Consolidated Statements of Income and Comprehensive Income, see Note 22 of the Notes to Consolidated Financial Statements in this Form 10-K for further information regarding all of our components of OCI.

We also have foreign exchange risk associated with our investments in subsidiaries located in the United Kingdom, France, and South America. These investments are not hedged and we do not believe we have material foreign exchange risk either individually, or in the aggregate, pertaining to these subsidiaries.

In addition, we are subject to foreign exchange risk due to our holdings of cash and certain other assets and liabilities, which result from transactions denominated in a currency other than the U.S. dollar. These foreign currency transactions are not hedged and the related gains/losses arising therefrom are reflected in other revenue on our Consolidated Statements of Income and Comprehensive Income.

Credit risk

Credit risk is the risk of loss due to adverse changes in a borrower's, issuer's or counterparty's ability to meet its financial obligations under contractual or agreed upon terms. The nature and amount of credit risk depends on the type of transaction, the structure and duration of that transaction, and the parties involved. Credit risk is an integral component of the profit assessment of lending and other financing activities.

We are engaged in various trading and brokerage activities whose counterparties primarily include broker-dealers, banks and other financial institutions. We are exposed to risk that these counterparties may not fulfill their obligations. The risk of default depends on the creditworthiness of the counterparty and/or the issuer of the instrument. We manage this risk by imposing and monitoring individual and aggregate position limits within each business segment for each counterparty, conducting regular credit reviews of financial counterparties, reviewing security and loan concentrations, holding and marking to market collateral on certain transactions and conducting business through clearing organizations, which may guarantee performance.

Our client activities involve the execution, settlement, and financing of various transactions on behalf of our clients. Client activities are transacted on either a cash or margin basis. Credit exposure results from client margin accounts, which are monitored daily and are collateralized. We monitor exposure to industry sectors and individual securities and perform analysis on a regular basis in connection with our margin lending activities. We adjust our margin requirements if we believe our risk exposure is not appropriate based on market conditions. In addition, when clients execute a purchase, we are at some risk that the client will renege on the trade. If this occurs, we may have to liquidate the position at a loss. However, most private clients have available funds in the account before the trade is executed.

We offer loans to financial advisors and certain key revenue producers, primarily for recruiting, transitional cost assistance, and retention purposes. We have credit risk and may incur a loss in the event that such borrower declares bankruptcy or is no longer affiliated with us. Historically, such losses have not been significant due to our strong advisor retention and successful collection efforts.

We are subject to concentration risk if we hold large positions, extend large loans to, or have large commitments with a single counterparty, borrower, or group of similar counterparties or borrowers (e.g. in the same industry). Securities purchased under agreements to resell consist primarily of securities issued by the U.S. government or its agencies. Receivables from and payables to clients and stock borrow and lending activities are conducted with a large number of clients and counterparties and potential concentration is carefully monitored. Inventory and investment positions taken and commitments made, including underwritings, may involve exposure to individual issuers and businesses. We seek to limit this risk through careful review of the underlying business and the use of limits established by senior management, taking into consideration factors including the financial strength of the counterparty, the size of the position or commitment, the expected duration of the position or commitment and other positions or commitments outstanding.

The valuation of the non-agency CMOs held as available for sale securities by RJ Bank is impacted by the credit risk associated with the underlying residential loans. Underlying loan characteristics associated with this risk are considered in valuing these securities. ARS held by a non-broker-dealer subsidiary of RJF is impacted by the credit worthiness of the ARS issuer. See Note 7 of the Notes to Consolidated Financial Statements in this Form 10-K for more information.

RJ Bank has substantial corporate, SBL and residential mortgage loan portfolios. A significant downturn in the overall economy, deterioration in real estate values or a significant issue within any sector or sectors where RJ Bank has a concentration could result in large provisions for loan losses and/or charge-offs.

RJ Bank's strategy for credit risk management includes well-defined credit policies, uniform underwriting criteria, and ongoing risk monitoring and review processes for all corporate, residential and SBL credit exposures. The strategy also includes diversification on a geographic, industry and customer level, regular credit examinations and management reviews of all corporate loans and individual delinquent residential loans. The credit risk management process also includes an annual independent review of the credit risk monitoring process that performs assessments of compliance with corporate and residential mortgage credit policies, risk ratings, and other critical credit information. RJ Bank seeks to identify potential problem loans early, record any necessary risk rating changes and charge-offs promptly and maintain appropriate reserve levels for probable incurred loan losses. RJ Bank utilizes a comprehensive credit risk rating system to measure the credit quality of individual corporate loans and related unfunded lending commitments, including the probability of default and/or loss given default of each corporate loan and commitment outstanding. For its SBL and residential mortgage loans, RJ Bank utilizes the credit risk rating system used by bank regulators in measuring the credit quality of each homogeneous class of loans.

RJ Bank's allowance for loan losses methodology are described in the Critical Accounting Estimates section of this Item 7 and Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K. As RJ Bank's loan portfolio is segregated into six portfolio segments, likewise, the allowance for loan losses is segregated by these same segments. The risk characteristics relevant to each portfolio segment are as follows:

C&I: Loans in this segment are made to businesses and are generally secured by all assets of the business. Repayment is expected from the cash flows of the respective business. Unfavorable economic and political conditions, including the resultant decrease in consumer or business spending, may have an adverse effect on the credit quality of loans in this segment.

CRE: Loans in this segment are primarily secured by income-producing properties. For owner-occupied properties, the cash flows are derived from the operations of the business, and the underlying cash flows may be adversely affected by the deterioration in the financial condition of the operating business. The underlying cash flows generated by non-owner-occupied properties may be adversely affected by increased vacancy and rental rates, which are monitored on a quarterly basis. Adverse developments in either of these areas may have a negative effect on the credit quality of loans in this segment.

CRE construction: Loans in this segment have similar risk characteristics of loans in the CRE segment as described above. In addition, project budget overruns and performance variables related to the contractor and subcontractors may affect the credit quality of loans in this segment. With respect to commercial construction of residential developments, there is also the risk that the builder has a geographical concentration of developments. Adverse developments in all of these areas may significantly affect the credit quality of the loans in this segment.

Tax-exempt: Loans in this segment are made to governmental and nonprofit entities and are generally secured by a pledge of revenue, and in some cases, by a security interest in or a mortgage on the asset being financed. For loans to governmental entities, repayment is expected from a pledge of certain revenues or taxes. For nonprofit entities, repayment is expected from revenues which may include fundraising proceeds. These loans are subject to demographic risk therefore, much of the credit assessment of tax-exempt loans is driven by the entity's revenue base and general economic environment. Adverse developments in either of these areas may have a negative effect on the credit quality of loans in this segment.

Residential mortgage (includes home equity loans/lines): All of RJ Bank's residential mortgage loans adhere to stringent underwriting parameters pertaining to credit score and credit history, debt-to-income ratio of borrower, LTV, and combined LTV (including second mortgage/home equity loans). RJ Bank does not originate or purchase option adjustable rate mortgage ("ARM") loans with negative amortization, reverse mortgages, or other types of non-traditional loan products. Loans with deeply discounted teaser rates are not originated or purchased. All loans in this segment are collateralized by residential real estate and repayment is primarily dependent on the credit quality of the individual borrower. A decline in the strength of the economy, particularly unemployment rates and housing prices, among other factors, could have a significant effect on the credit quality of loans in this segment.

SBL: Loans in this segment are secured by marketable securities at advance rates consistent with industry standards. These loans are monitored daily for adherence to LTV guidelines and when a loan exceeds the required LTV, a collateral call is issued. Past due loans are minimal as any past due amounts result in a notice to the client for payment or the potential sale of securities which will bring the loan current and may bring the loan within the prescribed LTV guidelines.

In evaluating credit risk, RJ Bank considers trends in loan performance, the level of allowance coverage relative to similar banking institutions, industry or customer concentrations, the loan portfolio composition and macroeconomic factors. During fiscal year 2015 corporate profit levels continued to improve but have remained weak as compared to historic levels. Unemployment rates have declined. Retail sales continue to be sluggish and credit quality trends, while improved in some sectors, remain somewhat tenuous. The volatility in residential home values in certain geographies has continued to have an impact on residential mortgage loan performance. All of these factors have a potentially negative impact on loan performance and net charge-offs. However, during fiscal year 2015, corporate borrowers have continued to access the markets for new equity and debt.

Several factors were taken into consideration in evaluating the allowance for loan losses at September 30, 2015, including the risk profile of the portfolios, net charge-offs during the period, the level of nonperforming loans, and delinquency ratios. RJ Bank also considered the uncertainty related to certain industry sectors and the extent of credit exposure to specific borrowers within the portfolio. RJ Bank further stratified the performing residential mortgage loan portfolio based upon updated LTV estimates with higher reserve percentages allocated to the higher LTV loans. Finally, RJ Bank considered current economic conditions that might impact the portfolio. RJ Bank determined the allowance that was required for specific loan grades based on relative risk characteristics of the loan portfolio. On an ongoing basis, RJ Bank evaluates its methods for determining the allowance for each class of loans and makes enhancements it considers appropriate.

Changes in the allowance for loan losses of RJ Bank are as follows:

	For the year ended September 30,				
	2015	2014	2013	2012	2011
	($ in thousands)				
Allowance for loan losses, beginning of year	$ 147,574	$ 136,501	$ 147,541	$ 145,744	$ 147,084
Provision for loan losses	23,570	13,565	2,565	25,894	33,655
Charge-offs:					
C&I loans	(1,191)	(1,845)	(813)	(10,486)	(458)
CRE loans	—	(16)	(9,599)	(2,000)	(15,204)
Residential mortgage loans	(1,667)	(2,015)	(6,771)	(15,270)	(22,501)
SBL	—	—	(254)	(96)	(255)
Total charge-offs	(2,858)	(3,876)	(17,437)	(27,852)	(38,418)
Recoveries:					
C&I loans	611	16	117	—	—
CRE loans	3,773	80	1,680	1,074	1,670
Residential mortgage loans	1,206	1,998	2,299	2,543	1,744
SBL	25	35	32	21	9
Total recoveries	5,615	2,129	4,128	3,638	3,423
Net recoveries (charge-offs)	2,757	(1,747)	(13,309)	(24,214)	(34,995)
Foreign exchange translation adjustment	(1,644)	(745)	(296)	117	—
Allowance for loan losses, end of year	$ 172,257	$ 147,574	$ 136,501	$ 147,541	$ 145,744
Allowance for loan losses to total bank loans outstanding	1.32%	1.33%	1.52%	1.81%	2.18%

The primary factors impacting the provision for loan losses during the year were significant loan growth offset by the favorable impact of generally improved credit characteristics of the loan portfolio. Although we incurred substantial provision for loan losses associated with loan growth in both fiscal years 2015 and 2014, the majority of the year-over-year increase in the provision for loan losses resulted from the prior year benefiting to a greater extent than the current year, from improved credit characteristics of the loan portfolio. The allowance for loan losses of $172.3 million as of September 30, 2015 increased $24.7 million from the prior year due to additional loan portfolio growth, yet reflected the relatively stable credit characteristics of the loan portfolio as the allowance for loan losses to total bank loans outstanding declined to 1.32% at September 30, 2015 from 1.33% at September 30, 2014.

The current year's provision for loan loss also includes $1.6 million resulting from the impact of the banking regulators' annual Shared National Credit ("SNC") exam. The SNC exam included a review which represented 85% of the total held for investment corporate loan portfolio at such time. The prior year's provision for loan losses also included $1.6 million resulting from the impact of the respective period's annual SNC exam. The prior year exam included a review which represented 83% of the total held for investment corporate loan portfolio at such time (see the "corporate loans" discussion within the Risk Monitoring Process section of Item 7A in this report, for additional information regarding how the annual SNC exam impacts RJ Bank's credit review process).

The following table presents net loan (charge-offs)/recoveries and the percentage of net loan (charge-offs)/recoveries to the average outstanding loan balances by loan portfolio segment:

	For the year ended September 30,					
	2015		2014		2013	
	Net loan (charge-off)/ recovery amount	% of avg. outstanding loans	Net loan (charge-off)/ recovery amount	% of avg. outstanding loans	Net loan (charge-off) amount	% of avg. outstanding loans
	($ in thousands)					
C&I loans	$ (580)	0.01%	$ (1,829)	0.03%	$ (696)	0.01%
CRE loans	3,773	0.22%	64	—	(7,919)	0.73%
Residential mortgage loans	(461)	0.02%	(17)	—	(4,472)	0.26%
SBL	25	—	35	—	(222)	0.05%
Total	$ 2,757	0.02%	$ (1,747)	0.02%	$ (13,309)	0.15%

	For the year ended September 30,			
	2012		2011	
	Net loan (charge-off) amount	% of avg. outstanding loans	Net loan (charge-off) amount	% of avg. outstanding loans
	($ in thousands)			
C&I loans	$ (10,486)	0.22%	$ (458)	0.01%
CRE loans	(926)	0.11%	(13,534)	1.70%
Residential mortgage loans	(12,727)	0.73%	(20,757)	1.12%
SBL	(75)	0.08%	(246)	3.55%
Total	$ (24,214)	0.32%	$ (34,995)	0.56%

The level of charge-off activity is a factor that is considered in evaluating the potential for and severity of future credit losses. Total net recoveries during fiscal year 2015 compared to total net charge-offs during the prior year reflect improved credit characteristics. Charge-offs declined in both the C&I and CRE loan portfolios.

The table below presents nonperforming loans and total allowance for loan losses:

	September 30,					
	2015		2014		2013	
	Nonperforming loan balance	Allowance for loan losses balance	Nonperforming loan balance	Allowance for loan losses balance	Nonperforming loan balance	Allowance for loan losses balance
	($ in thousands)					
Loans held for investment:						
C&I loans	$ —	$ (117,623)	$ —	$ (103,179)	$ 89	$ (95,994)
CRE construction loans	—	(2,707)	—	(1,594)	—	(1,000)
CRE loans	4,796	(30,486)	18,876	(25,022)	25,512	(19,266)
Tax-exempt loans	—	(5,949)	—	(1,380)	—	—
Residential mortgage loans	47,823	(12,526)	61,789	(14,350)	76,357	(19,126)
SBL	—	(2,966)	—	(2,049)	—	(1,115)
Total	$ 52,619	$ (172,257)	$ 80,665	$ (147,574)	$ 101,958	$ (136,501)
Total nonperforming loans as a % of RJ Bank total loans	0.40%		0.73%		1.14%	

	September 30,			
	2012		2011	
	Nonperforming loan balance	Allowance for loan losses balance	Nonperforming loan balance	Allowance for loan losses balance
	($ in thousands)			
Loans held for sale	$ —	$ —	$ —	$ (5)
Loans held for investment:				
C&I loans	19,517	(92,409)	25,685	(81,267)
CRE construction loans	—	(739)	—	(490)
CRE loans	8,404	(27,546)	15,842	(30,752)
Residential mortgage loans	78,739	(26,138)	91,796	(33,210)
SBL	—	(709)	—	(20)
Total	$ 106,660	$ (147,541)	$ 133,323	$ (145,744)
Total nonperforming loans as a % of RJ Bank total loans	1.31%		1.99%	

The level of nonperforming loans is another indicator of potential future credit losses. The amount of nonperforming loans decreased 35% during the year ended September 30, 2015. This decrease was due to a $14 million decrease in nonperforming residential mortgage loans and a $14 million decrease in nonperforming CRE loans. Included in nonperforming residential mortgage loans are $39 million in loans for which $21 million in charge-offs were previously recorded, resulting in less exposure within the remaining balance.

The nonperfoming loans above excludes $15 million, $14 million, $10 million, $13 million, and $10 million as of September 30, 2015, 2014, 2013, 2012 and 2011 respectively, of residential troubled debt restructurings ("TDR") which were returned to accrual status in accordance with our policy.

Loan underwriting policies

A component of RJ Bank's credit risk management strategy is conservative, well-defined policies and procedures. RJ Bank's underwriting policies for the major types of loans are:

SBL and residential mortgage loan portfolio

RJ Bank's residential mortgage loan portfolio consists of first mortgage loans originated by RJ Bank via referrals from our PCG financial advisors and the general public as well as first mortgage loans purchased by RJ Bank. All of RJ Bank's residential mortgage loans adhere to strict underwriting parameters pertaining to credit score and credit history, debt-to-income ratio of the borrower, LTV, and combined LTV (including second mortgage/home equity loans). Approximately 90% of the residential loans

are fully documented loans and 98% of the residential mortgage loan portfolio is owner-occupant borrowers for their primary or second home residences, of which approximately 85% is for their primary residences. Approximately 15% of the first lien residential mortgage loans are ARMs with interest-only payments based on a fixed rate for an initial period of the loan, typically five to seven years, then become fully amortizing, subject to annual and lifetime interest rate caps. A high percentage of our originated 15 or 30-year fixed-rate mortgage loans are sold in the secondary market. RJ Bank's SBL portfolio is comprised of loans fully collateralized by client's marketable securities and represents 11% of RJ Bank's total loan portfolio. The underwriting policy for RJ Bank's SBL primarily includes a review of collateral, including LTV, with a limited review of repayment history.

While RJ Bank has chosen not to participate in any government-sponsored loan modification programs, its loan modification policy does take into consideration some of the programs' parameters and supports every effort to assist borrowers within the guidelines of safety and soundness. In general, RJ Bank considers the qualification terms outlined in the government-sponsored programs as well as the affordability test and other factors. RJ Bank retains flexibility to determine the appropriate modification structure and required documentation to support the borrower's current financial situation before approving a modification. Short sales are also used by RJ Bank to mitigate credit losses.

Corporate loan portfolio

RJ Bank's corporate loan portfolio is comprised of approximately 430 borrowers, the majority of which are underwritten, managed and reviewed at RJ Bank's corporate headquarters location, which facilitates close monitoring of the portfolio by credit risk personnel, relationship officers and senior RJ Bank executives. RJ Bank's corporate loan portfolio is diversified among a number of industries in both the U.S. and Canada and comprised of project finance real estate loans, commercial lines of credit and term loans, the majority of which are participations in SNC or other large syndicated loans, and tax-exempt loans. RJ Bank is sometimes involved in the syndication of the loan at inception and some of these loans have been purchased in the secondary trading markets. As the process for evaluating the SNCs or other large syndications is consistent with the process for the other C&I, CRE and CRE construction loans in the portfolio, there is no additional credit risk with syndicated loans as compared to any other C&I, CRE and CRE construction loan in RJ Bank's corporate loan portfolio. RJ Bank's tax-exempt loans are long-term loans to governmental and nonprofit entities. These loans generally have lower overall credit risk, but are subject to other risks that are not usually present with corporate clients including the risk associated with the constituency served by a local government and the risk in ensuring an obligation has appropriate tax treatment. The remainder of the corporate loan portfolio is comprised of smaller participations and direct loans. There are no subordinated loans or mezzanine financings in the corporate loan portfolio.

Regardless of the source, all corporate loans are independently underwritten to RJ Bank credit policies and are subject to loan committee approval, and credit quality is monitored on an on-going basis by RJ Bank's corporate lending staff. RJ Bank credit policies include criteria related to LTV limits based upon property type, single borrower loan limits, loan term and structure parameters (including guidance on leverage, debt service coverage ratios and debt repayment ability), industry concentration limits, secondary sources of repayment, municipality demographics, and other criteria. A large portion of RJ Bank's corporate loans are to borrowers in industries in which we have expertise, through coverage provided by our Capital Markets research analysts. More than half of RJ Bank's corporate borrowers are public companies. RJ Bank's corporate loans are generally secured by all assets of the borrower, in some instances are secured by mortgages on specific real estate, and with respect to tax-exempt loans, are generally secured by a pledge of revenue. In a limited number of transactions, loans in the portfolio are extended on an unsecured basis. In addition, all corporate loans are subject to RJ Bank's regulatory review.

Risk monitoring process

Another component of the credit risk strategy at RJ Bank is the ongoing risk monitoring and review processes for all residential, SBL and corporate credit exposures. There are various other factors included in these processes, depending on the loan portfolio.

SBL and residential mortgage loans

We track and review many factors to monitor credit risk in RJ Bank's SBL and residential mortgage loan portfolios. The qualitative factors include, but are not limited to: loan performance trends, loan product parameters and qualification requirements, borrower credit scores, occupancy (i.e., owner occupied, second home or investment property), level of documentation, loan purpose, geographic concentrations, average loan size, and loan policy exceptions. These qualitative measures, while considered and reviewed in establishing the allowance for loan losses, have not resulted in any material quantitative adjustments to RJ Bank's historical loss rates. In addition to historical loss rates, one other quantitative factor utilized for the performing residential mortgage loan portfolio is updated LTV ratios.

RJ Bank obtains the most recently available information (generally on a quarter lag) to estimate current LTV ratios on the individual loans in the performing residential mortgage loan portfolio. Current LTV ratios are estimated based on the initial

appraisal obtained at the time of origination, adjusted using relevant market indices for housing price changes that have occurred since origination. The value of the homes could vary from actual market values due to change in the condition of the underlying property, variations in housing price changes within current valuation indices and other factors.

The current average estimated LTV is approximately 55% for the total residential mortgage loan portfolio. Residential mortgage loans with estimated LTVs in excess of 100% represent less than 2% of the residential mortgage loan portfolio. Credit risk management utilizes this data in conjunction with delinquency statistics, loss experience and economic circumstances to establish appropriate allowance for loan losses for the residential mortgage loan portfolio, which is based upon an estimate for the probability of default and loss given default for each homogeneous class of loans.

The marketable collateral securing RJ Bank's SBL is monitored on a daily basis. Collateral adjustments are made by the borrower as necessary to ensure RJ Bank's loans are adequately secured, resulting in minimizing its credit risk. Our SBL portfolio has not experienced high levels of delinquencies to date. As of both September 30, 2015 and 2014, there were no delinquent SBL.

At September 30, 2015, loans over 30 days delinquent (including nonperforming loans) decreased to 1.69% of residential mortgage loans outstanding, compared to 2.34% over 30 days delinquent at September 30, 2014. Additionally, our September 30, 2015 percentage compares favorably to the national average for over 30 day delinquencies of 5.71% as most recently reported by the Fed. RJ Bank's significantly lower delinquency rate as compared to its peers is the result of both our uniform underwriting policies and the lack of non-traditional loan products and subprime loans.

The following table presents a summary of delinquent residential mortgage loans:

	Delinquent residential loans (amount)			Delinquent residential loans as a percentage of outstanding loan balances		
	30-89 days	90 days or more	Total[1]	30-89 days	90 days or more	Total[1]
	($ in thousands)					
September 30, 2015						
Residential mortgage loans:						
First mortgage loans	$ 4,849	$ 28,036	$ 32,885	0.25%	1.44%	1.69%
Home equity loans/lines	30	231	261	0.14%	1.09%	1.23%
Total residential mortgage loans	$ 4,879	$ 28,267	$ 33,146	0.25%	1.44%	1.69%
September 30, 2014						
Residential mortgage loans:						
First mortgage loans	$ 4,756	$ 35,803	$ 40,559	0.27%	2.07%	2.34%
Home equity loans/lines	57	398	455	0.28%	1.96%	2.24%
Total residential mortgage loans	$ 4,813	$ 36,201	$ 41,014	0.27%	2.06%	2.34%

(1) Comprised of loans which are two or more payments past due as well as loans in process of foreclosure.

To manage and limit credit losses, we maintain a rigorous process to manage our loan delinquencies. With all whole loans purchased generally on a servicing-retained basis and all originated first mortgages serviced by a third party, the primary collection effort resides with the servicer. RJ Bank personnel direct and actively monitor the servicers' efforts through extensive communications regarding individual loan status changes and requirements of timely and appropriate collection or property management actions and reporting, including management of third parties used in the collection process (appraisers, attorneys, etc.). Additionally, every residential mortgage loan over 60 days past due is reviewed by RJ Bank personnel monthly and documented in a written report detailing delinquency information, balances, collection status, appraised value, and other data points. RJ Bank senior management meets monthly to discuss the status, collection strategy and charge-off/write-down recommendations on every residential mortgage loan over 60 days past due. Updated collateral valuations are obtained for loans over 90 days past due and charge-offs are taken on individual loans based on these valuations.

Credit risk is also managed by diversifying the residential mortgage loan portfolio. The geographic concentrations (top five states) of RJ Bank's one-to-four family residential mortgage loans are as follows:

September 30, 2015		September 30, 2014 [1]	
($ outstanding as a % of RJ Bank total residential mortgage loans)			
20.5%	FL	22.5%	FL
19.6%	CA [2]	15.7%	CA [2]
5.9%	NY	6.9%	NY
5.8%	TX	5.2%	NJ
4.2%	NJ	4.7%	TX

(1) In the prior year, the loan concentrations were presented as a percentage of RJ Bank total assets. In order to enhance comparability with the current year, the percentage concentrations have been revised from those presented in the prior year to reflect the percentage of total residential mortgage loans outstanding at such time.

(2) The concentration ratio for the state of California excludes 4.7% for September 30, 2015 and 6.2% for September 30, 2014, for loans purchased from a large investment grade institution that have full repurchase recourse for any delinquent loans.

Loans where borrowers may be subject to payment increases include adjustable rate mortgage loans with terms that initially require payment of interest only. Payments may increase significantly when the interest-only period ends and the loan principal begins to amortize. At September 30, 2015 and 2014, these loans totaled $264 million and $307 million, respectively, or approximately 15% and 20% of the residential mortgage loan portfolio, respectively. At September 30, 2015, the balance of amortizing, former interest-only, loans totaled $302 million. The weighted average number of years before the remainder of the loans, which were still in their interest-only period at September 30, 2015, begins amortizing is 2.8 years. The outstanding balance of interest-only loans that based on their contractual terms are scheduled to reprice, are as follows:

	September 30, 2015
	(in thousands)
One year or less	$ 130,807
Over one year through two years	5,407
Over two years through three years	16,136
Over three years through four years	20,267
Over four years through five years	42,807
Over five years	48,223
Total outstanding residential interest-only loan balance	$ 263,647

A component of credit risk management for the residential portfolio is the LTV and borrower credit score at origination or purchase. The most recent LTV/FICO scores at origination of RJ Bank's residential first mortgage loan portfolio are as follows:

	September 30, 2015	September 30, 2014
Residential first mortgage loan weighted-average LTV/FICO	66%/757	66%/754

Corporate loans

Credit risk in RJ Bank's corporate loan portfolio is monitored on an individual loan basis for trends in borrower operating performance, payment history, credit ratings, collateral performance, loan covenant compliance, annual SNC exam results, municipality demographics, and other factors including industry performance and concentrations. As part of the credit review process the loan grade is reviewed at least quarterly to confirm the appropriate risk rating for each credit. The individual loan ratings resulting from the SNC exam are incorporated in RJ Bank's internal loan ratings when the ratings are received and if the SNC rating is lower on an individual loan than RJ Bank's internal rating, the loan is downgraded. While RJ Bank considers historical SNC exam results in its loan ratings methodology, differences between the SNC exam and internal ratings on individual loans typically arise due to subjectivity of the loan classification process. These differences may result in additional provision for loan losses in periods when SNC exam results are received. See Note 2 of the Notes to Consolidated Financial Statements in this Form 10-K, specifically the bank loans and allowances for losses section, for additional information on RJ Bank's allowance for loan loss policies. See the Credit Risk section in Item 7A of this report for additional information on RJ Bank's corporate loan portfolio, including the impact of the most recent SNC exam on the current year's provision for loan losses.

At September 30, 2015, other than loans classified as nonperforming, there was one government-guaranteed loan totaling $200 thousand that was delinquent greater than 30 days.

Credit risk is also managed by diversifying the corporate loan portfolio. RJ Bank's corporate loan portfolio does not contain a significant concentration in any single industry. The industry concentrations (top five categories) of RJ Bank's corporate loans are as follows:

September 30, 2015		September 30, 2014 [1]	
($ outstanding as a % of RJ Bank total corporate loans)			
5.8%	Retail real estate	5.9%	Pharmaceuticals
5.7%	Pharmaceuticals	5.5%	Office
5.5%	Consumer products and services	4.8%	Automotive/transportation
5.4%	Hospitality	4.8%	Retail real estate
4.5%	Automotive/transportation	4.6%	Hospitality

(1) In the prior year, the loan concentrations were presented as a percentage of RJ Bank total assets. In order to enhance comparability with the current year, the percentage concentrations have been revised from those presented in the prior year to reflect the percentage of total corporate loans outstanding at such time.

Liquidity risk

See the section entitled "Liquidity and capital resources" in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in this report for more information regarding our liquidity and how we manage liquidity risk.

Operational risk

Operational risk generally refers to the risk of loss resulting from our operations, including, but not limited to, business disruptions, improper or unauthorized execution and processing of transactions, deficiencies in our technology or financial operating systems and inadequacies or breaches in our control processes including cyber security incidents (see the section entitled "Our businesses depend on technology" in Item 1A, Risk Factors in this report for a discussion of certain cyber security risks). We operate different businesses in diverse markets and are reliant on the ability of our employees and systems to process a large number of transactions. These risks are less direct than credit and market risk, but managing them is critical, particularly in a rapidly changing environment with increasing transaction volumes and complexity. In the event of a breakdown or improper operation of systems or improper action by employees, we could suffer financial loss, regulatory sanctions and damage to our reputation. In order to mitigate and control operational risk, we have developed and continue to enhance specific policies and procedures that are designed to identify and manage operational risk at appropriate levels throughout the organization and within such departments as Accounting, Operations, Information Technology, Legal, Compliance, Risk Management and Internal Audit. These control mechanisms attempt to ensure that operational policies and procedures are being followed and that our various businesses are operating within established corporate policies and limits. Business continuity plans exist for critical systems, and redundancies are built into the systems as deemed appropriate.

We have established an Operational Risk Management Committee, which is chaired by our Chief Operating Officer and is comprised of senior managers, to review and address operational risks across our businesses. The committee establishes risk appetite levels for major operational risks, monitors operating unit performance for adherence to defined risk tolerances, and establishes policies for risk management at the enterprise level.

Regulatory and legal risk

We have comprehensive procedures addressing regulatory capital requirements, sales and trading practices, use of and safekeeping of client funds, extension of credit, collection activities, money laundering and record keeping. We have designated Anti-money Laundering Officers in each of our subsidiaries who monitor compliance with regulations adopted under the Bank Secrecy Act and the USA PATRIOT Act.

We act as an underwriter or selling group member in both equity and fixed income product offerings. Particularly when acting as lead or co-lead manager, we have financial and legal exposure. To manage this exposure, a committee of senior executives reviews proposed underwriting commitments to assess the quality of the offering and the adequacy of due diligence investigation.

A Compliance and Standards Committee comprised of senior executives meets monthly to consider policy issues. The committee reviews material client or customer complaints and litigation, as well as issues in operating departments, for the purpose

of identifying issues that present risk exposure to either us or our customers. The committee adopts policies to deal with these issues, which are then disseminated throughout our operations.

A Quality of Markets Committee meets regularly to monitor the best execution activities of our trading departments as they relate to customer orders. This committee is comprised of representatives from the OTC Trading, Listed Trading, Options, Municipal Trading, Taxable Trading, Compliance and Legal Departments and is under the direction of one of our senior officers. This committee reviews reports from the respective departments listed above and recommends action for improvement when necessary.

Our major business units have compliance departments that are responsible for regularly reviewing and revising compliance and supervisory procedures to conform to changes in applicable regulations.

Our banking activities are highly regulated and subject to impact from changes in banking laws and regulations, including unanticipated rulings. Present economic conditions have led to rapid introduction of significant regulatory programs or changes affecting consumer protection and disclosure requirements, financial reporting, and regulatory restructuring. Regulatory requirements including recent changes to consumer and mortgage lending regulations, as well as new regulatory or government programs, are closely monitored and acted upon to ensure a timely response. See further discussion of our risks associated with new regulations, including the Dodd-Frank Act, in Item 1A, “Risk Factors” within this report.

The nature of the periodic examinations of our operations by our various regulators, applicable to not only our banking activities but also to our broker-dealer operational activities, have been active, expanding in some respects as it pertains to the scope of their annual reviews, and reflective of a heightened level of scrutiny of the operations and activities of financial services entities. We continue to incur costs to support these reviews, and evaluate and implement changes in our processes and procedures to improve and continue to comply with all of the various regulations to which we are subject. Given this environment, we cannot predict the impact that the ultimate outcome resulting from the periodic examinations by one or more of our regulators could have on our future costs or results of operations.

Legal risk includes the risk of PCG client claims, the possibility of sizable adverse legal judgments, exposure to pre-Closing Date litigation matters of Morgan Keegan should Regions fail to honor its indemnification obligations (see Item 3 Legal Proceedings in this report and Note 21 of the Notes to Consolidated Financial Statements in this Form 10-K for further discussion of the Regions indemnification for such matters) and non-compliance with applicable legal and regulatory requirements. We are generally subject to extensive regulation in the different jurisdictions in which we conduct business. Regulatory oversight of the financial services industry has become increasingly demanding over the past several years and we, as well as others in the industry, have been directly affected by this increased regulatory scrutiny.

We have a number of outstanding claims resulting from, among other reasons, market conditions. While these claims may not be the result of any wrongdoing, we do, at a minimum, incur costs associated with investigating and defending against such claims. See further discussion of our accounting policy regarding such matters in the loss provisions arising from legal proceedings section of “Critical Accounting Estimates” contained within Item 7, “Management’s Discussion of Analysis of Financial Condition and Results of Operations” in this report and in Note 2 of our Notes to Consolidated Financial Statements within this Form 10-K.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders
Raymond James Financial, Inc.:

We have audited the accompanying consolidated statements of financial condition of Raymond James Financial, Inc. and subsidiaries (the "Company" or "Raymond James") as of September 30, 2015 and 2014, and the related consolidated statements of income and comprehensive income, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended September 30, 2015. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Raymond James as of September 30, 2015 and 2014, and the results of its operations and its cash flows for each of the years in the three-year period ended September 30, 2015, in conformity with U.S. generally accepted accounting principles.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Raymond James' internal control over financial reporting as of September 30, 2015, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated November 25, 2015 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

Tampa, Florida
November 25, 2015
Certified Public Accountants

RAYMOND JAMES FINANCIAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION

	September 30,	
	2015	2014
	(in thousands)	
Assets:		
Cash and cash equivalents	$ 2,601,006	$ 2,199,063
Assets segregated pursuant to regulations and other segregated assets	2,905,324	2,489,264
Securities purchased under agreements to resell and other collateralized financings	474,144	446,016
Financial instruments, at fair value:		
Trading instruments	690,551	679,393
Available for sale securities	513,730	562,289
Private equity investments	209,088	211,666
Other investments	248,751	215,751
Derivative instruments associated with offsetting matched book positions	389,457	323,337
Receivables:		
Brokerage clients, net	2,185,296	2,126,804
Stock borrowed	124,373	158,988
Bank loans, net	12,988,021	10,964,299
Brokers-dealers and clearing organizations	134,890	107,116
Loans to financial advisors, net	488,760	424,928
Other	514,000	544,180
Deposits with clearing organizations	207,488	150,457
Prepaid expenses and other assets	705,391	655,256
Investments in real estate partnerships held by consolidated variable interest entities	199,678	235,858
Property and equipment, net	255,875	245,401
Deferred income taxes, net	266,899	231,325
Goodwill and identifiable intangible assets, net	376,962	354,261
Total assets	$ 26,479,684	$ 23,325,652

(continued on next page)

See accompanying Notes to Consolidated Financial Statements.

RAYMOND JAMES FINANCIAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION
(continued from previous page)

	September 30,	
	2015	2014
	($ in thousands)	
Liabilities and equity:		
Trading instruments sold but not yet purchased, at fair value	$ 287,993	$ 238,400
Securities sold under agreements to repurchase	332,536	244,495
Derivative instruments associated with offsetting matched book positions, at fair value	389,457	323,337
Payables:		
Brokerage clients	4,671,073	3,956,104
Stock loaned	478,573	417,383
Bank deposits	11,919,881	10,028,924
Brokers-dealers and clearing organizations	164,054	216,530
Trade and other	729,245	763,235
Other borrowings	703,065	696,718
Accrued compensation, commissions and benefits	842,527	814,359
Loans payable of consolidated variable interest entities	25,960	43,877
Senior notes payable	1,149,222	1,149,034
Total liabilities	21,693,586	18,892,396
Commitments and contingencies (see Note 21)		
Equity		
Preferred stock; $.10 par value; authorized 10,000,000 shares; issued and outstanding -0- shares	—	—
Common stock; $.01 par value; authorized 350,000,000 shares; issued 149,283,682 at September 30, 2015 and 146,103,658 at September 30, 2014	1,491	1,444
Additional paid-in capital	1,344,779	1,239,046
Retained earnings	3,419,719	3,023,845
Treasury stock, at cost; 6,364,706 common shares at September 30, 2015 and 4,900,266 common shares at September 30, 2014	(203,455)	(121,211)
Accumulated other comprehensive loss	(40,503)	(1,888)
Total equity attributable to Raymond James Financial, Inc.	4,522,031	4,141,236
Noncontrolling interests	264,067	292,020
Total equity	4,786,098	4,433,256
Total liabilities and equity	$ 26,479,684	$ 23,325,652

See accompanying Notes to Consolidated Financial Statements.

RAYMOND JAMES FINANCIAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME AND COMPREHENSIVE INCOME

	Year ended September 30,		
	2015	2014	2013
	(in thousands, except per share amounts)		
Revenues:			
Securities commissions and fees	$ 3,443,038	$ 3,241,525	$ 3,007,711
Investment banking	323,660	340,821	288,251
Investment advisory fees	385,238	362,362	282,755
Interest	543,207	480,886	473,599
Account and service fees	457,913	407,707	363,531
Net trading profit	58,512	64,643	34,069
Other	96,596	67,516	145,882
Total revenues	5,308,164	4,965,460	4,595,798
Interest expense	(107,954)	(104,091)	(110,371)
Net revenues	5,200,210	4,861,369	4,485,427
Non-interest expenses:			
Compensation, commissions and benefits	3,525,378	3,312,635	3,054,027
Communications and information processing	266,396	252,694	257,366
Occupancy and equipment costs	163,229	161,683	157,449
Clearance and floor brokerage	42,748	39,875	40,253
Business development	158,966	139,672	124,387
Investment sub-advisory fees	59,569	52,412	37,112
Bank loan loss provision	23,570	13,565	2,565
Acquisition related expenses	—	—	73,454
Other	183,642	172,885	144,904
Total non-interest expenses	4,423,498	4,145,421	3,891,517
Income including noncontrolling interests and before provision for income taxes	776,712	715,948	593,910
Provision for income taxes	296,034	267,797	197,033
Net income including noncontrolling interests	480,678	448,151	396,877
Net (loss) income attributable to noncontrolling interests	(21,462)	(32,097)	29,723
Net income attributable to Raymond James Financial, Inc.	$ 502,140	$ 480,248	$ 367,154
Net income per common share – basic	$ 3.51	$ 3.41	$ 2.64
Net income per common share – diluted	$ 3.43	$ 3.32	$ 2.58
Weighted-average common shares outstanding – basic	142,548	139,935	137,732
Weighted-average common and common equivalent shares outstanding – diluted	145,939	143,589	140,541
Net income attributable to Raymond James Financial, Inc.	$ 502,140	$ 480,248	$ 367,154
Other comprehensive (loss) income, net of tax:[1]			
Unrealized (losses) gains on available for sale securities and non-credit portion of other-than-temporary impairment losses	(3,325)	6,021	15,042
Unrealized losses on currency translations, net of the impact of net investment hedges	(30,640)	(18,635)	(13,763)
Unrealized loss on cash flow hedges	(4,650)	—	—
Total comprehensive income	$ 463,525	$ 467,634	$ 368,433
Other-than-temporary impairment:			
Total other-than-temporary impairment, net	$ 2,489	$ 4,966	$ 3,755
Portion of pre-tax recoveries recognized in other comprehensive income	(2,489)	(4,993)	(4,391)
Net impairment losses recognized in other revenue	$ —	$ (27)	$ (636)

(1) All components of other comprehensive (loss) income, net of tax, are attributable to Raymond James Financial, Inc.

See accompanying Notes to Consolidated Financial Statements.

RAYMOND JAMES FINANCIAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

	Year ended September 30,		
	2015	2014	2013
	(in thousands, except per share amounts)		
Common stock, par value $.01 per share:			
Balance, beginning of year	$ 1,444	$ 1,429	$ 1,404
Share issuances	47	15	25
Balance, end of year	1,491	1,444	1,429
Additional paid-in capital:			
Balance, beginning of year	1,239,046	1,136,298	1,030,288
Employee stock purchases	23,847	20,234	18,319
Exercise of stock options and vesting of restricted stock units, net of forfeitures	21,351	8,780	30,640
Restricted stock, stock option and restricted stock unit expense	68,196	65,410	58,689
Excess tax benefit (reduction of prior tax benefits) from share-based payments	(8,115)	7,437	2,590
Purchase of additional equity interest in subsidiary	—	—	(4,531)
Other	454	887	303
Balance, end of year	1,344,779	1,239,046	1,136,298
Retained earnings:			
Balance, beginning of year	3,023,845	2,635,026	2,346,563
Net income attributable to Raymond James Financial, Inc.	502,140	480,248	367,154
Cash dividends declared	(106,271)	(91,133)	(78,208)
Other	5	(296)	(483)
Balance, end of year	3,419,719	3,023,845	2,635,026
Treasury stock:			
Balance, beginning of year	(121,211)	(120,555)	(118,762)
Purchases/surrenders	(64,780)	(2,173)	(8,214)
Exercise of stock options and vesting of restricted stock units, net of forfeitures	(17,464)	1,517	6,421
Balance, end of year	(203,455)	(121,211)	(120,555)
Accumulated other comprehensive loss: [1]			
Balance, beginning of year	(1,888)	10,726	9,447
Net change in unrealized losses on available for sale securities and non-credit portion of other-than-temporary impairment losses, net of tax	(3,325)	6,021	15,042
Net change in currency translations and net investment hedges, net of tax	(30,640)	(18,635)	(13,763)
Net change in cash flow hedges, net of tax	(4,650)	—	—
Balance, end of year	(40,503)	(1,888)	10,726
Total equity attributable to Raymond James Financial, Inc.	$ 4,522,031	$ 4,141,236	$ 3,662,924
Noncontrolling interests:			
Balance, beginning of year	$ 292,020	$ 335,413	$ 411,342
Net (loss) income attributable to noncontrolling interests	(21,462)	(32,097)	29,723
Capital contributions	19,530	22,565	30,052
Distributions	(23,570)	(27,093)	(148,871)
Consolidation of acquired entity	—	—	7,592 [2]
Derecognition resulting from acquisition of additional interests	—	—	4,126
Other	(2,451)	(6,768)	1,449
Balance, end of year	264,067	292,020	335,413
Total equity	$ 4,786,098	$ 4,433,256	$ 3,998,337

(1) All components of other comprehensive (loss) income are attributable to Raymond James Financial, Inc.

(2) On December 24, 2012, we acquired a 45% interest in ClariVest Asset Management, LLC, see Notes 1 and 3 for discussion.

See accompanying Notes to Consolidated Financial Statements.

RAYMOND JAMES FINANCIAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Cash flows from operating activities:			
Net income attributable to Raymond James Financial, Inc.	$ 502,140	$ 480,248	$ 367,154
Net (loss) income attributable to noncontrolling interests	(21,462)	(32,097)	29,723
Net income including noncontrolling interests	480,678	448,151	396,877
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:			
Depreciation and amortization	68,315	64,163	66,359
Deferred income taxes	(23,462)	(35,171)	(31,789)
Premium and discount amortization on available for sale securities and unrealized/realized gain on other investments	(42,544)	(22,804)	(80,631)
Provisions for loan losses, legal proceedings, bad debts and other accruals	29,277	26,414	13,944
Share-based compensation expense	71,488	69,609	61,862
Goodwill impairment expense	—	—	6,933
Other	54,527	35,343	32,013
Net change in:			
Assets segregated pursuant to regulations and other segregated assets	(416,060)	1,575,563	(1,280,628)
Securities purchased under agreements to resell and other collateralized financings, net of securities sold under agreements to repurchase	59,913	206,666	(191,207)
Stock loaned, net of stock borrowed	95,805	50,767	(15,731)
(Loans provided to) repayment of loans, to financial advisors, net	(81,617)	(34,067)	11,486
Brokerage client receivables and other accounts receivable, net	(56,394)	(159,562)	88,162
Trading instruments, net	40,656	(46,526)	252,101
Prepaid expenses and other assets	46,896	19,330	(66,448)
Brokerage client payables and other accounts payable	594,464	(1,800,957)	1,307,607
Accrued compensation, commissions and benefits	28,758	72,294	50,318
(Purchases and originations of loans held for sale)/proceeds from sales of securitizations and loans held for sale, net	(59,638)	45,811	41,167
Reduction of prior tax benefits/(excess tax benefits) from share-based payment arrangements	8,115	(7,437)	(2,590)
Net cash provided by operating activities	899,177	507,587	659,805
Cash flows from investing activities:			
Additions to property and equipment	(74,111)	(60,149)	(72,879)
Increase in bank loans, net	(2,200,861)	(2,391,311)	(1,063,301)
Proceeds from sales of loans held for investment	111,731	183,279	198,676
(Purchases or contributions to private equity or other investments)/proceeds from sales of or distributions received from private equity and other investments, net	(44,574)	42,832	229,136
Purchases of available for sale securities	(92,485)	(1,305)	(62,102)
Available for sale securities maturations, repayments and redemptions	69,757	104,407	117,435
Proceeds from sales of available for sale securities	84,785	49,937	4,793
Other investing activities, net of proceeds received	(22,201)	(24,454)	(3,732)
Net cash used in investing activities	$ (2,167,959)	$ (2,096,764)	$ (651,974)

(continued on next page)

See accompanying Notes to Consolidated Financial Statements.

RAYMOND JAMES FINANCIAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(continued from previous page)

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Cash flows from financing activities:			
(Repayments of)/proceeds from short-term borrowings, net	$ (34,700)	$ 70,624	$ 79,076
Proceeds from Federal Home Loan Bank advances and other borrowed funds	550,299	500,367	5,000
Repayments of Federal Home Loan Bank advances and other borrowed funds	(509,252)	(4,011)	(134,897)
Repayments of borrowings by consolidated variable interest entities which are real estate partnerships	(19,673)	(21,839)	(22,613)
Proceeds from capital contributed to and borrowings of consolidated variable interest entities which are real estate partnerships	110	726	23,485
Purchase of additional equity interest in subsidiary	—	—	(553)
Exercise of stock options and employee stock purchases	47,964	33,633	55,997
Increase in bank deposits	1,890,957	733,553	695,658
Purchases of treasury stock	(88,542)	(8,427)	(11,718)
Dividends on common stock	(103,143)	(88,102)	(76,593)
(Reduction of prior tax benefits)/excess tax benefits, from share-based payments	(8,115)	7,437	2,590
Net cash provided by financing activities	1,725,905	1,223,961	615,432
Currency adjustment:			
Effect of exchange rate changes on cash	(55,180)	(32,337)	(6,667)
Net increase (decrease) in cash and cash equivalents	401,943	(397,553)	616,596
Cash and cash equivalents at beginning of year	2,199,063	2,596,616	1,980,020
Cash and cash equivalents at end of year	$ 2,601,006	$ 2,199,063	$ 2,596,616
Supplemental disclosures of cash flow information:			
Cash paid for interest	$ 106,313	$ 101,090	$ 106,818
Cash paid for income taxes	$ 378,928	$ 319,279	$ 189,730
Non-cash transfers of loans to other real estate owned	$ 5,870	$ 6,213	$ 3,072

See accompanying Notes to Consolidated Financial Statements

RAYMOND JAMES FINANCIAL, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2015

NOTE 1 – INTRODUCTION AND BASIS OF PRESENTATION

Description of business

Raymond James Financial, Inc. ("RJF") is a financial holding company whose broker-dealer subsidiaries are engaged in various financial services businesses, including the underwriting, distribution, trading and brokerage of equity and debt securities and the sale of mutual funds and other investment products. In addition, other subsidiaries of RJF provide investment management services for retail and institutional clients, corporate and retail banking, and trust services. As used herein, the terms "we," "our" or "us" refer to RJF and/or one or more of its subsidiaries.

Basis of presentation

The accompanying consolidated financial statements include the accounts of RJF and its consolidated subsidiaries that are generally controlled through a majority voting interest. We consolidate all of our 100% owned subsidiaries. In addition we consolidate any variable interest entity ("VIE") in which we are the primary beneficiary. Additional information on these VIEs is provided in Note 2 in the section titled, "Evaluation of VIEs to determine whether consolidation is required" and in Note 11. When we do not have a controlling interest in an entity, but we exert significant influence over the entity, we apply the equity method of accounting. All material intercompany balances and transactions have been eliminated in consolidation.

Accounting estimates and assumptions

The preparation of consolidated financial statements in conformity with United States of America ("U.S.") generally accepted accounting principles ("GAAP") requires us to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates and could have a material impact on the consolidated financial statements.

Reporting period

Our quarters end on the last day of each calendar quarter.

Fiscal year 2015 acquisitions

On April 30, 2015, we completed our acquisition of Cougar Global Investments Limited ("Cougar"), an asset management firm based in Toronto, Canada. Cougar's global asset allocation strategies are now offered to our asset management clients worldwide through our our Eagle Asset Management, Inc. ("Eagle") subsidiary. See Note 3 for additional information.

On July 31, 2015, we completed our acquisition of The Producers Choice LLC ("TPC"), a Troy, Michigan based private insurance and annuity marketing organization. TPC brings additional life insurance and annuity specialists to our existing insurance product offerings. See Note 3 for additional information.

Fiscal year 2013 acquisition

On December 24, 2012, we completed our acquisition of a 45% interest in ClariVest Asset Management, LLC ("ClariVest"), an acquisition that bolstered our platform in the large-cap investment objective. See Note 3 for additional information.

Significant subsidiaries

As of September 30, 2015, our significant subsidiaries, all wholly owned, include: Raymond James & Associates, Inc. ("RJ&A") a domestic broker-dealer carrying client accounts, Raymond James Financial Services, Inc. ("RJFS") an introducing domestic broker-dealer, Raymond James Financial Services Advisors, Inc. ("RJFSA") a registered investment advisor, Raymond James Ltd. ("RJ Ltd.") a broker-dealer headquartered in Canada, Eagle, a registered investment advisor, and Raymond James Bank, N.A. ("RJ Bank") a national bank.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current year's presentation.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Recognition of revenues

Securities commissions & fees

The significant components of our securities commissions and fees revenue include the following:

a. Commission revenues and related expenses from securities transactions are recorded on a trade date basis. Commission revenues are recorded at the amount charged to clients which, in certain cases, may include varying discounts.

b. Trailing commissions from mutual funds and variable annuities/insurance products, which are recorded ratably over the period earned.

c. Fee revenues include certain asset-based fees, which are recorded ratably over the period earned.

d. Fee revenues include the fees earned by financial advisors who provide investment advisory services under various manners of affiliation with us. These fee revenues are computed as either a percentage of the assets in the client account, or a flat periodic fee charged to the client for investment advice. Such fees are earned from the services provided by investment advisor representatives ("IARs") and registered investment advisors ("RIAs") who affiliate with us.

   Financial advisors may choose to affiliate with us as either an employee of RJ&A, and thus operate under the RJ&A registered investment advisor ("RIA") license, or as an independent contractor affiliated with RJFS. If affiliated with RJFS, the financial advisor may choose to provide such advisory services either under their own RIA license, or under the RIA license of RJFSA, a wholly owned RIA that exclusively supports the investment advisory activities of financial advisors affiliated with RJFS.

   The revenue recognition and related expense policies associated with the generation of advisory fees from each of these affiliation alternatives are as follows:

   i. Investment advisory service fee revenues earned by employee financial advisors (IARs of RJ&A) are presented in securities commissions and fees revenue on a gross basis. The RJ&A IARs are paid compensation which is computed as a percentage of the revenues generated and which is recorded as a component of compensation, commissions and benefits expense.

   ii. Investment advisory service fee revenues earned by independent contractors who are registered representatives ("RR") with RJFS are also registered with RJFSA and offer investment advisory services under RJFSA's RIA license as an IAR of RJFSA are presented in securities fees and commissions revenue on a gross basis. These financial advisors are paid a portion of the revenues generated which is recorded as a component of compensation, commissions and benefits expense.

   iii. Independent RIA firms that are owned and operated by a financial advisor who is an independent contractor registered as a RR with RJFS, may receive administrative and custodial services provided by RJFS as introducing broker-dealer firm to RJ&A. These independent RIA firms operate under their own RIA license and pay a fee for services provided to the RIA and its clients. These fees are recorded in securities commissions and fees revenue, net of the portion of the fees that are remitted to the independent RIA firm.

   iv. We may earn fees as a result of providing a custodial platform for unaffiliated independent RIA firms. These independent RIA firms operate under their own RIA license and pay for administrative and other services provided through RJFS. These fees are recorded in securities commissions and fees revenue, net of the portion of the fees that are remitted to the independent RIA firm.

e. Insurance commission revenues and related expenses are recognized when the delivery of the insurance contract is confirmed by the carrier, the premium is remitted to the insurance company and the contract requirements are met.

f. Annuity commission revenues and related expenses are recognized when the signed annuity contract and premium is submitted to the annuity carrier.

Investment banking

Investment banking revenues are recorded at the time a transaction is completed and the related income is reasonably determinable. Investment banking revenues include management fees and underwriting fees, net of reimbursable expenses, earned in connection with the distribution of the underwritten securities, merger and acquisition fees, private placement fees, syndication fees on the sale of low-income housing tax credit fund interests, and limited partnership distributions. Securities received in connection with investment banking transactions are carried at fair value.

We distribute our proprietary equity research products to certain institutional investor clients at no charge.

Investment advisory fees

We provide advice, research and administrative services for clients participating in both our managed and non-discretionary asset-based investment programs. These revenues are generated by our asset management businesses for administering and managing portfolios, funds and separate accounts. These asset management services are provided to individual investment portfolios, mutual funds and managed programs. We earn investment advisory fees based on the value of clients' portfolios which are held in either managed or non-discretionary asset-based programs. Fees are computed based on balances either at the beginning of the quarter, the end of the quarter, or average assets. These fees are recorded ratably over the period earned.

We may earn performance fees from various funds and separate accounts we manage, when their performance exceeds certain specified rates of return. We record performance fee revenues in the period they are specifically quantifiable and are earned. Once realized, such fees are not subject to clawback or reversal.

Account and service fees

Account and service fees primarily include transaction fees, annual account fees, service charges, exit fees, servicing fees, fees generated in lieu of interest income from a multi-bank sweep program with unaffiliated banks, money market processing and distribution fees and correspondent clearing fees. The annual account fees such as IRA fees and distribution fees are recognized as earned over the term of the contract. The transaction fees are earned and collected from clients as trades are executed. Servicing fees such as omnibus, education and marketing support fees, and no-transaction fee program revenues are paid to us for marketing and administrative services and are recognized as earned. Under clearing agreements, we clear trades for unaffiliated correspondent brokers and retain a portion of commissions as a fee for our services. Correspondent clearing revenues are recorded net of commissions remitted. Total commissions generated by correspondents were $39.9 million, $39.6 million, and $35.5 million and commissions remitted totaled $37.7 million, $36.9 million, and $32.6 million for the years ended September 30, 2015, 2014, and 2013 respectively.

Cash and cash equivalents

Our cash equivalents include money market funds or highly liquid investments with original maturities of 90 days or less, other than those used for trading purposes.

Assets segregated pursuant to regulations and other segregated assets

In accordance with Rule 15c3-3 of the Securities Exchange Act of 1934, RJ&A, as a broker-dealer carrying client accounts, is subject to requirements related to maintaining cash or qualified securities in a segregated reserve account for the exclusive benefit of its clients. In addition, RJ Ltd. is required to hold client Registered Retirement Savings Plan funds in trust. Segregated assets consist of cash and cash equivalents.

RJ Bank maintains interest-bearing bank deposits that are restricted for pre-funding letter of credit draws related to certain syndicated borrowing relationships in which RJ Bank is involved. In addition, RJ Bank maintains cash in an interest-bearing pass-through account at the Federal Reserve Bank in accordance with Regulation D of the Federal Reserve Act, which requires depository institutions to maintain minimum average reserve balances against its deposits.

Repurchase agreements and other collateralized financings

We purchase securities under short-term agreements to resell ("Reverse Repurchase Agreements"). Additionally, we sell securities under agreements to repurchase ("Repurchase Agreements"). Both Reverse Repurchase Agreements and Repurchase Agreements are accounted for as collateralized financings and are carried at contractual amounts plus accrued interest. Our policy is to obtain possession of collateral with a market value equal to or in excess of the principal amount loaned under the Reverse Repurchase Agreements. To ensure that the market value of the underlying collateral remains sufficient, the securities are valued daily, and collateral is obtained from or returned to the counterparty when contractually required. These Reverse Repurchase Agreements may result in credit exposure in the event the counterparty to the transaction is unable to fulfill its contractual obligations. Other collateralized financings may include secured call loans receivable held by RJ Ltd. When executed, these financings represent loans of excess cash to financial institutions which are fully collateralized by Canadian treasury bills or provincial obligations and bear interest at call loan rates.

Financial instruments owned, financial instruments sold but not yet purchased and fair value

Financial instruments owned and financial instruments sold, but not yet purchased are recorded at fair value. Fair value is defined by GAAP as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between willing market participants on the measurement date.

In determining the fair value of our financial instruments in accordance with GAAP, we use various valuation approaches, including market and/or income approaches. Fair value is a market-based measure considered from the perspective of a market participant. As such, even when assumptions from market participants are not readily available, our own assumptions reflect those that we believe market participants would use in pricing the asset or liability at the measurement date. GAAP provides for the following three levels to be used to classify our fair value measurements:

Level 1-Financial instruments included in Level 1 are highly liquid instruments with quoted prices in active markets for identical assets or liabilities. These include equity securities traded in active markets and certain U. S. Treasury securities, other governmental obligations, or publicly traded corporate debt securities.

Level 2-Financial instruments reported in Level 2 include those that have pricing inputs that are other than quoted prices in active markets, but which are either directly or indirectly observable as of the reporting date (i.e., prices for similar instruments). Instruments that are generally included in this category are equity securities that are not actively traded, corporate obligations infrequently traded, certain government and municipal obligations, interest rate swaps, certain asset-backed securities ("ABS"), certain collateralized mortgage obligations ("CMOs"), certain mortgage-backed securities ("MBS"), our derivative instruments, corporate loans and nonrecurring fair value measurements for certain loans held for sale, impaired loans and other real estate owned ("OREO").

Level 3-Financial instruments reported in Level 3 have little, if any, market activity and are measured using our best estimate of fair value, where the inputs into the determination of fair value are both significant to the fair value measurement and unobservable. These valuations require significant judgment or estimation. Instruments in this category generally include: equity securities with unobservable inputs such as those investments made in our principal capital activities, certain non-agency ABS, pools of interest-only Small Business Administration ("SBA") loan strips ("I/O Strips"), certain municipal and corporate obligations which include auction rate securities ("ARS") and nonrecurring fair value measurements for certain impaired loans.

GAAP requires that we maximize the use of observable inputs and minimize the use of unobservable inputs when performing our fair value measurements. The availability of observable inputs can vary from instrument to instrument and in certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, an instrument's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement of an instrument requires judgment and consideration of factors specific to the instrument.

We offset our long and short positions for a particular security recorded at fair value as part of our trading instruments (long positions) and trading instruments sold but not yet purchased (short positions), when the long and short positions have identical Committee on Uniform Security Identification Procedures numbers ("CUSIPs").

Valuation techniques

The fair value for certain of our financial instruments is derived using pricing models and other valuation techniques that involve significant management judgment. The price transparency of financial instruments is a key determinant of the degree of judgment involved in determining the fair value of our financial instruments. Financial instruments for which actively quoted prices or pricing parameters are available will generally have a higher degree of price transparency than financial instruments that are thinly traded or not quoted. In accordance with GAAP, the criteria used to determine whether the market for a financial instrument is active or inactive is based on the particular asset or liability. For equity securities, our definition of actively traded is based on average daily volume and other market trading statistics. We have determined the market for certain other types of financial instruments, including certain CMOs, ABS, certain collateralized debt obligations and ARS, to be volatile, uncertain or inactive as of both September 30, 2015 and 2014. As a result, the valuation of these financial instruments included significant management judgment in determining the relevance and reliability of market information available. We considered the inactivity of the market to be evidenced by several factors, including a continued decreased price transparency caused by decreased volume of trades relative to historical levels, stale transaction prices and transaction prices that varied significantly either over time or among market makers.

The specific valuation techniques utilized for the categorization of financial instruments presented in our Consolidated Statements of Financial Condition are described as follows:

Trading instruments and trading instruments sold but not yet purchased

Trading securities are comprised primarily of the financial instruments held by our broker-dealer subsidiaries. These instruments are recorded at fair value with realized and unrealized gains and losses reflected in current period net income.

When available, we use quoted prices in active markets to determine the fair value of our trading securities. Such instruments are classified within Level 1 of the fair value hierarchy. Examples include exchange traded equity securities and liquid government debt securities.

When instruments are traded in secondary markets and quoted market prices do not exist for such securities, we utilize valuation techniques including matrix pricing to estimate fair value. Matrix pricing generally utilizes spread-based models periodically re-calibrated to observable inputs such as market trades or to dealer price bids in similar securities in order to derive the fair value of the instruments. Valuation techniques may also rely on other observable inputs such as yield curves, interest rates and expected principal repayments and default probabilities. Instruments valued using these inputs are typically classified within Level 2 of the fair value hierarchy. Examples include certain municipal debt securities, corporate debt securities, agency MBS, and restricted equity securities in public companies. We utilize prices from independent services to corroborate our estimate of fair value. Depending upon the type of security, the pricing service may provide a listed price, a matrix price or use other methods including broker-dealer price quotations.

The fair value for SBA loan securitizations is determined by utilizing observable prices obtained from a third party pricing service. The third party pricing service provides comparable price evaluations utilizing observable market data for similar securities. We substantiate the prices obtained from the third party pricing service by comparing such prices for a sample of securities to observable market trades obtained from external sources. The instruments valued using these observable inputs are typically classified within Level 2 of the fair value hierarchy.

RJ Bank maintains a trading portfolio of certain corporate loans, that it originates through the primary syndication market. These trading instruments are recognized as of the trade date and are carried at fair value with the related unrealized and realized gains and losses reflected in net trading profit. These trading instruments are valued using quotes from a third party pricing service. These third party pricing service quotes are based on current market data provided by multiple dealers. The instruments are classified within Level 2 of the fair value hierarchy as the market inputs utilized by the third party pricing service are based upon observable inputs. We validate the third party pricing service quotes by comparing such prices to those provided by another external source.

Positions in illiquid securities that do not have readily determinable fair values require significant judgment or estimation. For these securities we use pricing models, discounted cash flow methodologies or similar techniques. Assumptions utilized by these techniques include estimates of future delinquencies, loss severities, defaults and prepayments or redemptions. Securities valued using these techniques are classified within Level 3 of the fair value hierarchy. For certain CMOs, where there has been limited activity or less transparency around significant inputs to the valuation, such as assumptions regarding performance of the underlying mortgages, these securities are currently classified within Level 3 of the fair value hierarchy.

I/O Strip securities do not trade in an active market with readily observable prices. Accordingly, we use valuation techniques that consider a number of factors including: (a) the original cost of the pooled underlying SBA loans from which the I/O Strip securities were created, and any changes from the original to the hypothetical cost of buying similar loans under current market conditions; (b) seasoning of the underlying SBA loans in the pool that back the I/O strip securities; (c) the type and nature of the pooled SBA loans backing the I/O Strip securities; (d) actual and assumed prepayment rates on the underlying pools of SBA loans; and (e) market data for past trades in comparable I/O Strip securities. Prices from independent sources are used to corroborate our estimates of fair value. Our I/O Strip securities are recorded in "other securities" within our trading instruments on our Consolidated Statements of Financial Condition. These fair value measurements use significant unobservable inputs and accordingly, we classify them as Level 3 of the fair value hierarchy.

Included within trading instruments (or trading instruments sold but not yet purchased) are to be announced ("TBA") security contracts with investors for generic MBS securities at specific rates and prices to be delivered on settlement dates in the future. These TBA's are entered into by RJ&A as a component of a hedging strategy, to hedge interest rate risk that it would otherwise be exposed to as part of a program its fixed income public finance operations offers to certain state and local housing finance agencies ("HFA"). Under this program, RJ&A enters into forward commitments to purchase Government National Mortgage Association ("GNMA") or Federal National Home Mortgage Association ("FNMA") MBS. The MBS securities are issued on behalf of various HFA clients and consist of the mortgages originated through their lending programs. RJ&A's forward GNMA or FNMA MBS purchase commitments arise at the time of the loan reservation for a borrower in the HFA lending program (these loan reservations fix the terms of the mortgage, including the interest rate and maximum principal amount). The underlying terms of the GNMA or FNMA MBS purchase, including the price for the MBS security (which is dependent upon the interest rates associated with the underlying mortgages) are also fixed at loan reservation. Upon acquisition of the MBS security, RJ&A typically sells such security in open market transactions as part of its fixed income operations. Given that the actual principal amount of the MBS security is not fixed and determinable at the date of RJ&A's commitment to purchase, these forward MBS purchase commitments do not meet the definition of a "derivative instrument." These TBA securities are accounted for at fair value and are classified within Level 1 of the fair value hierarchy. The TBA securities may aggregate to either a net asset or net liability at any reporting date, depending upon market conditions. The offsetting purchase commitment is accounted for at fair value and is included in either other assets, or other liabilities, depending upon whether the TBA securities aggregate to a net asset or net liability. The fair value of the purchase commitment is classified within Level 3 of the fair value hierarchy.

Available for sale securities

Available for sale securities are comprised primarily of MBS, CMOs and other equity securities held predominately by RJ Bank (the "RJ Bank AFS Securities") and ARS held by a non-broker-dealer subsidiary of RJF (collectively referred to as the "RJF AFS Securities").

Interest on the RJF AFS Securities is recognized in interest income on an accrual basis. For the RJ Bank AFS Securities, discounts are accreted and premiums are amortized as an adjustment to yield over the estimated average life of the security.

Realized gains and losses on sales of any RJF AFS Securities are recognized using the specific identification method and reflected in other revenue in the period they are sold.

Unrealized gains or losses on any RJF AFS Securities, except for those that are deemed to be other-than-temporary, are recorded through other comprehensive (loss) income and are thereafter presented in equity as a component of accumulated other comprehensive income ("AOCI") on our Consolidated Statements of Financial Condition.

For any RJF AFS Securities in an unrealized loss position at a reporting period end, we make an assessment whether such securities are impaired on an other-than-temporary basis. In order to evaluate our risk exposure and any potential impairment of these securities, on at least a quarterly basis, we review the characteristics of each security owned such as, where applicable, collateral type, delinquency and foreclosure levels, credit enhancement, projected loan losses, collateral coverage, the presence of U.S. government or government agency guarantees, and issuer credit rating. The following factors are considered in order to determine whether an impairment is other-than-temporary: our intention to sell the security, our assessment of whether it is more likely than not that we will be required to sell the security before the recovery of its amortized cost basis, and whether the evidence indicating that we will recover the amortized cost basis of a security in full outweighs evidence to the contrary. Evidence considered in this assessment includes the reasons for the impairment, the severity and duration of the impairment, changes in value subsequent to period end, recent events specific to the issuer or industry and forecasted performance of the security.

We intend and have the ability to hold the RJF AFS Securities to maturity. We have concluded that it is not more likely than not that we will be required to sell these available for sale securities before the recovery of their amortized cost basis. Those securities whose amortized cost basis we do not expect to recover in full are deemed to be other-than-temporarily impaired and

are written down to fair value with the credit loss portion of the write-down recorded as a realized loss in other revenue and the non-credit portion of the write-down recorded, net of deferred taxes, in shareholders' equity as a component of AOCI. The credit loss portion of the write-down is the difference between the present value of the cash flows expected to be collected and the amortized cost basis of the security.

For any RJF AFS Securities, we estimate the portion of loss attributable to credit using a discounted cash flow model. For RJ Bank AFS Securities, our discounted cash flow model utilizes relevant assumptions such as prepayment rate, default rate, and loss severity on a loan level basis. These assumptions are subject to change depending on a number of factors such as economic conditions, changes in home prices, delinquency and foreclosure statistics, among others. Events that may trigger material declines in fair values or additional credit losses for these securities in the future would include, but are not limited to, deterioration of credit metrics, significantly higher levels of default and severity of loss on the underlying collateral, deteriorating credit enhancement and loss coverage ratios, or further illiquidity. Expected principal and interest cash flows on the impaired debt security are discounted using the effective interest rate implicit in the security at the time of acquisition. The previous amortized cost basis of the security less the other-than-temporary impairment ("OTTI") recognized in earnings establishes the new cost basis for the security.

The fair value of agency and non-agency securities included within the RJ Bank AFS Securities is determined by obtaining third party pricing service bid quotations from two independent pricing services. Third party pricing service bid quotations are based on either current market data, or for any securities traded in markets where the trading activity has slowed such as the CMO market, the most recently available market data. The third party pricing services provide comparable price evaluations utilizing available market data for similar securities. The market data the third party pricing services utilize for these price evaluations includes observable data comprised of benchmark yields, reported trades, broker-dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, reference data including market research publications, and loan performance experience. In order to validate that the pricing information used by the primary third party pricing service is observable, we request, on a quarterly basis, some of the key market data available for a sample of securities and compare this data to that which we observed in our independent accumulation of market information. Securities valued using these valuation techniques are classified within Level 2 of the fair value hierarchy.

For non-agency securities within the RJ Bank AFS Securities where a significant difference exists between the primary third party pricing service bid quotation and the secondary third party pricing service, we utilize a discounted cash flow analysis to determine which third party price quote is more representative of fair value under the current market conditions. Securities measured using these valuation techniques are generally classified within Level 2 of the fair value hierarchy.

ARS are long-term variable rate securities tied to short-term interest rates that were intended to be reset through a "Dutch auction" process, which generally occurs every seven to 35 days. Holders of ARS were at one time able to liquidate their holdings to prospective buyers by participating in the auctions. During 2008, the Dutch auction process failed and holders were no longer able to liquidate their holdings through the auction process. The fair value of the ARS holdings is estimated based on internal pricing models. The pricing model takes into consideration the characteristics of the underlying securities, as well as multiple inputs including the issuer and its credit quality, data from any recent trades, the expected timing of redemptions and an estimated yield premium that a market participant would require over otherwise comparable securities to compensate for the illiquidity of the ARS. These inputs require significant management judgment and accordingly, these securities are classified within Level 3 of the fair value hierarchy.

Derivative contracts

We enter into interest rate swaps, futures contracts, and forward foreign exchange contracts either as part of our fixed income business to facilitate client transactions, to hedge a portion of our trading inventory, or to a limited extent for our own account. These derivatives are accounted for as trading account assets or liabilities and recorded at fair value in the Consolidated Statements of Financial Condition. Any realized or unrealized gains or losses are recorded in net trading profits within the Consolidated Statements of Income and Comprehensive Income with any interest earned thereon recorded in interest income. The fair value of any cash collateral exchanged as part of the interest rate swap contract is netted, by-counterparty, against the fair value of the derivative instrument. The fair value of these interest rate derivative contracts is obtained from internal pricing models that consider current market trading levels and the contractual prices for the underlying financial instruments, as well as time value, yield curve and other volatility factors underlying the positions. Since our model inputs can be observed in a liquid market and the models do not require significant judgment, such derivative contracts are classified within Level 2 of the fair value hierarchy. We utilize values obtained from third party derivatives dealers to corroborate the output of our internal pricing models.

We also facilitate matched book derivative transactions through non-broker-dealer subsidiaries, either Raymond James Financial Products, LLC or Raymond James Capital Services, LLC (collectively referred to as the Raymond James matched book

swap subsidiaries or "RJSS"). The only difference in the swap businesses conducted by these two subsidiary entities is that they utilize different third party financial institutions to facilitate the offsetting transaction. RJSS enters into derivative transactions (primarily interest rate swaps) with clients. For every derivative transaction RJSS enters into with a client, it enters into an offsetting transaction with terms that mirror the client transaction, with a credit support provider who is a third party financial institution. Any collateral required to be exchanged under these derivative contracts is administered directly by the client and the third party financial institution. RJSS does not hold any collateral, or administer any collateral transactions, related to these instruments. We record the value of each derivative position held at fair value, as either an asset or an offsetting liability, presented as "derivative instruments associated with offsetting matched book positions," as applicable, on our Consolidated Statements of Financial Condition. Fair value is determined using an internal model which includes inputs from independent pricing sources to project future cash flows under each underlying derivative contract. The cash flows are discounted to determine the present value. Since any changes in fair value are completely offset by an opposite change in the offsetting transaction position, there is no net impact on our Consolidated Statements of Income and Comprehensive Income from changes in the fair value of these derivative instruments. RJSS recognizes revenue on derivative transactions on the transaction date, computed as the present value of the expected cash flows RJSS expects to receive from the third party financial institution over the life of the derivative contract. The difference between the present value of these cash flows at the date of inception and the gross amount potentially received is accreted to revenue over the term of the contract. The revenue from these transactions is included within other revenues on our Consolidated Statements of Income and Comprehensive Income.

RJ Bank enters into three-month forward foreign exchange contracts to hedge the risk related to their investment in their Canadian subsidiary. These derivatives are recorded at fair value on the Consolidated Statements of Financial Condition, the majority of which are designated as net investment hedges. The effective portion of the related gain or loss is recorded, net of tax, in shareholders' equity as part of the cumulative translation adjustment component of AOCI with such balance impacting earnings in the event the net investment is sold or substantially liquidated. Gains and losses on the undesignated derivative instruments as well as amounts representing hedge ineffectiveness are recorded in earnings in the Consolidated Statements of Income and Comprehensive Income. Hedge effectiveness is assessed at each reporting period using a method that is based on changes in forward rates. The measurement of hedge ineffectiveness is based on the beginning balance of the foreign net investment at the inception of the hedging relationship and performed using the hypothetical derivative method. However, as the terms of the hedging instrument and hypothetical derivative match at inception, there is no expected ineffectiveness to be recorded in earnings. The fair value of any cash collateral exchanged as part of the forward exchange contracts is netted, by counterparty, against the fair value of the derivative instrument.

The fair value of RJ Bank's forward foreign exchange contracts is determined by obtaining valuations from a third party pricing service. These third party valuations are based on observable inputs such as spot rates, foreign exchange rates and both U.S. and Canadian interest rate curves. We validate the observable inputs utilized in the third party valuation model by preparing an independent calculation using a secondary, third party valuation model. These forward foreign exchange contracts are classified within Level 2 of the fair value hierarchy.

The cash flows associated with certain assets held by RJ Bank provide interest income at fixed interest rates. Therefore, the value of these assets, absent any risk mitigation, is subject to fluctuation based upon changes in market rates of interest over time. Beginning in February 2015, we entered into certain interest rate swap contracts (the "RJ Bank Interest Hedges") which swap variable interest payments on debt for fixed interest payments. Through the RJ Bank Interest Hedges, RJ Bank is able to mitigate a portion of the market risk associated with certain fixed rate interest earning assets held by RJ Bank.

The RJ Bank Interest Hedges are recorded at fair value on the Consolidated Statements of Financial Condition and are designated as cash flow hedges. The effective portion of the related gain or loss is recorded, net of tax, in shareholders' equity as part of the cash flow hedge component of AOCI and subsequently reclassified to earnings when the hedged transaction affects earnings, specifically upon the incurrence of interest expense on certain borrowings. The ineffective portions of the related gain and loss are immediately recognized into earnings in the Consolidated Statements of Income and Comprehensive Income. Hedge effectiveness is assessed at inception and each reporting period utilizing regression analysis and performed using the hypothetical derivative method. However, as the key terms of the hedging instrument and hedged transaction match at inception, management expects there to be no ineffectiveness impacting earnings from this hedge while it is outstanding. As a result of these derivative transactions being executed through a clearing exchange, the cash deposit associated with this transaction that we have provided to the exchange, is included as a component of deposits with clearing organizations on our Consolidated Statements of Financial Condition. The fair value of RJ Bank Interest Hedges is obtained from internal pricing models that consider current market trading levels and the contractual prices for the underlying financial instruments, as well as time value, yield curve and other volatility factors underlying the positions. Since our model inputs can be observed in a liquid market and the models do not require significant judgment, such derivative contracts are classified within Level 2 of the fair value hierarchy. We utilize values obtained from a third party to corroborate the output of our internal pricing models.

Private equity investments

Private equity investments are held primarily in our Other segment and consist of various direct and third party private equity investments, employee investment funds, and various private equity funds which we sponsor. Private equity investments include various private equity fund investments, including the Raymond James Employee Investment Funds I and II (the "EIF Funds") (collectively, these private equity fund investments and the EIF Funds are referred to as the "Private Funds"). See Note 11 for additional information regarding the consolidation of the EIF Funds, which are variable interest entities. These Private Funds invest in new and developing companies. Our investments in these Private Funds cannot be redeemed directly with the funds; our investment is monetized through distributions received through the liquidation of the underlying assets of those funds. We estimate that the underlying assets of these funds will be liquidated over the life of these funds (typically 10 to 15 years). Approval by the management of these funds is required for us to sell or transfer these investments. Certain of our private equity investments include ownership interests in private companies with long-term growth potential. These investments are measured at fair value with any changes recognized in other revenue on our Consolidated Statements of Income and Comprehensive Income.

The valuation of these investments requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and long-term nature of these assets. As a result, these values cannot be determined with precision and the calculated fair value estimates may not be realizable in a current sale or immediate settlement of the instrument.

Private equity investments are carried at estimated fair value. They are valued initially at the transaction price until significant transactions or developments indicate that a change in the carrying values of these investments is appropriate. The carrying values of these investments are adjusted based on financial performance, investment-specific events, financing and sales transactions with third parties and/or discounted cash flow models incorporating changes in market outlook. Investments in funds structured as limited partnerships are generally valued based on our proportionate share of the net assets of the partnership as provided by the fund manager. Investments valued using these valuation techniques are classified within Level 3 of the fair value hierarchy.

Other investments

Other investments consist primarily of marketable securities we hold that are associated with deferred compensation programs of either Eagle or a plan that was formerly sponsored by MK & Co. (as hereinafter defined), term deposits with Canadian financial institutions, and certain investments in limited partnerships (or funds) for which in a number of instances, one of our affiliates serves as the managing member or general partner (see Note 11 for information regarding such funds).

Certain employees, of either Eagle or others who were at one-time associated with MK & Co. (as hereinafter defined), participate in deferred compensation plans. The balances associated with these plans are invested in certain marketable securities that we hold until the vesting date, typically five years from the date of the deferral. A liability associated with these deferrals is reflected as a component of our accrued compensation, commissions and benefits on our Consolidated Statements of Financial Condition. We use quoted prices in active markets to determine the fair value of these investments. Such instruments are classified within Level 1 of the fair value hierarchy.

Canadian financial institution term deposits are recorded at cost which approximates market value. These investments are classified within Level 1 of the fair value hierarchy.

The valuation of the investments in limited partnerships and funds requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and long-term nature of these assets. As a result, these values cannot be determined with precision and the calculated fair value estimates may not be realizable in a current sale or immediate settlement of the instrument. Such instruments are classified within Level 3 of the fair value hierarchy.

Brokerage client receivables, loans to financial advisors and allowance for doubtful accounts

Brokerage client receivables include receivables from the clients of our broker-dealer and asset management subsidiaries. The receivables from broker-dealer clients are principally for amounts due on cash and margin transactions and are generally collateralized by securities owned by the clients. The receivables from asset management clients are primarily for accrued investment advisory fees. Both the receivables from the asset management and broker-dealer clients are reported at their outstanding principal balance, adjusted for any allowance for doubtful accounts. When a receivable held by one of our broker-dealer subsidiaries is considered to be impaired, the amount of the impairment is generally measured based on the fair value of the securities acting as collateral, which is measured based on current prices from independent sources such as listed market prices or broker-dealer price quotations. Securities beneficially owned by customers, including those that collateralize margin or other similar transactions,

are not reflected in our Consolidated Statements of Financial Condition (see Note 19 for additional information regarding this collateral).

We offer loans to financial advisors and certain key revenue producers, primarily for recruiting, transitional cost assistance, and retention purposes. These loans are generally repaid over a five to eight year period with interest recognized as earned. There is no fee income associated with these loans. We assess future recoverability of these loans through analysis of individual financial advisor production or other performance standards. In the event that the financial advisor is no longer affiliated with us, any unpaid balance of such loan becomes immediately due and payable to us. In determining the allowance for doubtful accounts related to former employees or independent contractors, management primarily considers our historical collection experience as well as other factors including: any amounts due at termination, the reasons for the terminated relationship, and the former financial advisor's overall financial position. When the review of these factors indicates that further collection activity is highly unlikely, the outstanding balance of such loan is written-off and the corresponding allowance is reduced. Based upon the nature of these financing receivables, we do not analyze this asset on a portfolio segment or class basis. Further, the aging of this receivable balance is not a determinative factor in computing our allowance for doubtful accounts, as concerns regarding the recoverability of these loans primarily arise in the event that the financial advisor is no longer affiliated with us. We present the outstanding balance of loans to financial advisors on our Consolidated Statements of Financial Condition, net of their applicable allowances for doubtful accounts. The allowance for doubtful accounts balance associated with all of our loans to financial advisors is $3.7 million and $2.5 million at September 30, 2015 and 2014, respectively. Of the September 30, 2015 loans to financial advisors, the portion of the balance associated with financial advisors who are no longer affiliated with us, after consideration of the allowance for doubtful accounts, is approximately $5.8 million.

Securities borrowed and securities loaned

Securities borrowed and securities loaned transactions are reported as collateralized financings and recorded at the amount of collateral advanced or received. In securities borrowed transactions, we are generally required to deposit cash with the lender. With respect to securities loaned, we generally receive collateral in the form of cash in an amount in excess of the market value of securities loaned. We monitor the market value of securities borrowed and loaned on a daily basis, with additional collateral obtained or refunded as necessary (see Note 19 for additional information regarding this collateral).

Bank loans and allowances for losses

Loans held for investment

Bank loans are comprised of loans originated or purchased by RJ Bank and include commercial and industrial ("C&I") loans, commercial and residential real estate loans, tax-exempt loans, as well as loans which are fully collateralized by the borrower's marketable securities. The loans which we have the intent and the ability to hold until maturity or payoff, are recorded at their unpaid principal balance plus any premium paid in connection with the purchase of the loan, less the allowance for loan losses and any discounts received in connection with the purchase of the loan and net of deferred fees and costs on originated loans. Syndicated loans purchased in the secondary market are recognized as of the trade date. Interest income is recognized on an accrual basis.

Loan origination fees and direct costs, as well as premiums and discounts on loans that are not revolving, are capitalized and recognized in interest income using the interest method. For revolving loans, the straight-line method is used based on the contractual term.

RJ Bank segregates its loan portfolio into six portfolio segments, C&I, commercial real estate ("CRE"), CRE construction, tax-exempt, residential mortgage and securities based loans ("SBL"). These portfolio segments also serve as the portfolio loan classes for purposes of credit analysis, except for residential mortgage loans which are further disaggregated into residential first mortgage and residential home equity classes.

Loans held for sale

Certain residential mortgage loans originated and intended for sale in the secondary market due to their fixed-rate terms are carried at the lower of cost or estimated fair value. The fair value of the residential mortgage loans held for sale are estimated using observable prices obtained from counterparties for similar loans. These nonrecurring fair value measurements are classified within Level 2 of the fair value hierarchy. Gains and losses on sales of these assets are included as a component of other revenue, while interest collected on these assets is included in interest income. Net unrealized losses are recognized through a valuation allowance by charges to income as a component of other revenue in the Consolidated Statements of Income and Comprehensive Income. Corporate loans, which include C&I, CRE, CRE construction and tax-exempt, are designated as held for investment

upon inception and recognized in loans receivable. If we subsequently designate a corporate loan as held for sale, which generally occurs as part of a loan workout situation, we then write down the carrying value of the loan with a partial charge-off, if necessary, to carry it at the lower of cost or estimated fair value.

RJ Bank purchases the guaranteed portions of SBA section 7(a) loans and accounts for these loans in accordance with the policy for loans held for sale. RJ Bank then aggregates SBA loans with similar characteristics into pools for securitization and sells these pools in the secondary market. Individual loans may be sold prior to securitization. The determination of the fair value of the SBA loans depend upon their intended disposition. The fair value of the SBA loans to be individually sold are determined based upon their committed sales price. The fair value of loans to be aggregated into pools for securitization which are committed to be sold, are determined based upon third party price quotes. The fair value of all other SBA loans are determined using a third party pricing service. The prices for the SBA loans, other than those committed to be individually sold, are validated by comparing the third party price quote or the third party pricing service prices, as applicable, for a sample of loans to observable market trades obtained from external sources. Once the loans are securitized into a pool, the respective securities are classified as trading instruments and are carried at fair value based on RJ Bank's intention to sell the securitizations within the near term. Any changes in the fair value of the securitized pools as well as any realized gains or losses earned thereon are reflected in net trading profits. Transfers of the securitizations are all accounted for as sales at settlement date when RJ Bank has surrendered control over the transferred assets. RJ Bank does not retain any interest in the securitizations once they are sold.

Off-balance sheet loan commitments

RJ Bank has outstanding at any time a significant number of commitments to extend credit and other credit-related off-balance sheet financial instruments such as standby letters of credit and loan purchases. RJ Bank's policy is generally to require customers to provide collateral at the time of closing. The amount of collateral obtained, if it is deemed necessary by RJ Bank upon extension of credit, is based on RJ Bank's credit evaluation of the borrower. Collateral held varies but may include assets such as: marketable securities, accounts receivable, inventory, real estate, and income-producing commercial properties. The potential credit loss associated with these off-balance sheet loan commitments is accrued and reflected in other liabilities within the Consolidated Statements of Financial Condition. Refer to the allowance for loan losses and reserve for unfunded lending commitments section that follows for a discussion of the reserve calculation methodology.

RJ Bank recognizes the revenue associated with corporate syndicated standby letters of credit, which is generally received quarterly, on a cash basis, the effect of which does not differ materially from recognizing in the period the fee is earned. Unused corporate line fees are accounted for on an accrual basis.

Nonperforming assets

Nonperforming assets are comprised of both nonperforming loans and OREO. Nonperforming loans represent those loans which have been placed on nonaccrual status and loans which have been restructured in a manner that grant a concession to a borrower experiencing financial difficulties; loans with such restructurings are discussed further below. Additionally, any accruing loans which are 90 days or more past due and in the process of collection are considered nonperforming loans.

Loans of all classes are placed on nonaccrual status when we determine that full payment of all contractual principal and interest is in doubt, or the loan is past due 90 days or more as to contractual interest or principal unless the loan, in our opinion, is well-secured and in the process of collection. When a loan is placed on nonaccrual status, the accrued and unpaid interest receivable is written off against interest income and accretion of the net deferred loan origination fees cease. Interest is recognized using the cash method for SBL and residential (first mortgage and home equity) loans and the cost recovery method for corporate loans thereafter until the loan qualifies for return to accrual status. Loans are returned to an accrual status when the loans have been brought contractually current with the original or amended terms and have been maintained on a current basis for a reasonable period, generally six months.

Other real estate acquired in the settlement of loans, including through, or in lieu of, loan foreclosure, is initially recorded at the lower of cost or fair value less estimated selling costs through a charge to the allowance for loan losses, thus establishing a new cost basis. Subsequent to foreclosure, valuations are periodically performed by RJ Bank and the assets are carried at the lower of the carrying amount or fair value, as determined by a current appraisal, or valuation less estimated costs to sell and are classified as other assets on the Consolidated Statements of Financial Condition. These nonrecurring fair value measurements are classified within Level 2 of the fair value hierarchy. Costs relating to development and improvement of the property are capitalized, whereas those relating to holding the property are charged to operations. Sales of OREO are recorded as of the settlement date and any associated gains or losses are included in other revenue on our Consolidated Statements of Income and Comprehensive Income.

Troubled debt restructurings

A loan restructuring is deemed to be a troubled debt restructuring ("TDR") if we, for economic or legal reasons related to the borrowers' financial difficulties, grant a concession we would not otherwise consider. In TDRs, for all classes of loans, the concessions granted, such as interest rate reductions, generally do not reflect current market conditions for a new loan of similar risk made to another borrower in similar financial circumstances. For those restructurings of first mortgage and home equity residential mortgage loans which may reflect current market conditions, the concessions granted by RJ Bank are generally interest capitalization, principal forbearance, release of liability ordered under Chapter 7 bankruptcy not reaffirmed by the borrower, or an extension of the interest-only or maturity period. The concessions granted in restructurings of corporate loans are similar to those for residential mortgage loans, and may also include the reduction of the guarantor's liability. First mortgage and home equity residential mortgage TDRs may be returned to accrual status when there has been a sustained period of six months of satisfactory performance. Corporate TDRs have generally been partially charged-off and, therefore, remain on nonaccrual status until the loan is fully resolved.

Impaired loans

Loans in all classes are considered to be impaired when, based on current information and events, it is probable that RJ Bank will be unable to collect the scheduled payments of principal and interest on a loan when due according to the contractual terms of the loan agreement. Loans that experience insignificant payment delays and payment shortfalls generally are not classified as impaired. RJ Bank determines the significance of payment delays and payment shortfalls on a case-by-case basis, taking into consideration reasons for the delay, the borrower's prior payment record and the amount of the shortfall in relation to the principal and interest owed. For individual loans identified as impaired, impairment is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate and taking into consideration the factors described below in relation to the evaluation of the allowance for loan losses, except that as a practical expedient, RJ Bank measures impairment based on the loan's observable market price, or the fair value of the collateral if the loan is collateral dependent. Impaired loans include all corporate nonaccrual loans, all residential mortgage nonaccrual loans for which a charge-off had previously been recorded, and all loans which have been modified in TDRs. Interest income on impaired loans is recognized consistently with the recognition policy of nonaccrual loans.

Allowance for loan losses and reserve for unfunded lending commitments

RJ Bank maintains an allowance for loan losses to provide for probable losses inherent in RJ Bank's loan portfolio. Loan losses are charged against the allowance when RJ Bank believes the uncollectibility of a loan balance is confirmed. Subsequent recoveries, if any, are credited to the allowance.

RJ Bank has developed policies and procedures for assessing the adequacy of the allowance for loan losses that reflect the assessment of risk considering all available information. In developing this assessment, RJ Bank relies on estimates and exercises judgment in evaluating credit risk. The evaluation is inherently subjective as it requires estimates that are susceptible to significant revision as more information becomes available. Depending on changes in circumstances, future assessments of credit risk may yield materially different results from the prior estimates, which may require an increase or a decrease in the allowance for loan losses.

This allowance for loan loss is comprised of three components: allowances calculated based on formulas for homogenous classes of loans collectively evaluated for impairment, specific allowances assigned to certain classified loans individually evaluated for impairment, and unallocated allowances resulting from our analysis of certain qualitative factors. These homogeneous classes are a result of management's disaggregation of the loan portfolio and are comprised of the previously mentioned classes: C&I, CRE, CRE construction, tax-exempt, residential first mortgage, residential home equity, and SBL.

A quarterly analysis of the loss emergence period (the average length of time in calendar quarters between discovery of the estimate of the loss event and confirmation of loss) is performed on all defaulted loans in the corporate, residential first mortgage and residential home equity loan classes. Where deemed necessary, this analysis is utilized in establishing the allowance for each of these classes of loans through the application of an adjustment to the calculated allowance percentage for the respective loan grade.

The loans within the corporate loan classes are assigned to one of several internal loan grades based upon the respective loan's credit characteristics. The loans within the residential first mortgage, residential home equity, and SBL classes are assigned loan grades equivalent to the loan classifications utilized by bank regulators, dependent on their respective likelihood of loss. We assign each loan grade for all loan classes an allowance percentage based on the perceived risk associated with that grade. The allowance for loan losses for all non-impaired loans is then calculated based on the allowance percentage assigned to the respective loan's

class and grade. The allowance for loan losses for all impaired loans and those nonaccrual residential mortgage loans that have been evaluated for a charge-off are based on an individual evaluation of impairment as previously described in the "Impaired loans" section.

The qualitative and quantitative factors taken into consideration when assigning the loan grades and allowance percentages to the loans within the corporate loan classes include: estimates of borrower default probabilities and collateral values; trends in delinquencies; loan growth; loan terms; changes in geographic distribution, updated loan-to-value ("LTV") ratios, lending policies, experience, ability and depth of lending management and other relevant staff, local, regional, national and international economic conditions; concentrations of credit risk; past loss history, Shared National Credit ("SNC") reviews and examination results from bank regulators. Loan grades for individual corporate loans are derived from analyzing two aspects of the risk factors in a particular loan, the obligor rating and the facility (collateral) rating. The obligor rating relates to a borrower's probability of default and the facility rating is utilized to estimate the anticipated loss given default. These two ratings, which are based on RJ Bank's internal historical loss data or historical long-term industry loss rates where RJ Bank has limited loss history, are considered in combination with certain management adjustments to derive the final corporate loan grades and allowance percentages.

For SBL, residential first mortgage loan and residential home equity loan classes, the qualitative factors considered when assigning allowance percentages include loan performance trends, loan product parameters and qualification requirements, whether the loan is originated or purchased, borrower credit scores at origination, occupancy (i.e., owner occupied, second home or investment property), documentation level, loan purpose, geographic concentrations, average loan size and loan policy exceptions. These qualitative factors, while considered and reviewed in establishing the allowance for loan losses, have generally not resulted in any quantitative adjustments to RJ Bank's historical loss rates.

Historical loss rates, a quantitative factor, are utilized when assigning the allowance percentages for residential first mortgage loans and residential home equity loans, and are derived from estimates of the probability of default and loss given default (severity). These estimated loss rates are based on RJ Bank's historical loss data, as adjusted by management, over a period of time. Prior to the quarter ended September 30, 2015, the estimated loss rates were based on a two-year period. During the fourth quarter of fiscal year 2015, this look-back period was revised to five years in order to encompass a full housing cycle. In addition to historical loss rates, one other quantitative factor utilized for the performing residential mortgage loan portfolio is updated LTV ratios. RJ Bank segregates the performing loans in the residential loan classes, on a quarterly basis, based upon updated LTV data. RJ Bank obtains the most recently available information (generally on a quarter-lag) to estimate the current LTV ratios on the individual loans in the residential mortgage loan portfolio. Current LTVs are estimated, on a loan by loan basis, utilizing the initial appraisal obtained at the time of origination, adjusted for housing price changes that have occurred since origination using current valuation indices. The value of the homes could vary from actual market values due to changes in the condition of the underlying property, variations in housing price changes within current valuation indices and other factors. The product of the default and loss severity percentages is then applied to the balance of residential first mortgages and residential home equity loan balances, which have been further stratified by updated LTV in order to calculate the related allowance for loan losses.

As TDRs, regardless of the loan portfolio segment or accrual status, are impaired loans, RJ Bank evaluates its credit risk on an individual loan basis. The amount of impairment recorded on these loans is measured based on the present value of the expected future cash flows discounted at the loan's effective interest rate, or if collateral dependent, based on the fair value of the collateral, less costs to sell. In addition, all redefaults (60 or more days delinquent subsequent to the loan's modification date) on TDRs are factored into each portfolio segments' allowance for loan losses. Qualitative information, such as geographic area and industry for TDRs and redefaulted TDRs, is considered and reviewed in the determination of expected loss rates previously discussed.

RJ Bank reserves for losses inherent in its unfunded lending commitments using a methodology similar to that used for loans in the respective portfolio segment, based upon loan grade and expected funding probabilities for fully binding commitments. This will result in some reserve variability over different periods depending upon the mix of the loan portfolio at the time and future funding expectations. All classes of impaired loans which have unfunded lending commitments are analyzed in conjunction with the impaired reserve process previously described.

Loan charge-off policies

Corporate loans are monitored on an individual basis, and loan grades are reviewed at least quarterly to ensure they reflect the loan's current credit risk. When RJ Bank determines that it is likely a corporate loan will not be collected in full, the loan is evaluated for potential impairment. After consideration of the borrower's ability to restructure the loan, alternative sources of repayment, and other factors affecting the borrower's ability to repay the debt, the portion of the loan deemed to be a confirmed loss, if any, is charged-off. For collateral-dependent loans secured by real estate, the amount of the loan considered a confirmed loss and charged-off is generally equal to the difference between the recorded investment in the loan and the collateral's appraised value less estimated costs to sell. In instances where the individual loan under evaluation is agented by another bank, and where

the agent bank has not ordered a timely update of an outdated appraisal, RJ Bank may make adjustments to previous appraised values for purposes of calculating specific reserves or taking partial charge-offs. These impaired loans are then considered to be in a workout status and we evaluate, on an ongoing basis, all factors relevant in determining the collectability and fair value of the loan. Appraisals on these impaired loans are obtained early in the impairment process as part of determining fair value and are updated as deemed necessary given the facts and circumstances of each individual situation. Certain factors such as guarantor recourse, additional borrower cash contributions or stable operations will mitigate the need for more frequent than annual appraisals. In its ongoing evaluation of each individual loan, RJ Bank may consider more frequent appraisals in locations where commercial property values are known to be experiencing a greater amount of volatility. For C&I and tax-exempt loans, RJ Bank evaluates all sources of repayment, including the estimated liquidation value of collateral, to arrive at the amount considered to be a loss and charged-off. Corporate banking and credit risk managers also hold a monthly meeting to review criticized loans (loans that are rated special mention or worse as defined by bank regulators, see Note 9 for further discussion). Additional charge-offs are taken when the value of the collateral changes or there is an adverse change in the expected cash flows.

The majority of RJ Bank's corporate loan portfolio is comprised of participations in either SNCs or other large syndicated loans in the U.S. or Canada. The SNCs are U.S. loan syndications totaling over $20 million that are shared between three or more regulated institutions. Most SNC loans are reviewed annually by the agent bank's regulator, a process in which the other participating banks have no involvement. Once the SNC regulatory review process is complete, RJ Bank receives a summary of the review of these SNC credits from the Office of the Comptroller of the Currency ("OCC"). This summary includes a synopsis of each loan's regulatory classification, loans that are designated for nonaccrual status and directed charge-offs. RJ Bank must be at least as critical with nonaccrual designations, directed charge-offs, and classifications as the OCC. This ensures that each bank participating in a SNC loan rates the loan at least as critical. Any classification changes may impact RJ Bank's reserves and charge-offs during the quarter that the SNC information is received from the OCC, however, these differences in classifications are generally minimal given the size of the SNC loan portfolio. The amount of such adjustments depend upon the classification and whether RJ Bank had the loan classified differently (either more or less critically) than the SNC review findings and, therefore, could result in higher, lower, or no change in loan loss provisions than previously recorded. RJ Bank incorporates into its ratings process any observed regulatory trends in the annual SNC exam process, but there will inherently be differences of opinion on individual credits due to the high degree of judgment involved. While the SNC review has historically been an annual process, regulators may increase the frequency of such examinations in the future. With respect to its ongoing credit evaluation process of the SNC portfolio, RJ Bank conforms to what it believes will be the regulators' view of individual credits. Corporate loans are subject to RJ Bank's internal review procedures and regulatory review by the OCC as part of RJ Bank's regulatory examination.

Every residential mortgage loan over 60 days past due is reviewed by RJ Bank personnel monthly and documented in a written report detailing delinquency information, balances, collection status, appraised value and other data points. RJ Bank senior management meets monthly to discuss the status, collection strategy and charge-off/write-down recommendations on every residential mortgage loan over 60 days past due with charge-offs considered on residential mortgage loans once the loans are delinquent 90 days or more and then generally taken before the loan is 120 days past due. A charge-off is taken against the allowance for loan losses for the difference between the loan amount and the amount that RJ Bank estimates will ultimately be collected, based on the value of the underlying collateral less estimated costs to sell. RJ Bank predominantly uses broker price opinions ("BPO") for these valuations as access to the property is restricted during the collection and foreclosure process and there is insufficient data available for a full appraisal to be performed. BPOs contain relevant and timely sale comparisons and listings in the marketplace and, therefore, we have found these BPOs to be reasonable determinants of market value in lieu of appraisals and more reliable than an automated valuation tool or the use of tax assessed values. A full appraisal is obtained post-foreclosure. RJ Bank takes further charge-offs against the owned asset if an appraisal has a lower valuation than the original BPO, but does not reverse previously charged-off amounts if the appraisal is higher than the original BPO. If a loan remains in pre-foreclosure status for more than nine months, an updated valuation is obtained and further charge-offs are taken against the allowance for loan losses, if necessary.

Other assets

RJ Bank carries investments in stock of the Federal Home Loan Bank of Atlanta ("FHLB") and the Federal Reserve Bank of Atlanta (the "FRB") at cost. These investments are held in accordance with certain membership requirements, are restricted, and lack a market. FHLB and FRB stock can only be sold to the issuer or another member institution at its par value. RJ Bank annually evaluates its holdings in FHLB and FRB stock for potential impairment based upon its assessment of the ultimate recoverability of the par value of the stock. This annual evaluation is comprised of a review of the capital adequacy, liquidity position and the overall financial condition of the FHLB and FRB to determine the impact these factors have on the ultimate recoverability of the par value of the respective stock. Impairment evaluations are performed more frequently if events or circumstances indicate there may be impairment. Any cash dividends received are recognized as interest income in the Consolidated Statements of Income and Comprehensive Income.

We maintain investments in a significant number of company-owned life insurance policies utilized to fund certain non-qualified deferred compensation plans and other employee benefit plans (see Notes 24 and 25 for information on the non-qualified deferred compensation plans). The life insurance policies are carried at cash surrender value as determined by the insurer. See Note 10 for additional information.

Investments in real estate partnerships held by consolidated variable interest entities

Raymond James Tax Credit Funds, Inc., a wholly owned subsidiary of RJF ("RJTCF"), is the managing member or general partner in low-income housing tax credit ("LIHTC") funds, some of which require consolidation (refer to the separate discussion of our policies regarding the evaluation of VIEs to determine if consolidation is required that follows). These funds invest in housing project limited partnerships or limited liability companies ("LLCs") which purchase and develop affordable housing properties qualifying for federal and state low-income housing tax credits. The balance presented is the investment in project partnership balance of all of the LIHTC fund VIEs which require consolidation. Additional information is presented in Note 11.

Property and equipment

Property, equipment and leasehold improvements are stated at cost less accumulated depreciation and amortization. Depreciation of assets is primarily provided for using the straight-line method over the estimated useful lives of the assets, which range from two to seven years for software, two to five years for furniture, fixtures and equipment and 10 to 31 years for buildings, building components, building improvements and land improvements. Leasehold improvements are amortized using the straight-line method over the shorter of the remaining lease term or the estimated useful lives of the assets.

Additions, improvements and expenditures that extend the useful life of an asset are capitalized. Expenditures for repairs and maintenance are charged to operations in the period incurred. Gains and losses on disposals of property and equipment are reflected in the Consolidated Statements of Income and Comprehensive Income in the period realized.

Intangible assets

Certain identifiable intangible assets we acquire such as customer relationships, trade names, developed technology, intellectual property, and non-compete agreements, are amortized over their estimated useful lives on a straight-line method, and are evaluated for potential impairment whenever events or changes in circumstances suggest that the carrying value of an asset or asset group may not be fully recoverable.

The rights to service mortgage loans, known as mortgage servicing rights ("MSRs"), are an intangible asset. Our MSRs arise when RJ Bank sells residential mortgage loans and retains the associated mortgage servicing rights. RJ Bank records the estimated fair value of MSRs and amortizes MSRs in proportion to, and over the period of estimated net servicing revenue. MSRs are assessed for impairment quarterly, based on their fair value, with any impairment recognized in our Consolidated Statements of Income and Comprehensive Income.

Goodwill

Goodwill represents the cost of acquired businesses in excess of the fair value of the related net assets acquired. GAAP does not provide for the amortization of indefinite-life intangible assets such as goodwill. Rather, these assets are subject to an evaluation of potential impairment on an annual basis, or more often if events or circumstances indicate there may be impairment. Goodwill impairment is determined by comparing the estimated fair value of a reporting unit with its respective carrying value. If the estimated fair value exceeds the carrying value, goodwill at the reporting unit level is not deemed to be impaired. However, if the estimated fair value is below carrying value, further analysis is required to determine the amount of the impairment. This further analysis involves assigning tangible assets and liabilities, identified intangible assets and goodwill to reporting units and comparing the fair value of each reporting unit to its carrying amount.

In the course of our evaluation of the potential impairment of goodwill, we may perform either a qualitative or a quantitative assessment. Our qualitative assessment of potential impairment may result in the determination that a quantitative impairment analysis is not necessary. Under this elective process, we assess qualitative factors to determine whether the existence of events or circumstances leads us to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If after assessing the totality of events or circumstances, we determine it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, then performing a quantitative analysis is not required. However, if we conclude otherwise, then we perform a quantitative impairment analysis.

If we either choose not to perform a qualitative assessment, or we choose to perform a qualitative assessment but are unable to qualitatively conclude that no impairment has occurred, then we perform a quantitative evaluation. In the case of a quantitative assessment, we estimate the fair value of the reporting unit which the goodwill that is subject to the quantitative analysis is associated (generally defined as the businesses for which financial information is available and reviewed regularly by management) and compare it to the carrying value. If the estimated fair value of a reporting unit is less than its carrying value, we estimate the fair value of all assets and liabilities of the reporting unit, including goodwill. If the carrying value of the reporting unit's goodwill is greater than the estimated fair value, an impairment charge is recognized for the excess.

We have elected December 31 as our annual goodwill impairment evaluation date (see Note 13 for additional information regarding the outcome of our goodwill impairment assessments).

Legal liabilities

We recognize liabilities for contingencies when there is an exposure that, when fully analyzed, indicates it is both probable that a liability has been incurred and the amount of loss can be reasonably estimated. Whether a loss is probable, and if so, the estimated range of possible loss, is based upon currently available information and is subject to significant judgment, a variety of assumptions, and uncertainties. When a range of possible loss can be estimated, we accrue the most likely amount within that range; if the most likely amount of possible loss within that range is not determinable, we accrue a minimum based on the range of possible loss. No liability is recognized for those matters which, in managements judgment, the determination of a reasonable estimate of loss is not possible.

We record liabilities related to legal proceedings in trade and other payables on our Consolidated Statements of Financial Condition. The determination of these liability amounts requires significant judgment on the part of management. Management considers many factors including, but not limited to: the amount of the claim; the amount of the loss in the client's account; the basis and validity of the claim; the possibility of wrongdoing on the part of one of our employees or financial advisors; previous results in similar cases; and legal precedents and case law. Each legal proceeding is reviewed with counsel in each accounting period and the liability balance is adjusted as deemed appropriate by management. Any change in the liability amount is recorded in the consolidated financial statements and is recognized as either a charge, or a credit, to net income in that period. The actual costs of resolving legal proceedings may be substantially higher or lower than the recorded liability amounts for those matters. We expense our cost of defense related to such matters in the period they are incurred.

Share-based compensation

We account for share-based awards through the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors based on estimated fair values. The compensation cost is recognized over the requisite service period of the awards and is calculated as the market value of the awards on the date of the grant. See Note 24 for additional information. In addition, we account for share-based awards to our independent contractor financial advisors in accordance with guidance applicable to accounting for equity instruments that are issued to other than employees for acquiring, or in conjunction with selling, goods or services and guidance applicable to accounting for derivative financial instruments indexed to, and potentially settled in, a company's own stock. Share-based awards granted to our independent contractor financial advisors are measured at their vesting date fair value and their fair value estimated at reporting dates prior to that time. The compensation expense recognized each period is based on the most recent estimated value. Further, we classify certain of these non-employee awards as liabilities at fair value upon vesting, with changes in fair value reported in earnings until these awards are exercised or forfeited. See Note 25 for additional information. Compensation expense is recognized for all share-based compensation with future service requirements over the requisite service period using the straight-line method, and in certain instances, the graded attribution method.

Deferred compensation plans

We maintain various deferred compensation plans for the benefit of certain employees and independent contractors that provide a return to the participant based upon the performance of various referenced investments. For certain of these plans, we invest directly, as a principal in such investments, related to our obligations to perform under the deferred compensation plans (see the "*Other Investments"* discussion within the financial instruments owned, financial instruments sold but not yet purchased and fair value section of this Note 2 for further discussion of these assets). For other such plans, including our Long Term Incentive Plan ("LTIP") and our Wealth Accumulation Plan, we purchase and hold life insurance on the lives of certain current and former participants to earn a competitive rate of return for participants and to provide a source of funds available to satisfy our obligations under the plan (see Note 10 for information regarding the carrying value of such policies). Compensation expense is recognized for all awards made under such plans with future service requirements over the requisite service period using the straight-line method. Changes in the value of the company-owned life insurance and other investments, as well as the expenses associated with

the related deferred compensation plans, are recorded in compensation, commissions and benefits expense on our Consolidated Statements of Income and Comprehensive Income. See Notes 24 and 25 for additional information.

Leases

We lease office space and equipment under operating leases. We recognize rent expense related to these operating leases on a straight-line basis over the lease term. The lease term commences on the earlier of the date when we become legally obligated for the rent payments or the date on which we take possession of the property. For tenant improvement allowances and rent holidays, we record a deferred rent liability in other liabilities on our Consolidated Statements of Financial Condition and amortize the deferred rent over the lease term as a reduction to rent expense in the Consolidated Statements of Income and Comprehensive Income. In instances where the office space or equipment under an operating lease will be abandoned prior to the expiration of the lease term (these instances primarily result from the effects of acquisitions), we accrue an estimate of any projected loss in the Consolidated Statements of Income and Comprehensive Income at the time such abandonment is known and any loss is estimable.

Acquisition related expense

Acquisition related expenses associated with material acquisitions are separately reported in the Consolidated Statement of Income and Comprehensive Income and include certain incremental expenses arising from our acquisitions. These costs do not represent recurring costs within the fully integrated combined organization.

Our most recent material acquisition was our April 2, 2012 acquisition of Morgan Keegan & Company, Inc. (a broker-dealer referred to as “MK & Co.”) and MK Holding, Inc. and certain of its affiliates (collectively referred to as “Morgan Keegan”) from Regions Financial Corporation (“Regions”). Our integration of Morgan Keegan was substantially complete as of September 30, 2013.

Foreign currency translation

We consolidate our foreign subsidiaries and certain joint ventures in which we hold an interest. The statement of financial condition of the subsidiaries and joint ventures we consolidate are translated at exchange rates as of the period end. The statements of income are translated either at an average exchange rate for the period, or in the case of the foreign subsidiary of RJ Bank, at the exchange rate in effect on the date which transactions occur. The gains or losses resulting from translating foreign currency financial statements into U.S. dollars are included in other comprehensive (loss) income and are thereafter presented in equity as a component of AOCI. The translation gains or losses related to RJ Bank’s U.S. subsidiaries’ net investment in their Canadian subsidiary are tax affected to the extent the Canadian subsidiary’s earnings will be repatriated to the U.S.

Income taxes

The objectives of accounting for income taxes are to recognize the amount of taxes payable or refundable for the current year. We utilize the asset and liability method to provide income taxes on all transactions recorded in the consolidated financial statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that we expect to be in effect when the underlying items of income and expense are realized. Judgment is required in assessing the future tax consequences of events that have been recognized in our financial statements or tax returns, including the repatriation of undistributed earnings of foreign subsidiaries. Variations in the actual outcome of these future tax consequences could materially impact our financial position, results of operations, or liquidity. See Note 20 for further information on our income taxes.

Earnings per share (“EPS”)

Basic EPS is calculated by dividing earnings available to common shareholders by the weighted-average number of common shares outstanding. Earnings available to common shareholders’ represents Net Income Attributable to Raymond James Financial, Inc. reduced by the allocation of earnings and dividends to participating securities. Diluted EPS is similar to basic EPS, but adjusts for the dilutive effect of outstanding stock options and restricted stock units by application of the treasury stock method.

Evaluation of VIEs to determine whether consolidation is required

A VIE requires consolidation by the entity’s primary beneficiary. Examples of entities that may be VIEs include certain legal entities structured as corporations, partnerships or limited liability companies.

We evaluate all of the entities in which we are involved to determine if the entity is a VIE and if so, whether we hold a variable interest and are the primary beneficiary. We hold variable interests in the following VIE's: the EIF Funds, a trust fund established for employee retention purposes ("Restricted Stock Trust Fund"), certain LIHTC funds ("LIHTC Funds"), various other partnerships and LLCs involving real estate ("Other Real Estate Limited Partnerships and LLCs"), certain new market tax credit funds ("NMTC Funds"), and certain funds formed for the purpose of making and managing investments in securities of other entities ("Managed Funds").

Determination of the primary beneficiary of a VIE

We assess VIEs for consolidation when we hold variable interests in the entity. We consolidate the VIEs that are subject to assessment when we are deemed to be the primary beneficiary of the VIE. Other than for the Managed Funds whose process is discussed separately, the process for determining whether we are the primary beneficiary of the VIE is to conclude whether we are a party to the VIE holding a variable interest that meets both of the following criteria: (1) has the power to make decisions that most significantly affect the economic performance of the VIE, and (2) has the obligations to absorb losses or the right to receive benefits that in either case could potentially be significant to the VIE.

EIF Funds

The EIF Funds are limited partnerships for which we are the general partner. The EIF Funds invest in certain of our private equity activities as well as other unaffiliated venture capital limited partnerships. The EIF Funds were established as compensation and retention measures for certain of our key employees. We are deemed to be the primary beneficiary and, accordingly, we consolidate the EIF Funds.

Restricted Stock Trust Fund

We utilize a trust in connection with certain of our restricted stock unit awards. This trust fund was established and funded for the purpose of acquiring our common stock in the open market to be used to settle restricted stock units granted as a retention vehicle for certain employees of our Canadian subsidiary. We are deemed to be the primary beneficiary and, accordingly, consolidate this trust fund.

LIHTC Funds

RJTCF is the managing member or general partner in a number of LIHTC Funds having one or more investor members or limited partners. These low-income housing tax credit funds are organized as LLCs or limited partnerships for the purpose of investing in a number of project partnerships, which are limited partnerships or LLCs that in turn purchase and develop low-income housing properties qualifying for tax credits.

Our determination of the primary beneficiary of each tax credit fund in which RJTCF has a variable interest requires judgment and is based on an analysis of all relevant facts and circumstances, including: (1) an assessment of the characteristics of RJTCF's variable interest and other involvement it has with the tax credit fund, including involvement of related parties and any de facto agents, as well as the involvement of other variable interest holders, namely, limited partners or investor members, and (2) the tax credit funds' purpose and design, including the risks that the tax credit fund was designed to create and pass through to its variable interest holders. In the design of tax credit fund VIEs, the overriding premise is that the investor members invest solely for tax attributes associated with the portfolio of low-income housing properties held by the fund, while RJTCF, as the managing member or general partner of the fund, is responsible for overseeing the fund's operations.

Non-guaranteed low-income housing tax credit funds

As the managing member or general partner of the fund, except for one guaranteed fund discussed below, RJTCF does not provide guarantees related to the delivery or funding of tax credits or other tax attributes to the investor members or limited partners of tax credit funds. The investor member(s) or limited partner(s) of the VIEs bear the risk of loss on their investment. Additionally, under the tax credit funds' designed structure, the investor member(s) or limited partner(s) receive nearly all of the tax credits and tax-deductible loss benefits designed to be delivered by the fund entity, as well as a majority of any proceeds upon a sale of a project partnership held by a tax credit fund (fund level residuals). RJTCF earns fees from the fund for its services in organizing the fund, identifying and acquiring the project partnership investments, ongoing asset management fees, and a share of any residuals arising from sale of project partnerships upon the termination of the fund.

The determination of whether RJTCF is the primary beneficiary of any of the non-guaranteed LIHTC Funds in which it holds a variable interest is primarily dependent upon: (1) the analysis of whether the other variable interest holders in the tax credit fund

hold significant participating rights over the activities that most significantly impact the tax credit funds' economic performance, and/or (2) whether RJTCF has an obligation to absorb losses of, or the right to receive benefits from, the tax credit fund VIE which could potentially be significant to the fund.

RJTCF sponsors two general types of non-guaranteed tax credit funds: either non-guaranteed single investor funds, or non-guaranteed multi-investor funds. In single investor funds, RJTCF has concluded that the one single investor member or limited partner in such funds has significant participating rights over the activities that most significantly impact the economics of the fund, resulting in a conclusion of shared power with the limited partner. Therefore RJTCF, as managing member or general partner of such funds, is not the one party with power over such activities and resultantly is not deemed to be the primary beneficiary of such single investor funds and these funds are not consolidated.

In multi-investor funds, RJTCF has concluded that since the participating rights over the activities that most significantly impact the economics of the fund are not held by one single investor member or limited partner, RJTCF is deemed to have the power over such activities. RJTCF then assesses whether its projected benefits to be received from the multi-investor funds, primarily from ongoing asset management fees or its share of any residuals upon the termination of the fund, are potentially significant to the fund. RJTCF is deemed to be the primary beneficiary, and therefore consolidates, any multi-investor fund for which it concludes that such benefits are potentially significant to the fund.

Among the LIHTC Fund entities evaluated, RJTCF determined that some of the LIHTC Funds it sponsors are not VIEs. These funds are either: (1) funds which RJTCF holds a significant interest (one of which typically holds interests in certain tax credit limited partnerships for less than 90 days, or until beneficial interest in the limited partnership or fund is sold to third parties), or (2) are single investor LIHTC Funds in which RJTCF holds an interest, but the LIHTC Fund does not meet the VIE determination criteria.

Direct investments in LIHTC project partnerships

RJ Bank is the investor member of a LIHTC fund in which a subsidiary of RJTCF is the managing member. This LIHTC fund is an investor member in certain LIHTC project partnerships. We evaluate the appropriate accounting for these investments after aggregating RJ Bank and RJTCF's interests and roles in the LIHTC fund. Since unrelated third parties are the managing member of the investee project partnerships, we have determined that consolidation of these project partnerships is not required; we account for these investments under the equity method. The carrying value of these project partnerships is included in other assets on our Consolidated Statements of Financial Condition (see Note 10 for additional information).

Guaranteed LIHTC fund

In conjunction with one of the multi-investor tax credit funds in which RJTCF is the managing member, RJTCF has provided the investor members with a guaranteed return on their investment in the fund (the "Guaranteed LIHTC Fund"). As a result of this guarantee obligation, RJTCF has determined that it is the primary beneficiary of, and accordingly consolidates, this guaranteed multi-investor fund.

Other real estate limited partnerships and LLCs

We have a variable interest in several limited partnerships involved in various real estate activities in which one of our subsidiaries is either the general partner or a limited partner. Given that we do not have the power to direct the activities that most significantly impact the economic performance of these partnerships or LLCs, we have determined that we are not the primary beneficiary of these VIEs. Accordingly, we do not consolidate these partnerships or LLCs.

New market tax credit funds

An entity which was at one time an affiliate of Morgan Keegan is the managing member of a number of NMTC Funds. NMTC Funds are organized as LLC's for the purpose of investing in eligible projects in qualified low-income areas or that serve qualified targeted populations. In return for making a qualified equity investment into the NMTC Fund, the Fund's investor member receives tax credits eligible to apply against their federal tax liability. These new market tax credits are taken by the investor member over a seven year period.

Each of these NMTC Funds have one investor member. We have concluded that in each of the NMTC Funds, the investor member of such funds has significant participating rights over the activities that most significantly impact the economics of the NMTC Fund and, therefore, our affiliate as the managing member of the NMTC Fund does not have the power over such activities. Accordingly, we are not deemed to be the primary beneficiary of these NMTC Funds and, therefore, they are not consolidated.

Managed Funds

The Managed Funds are VIEs in which one of our subsidiaries serves as the general partner. The Managed Funds satisfy the conditions for deferral of the determination of who is the primary beneficiary that is performed based upon the assessment of who has the power to direct the activities of the entity that most significantly impact the entity' s economic performance and the obligation to absorb losses of the entity that could potentially be significant to the entity. The deferral criteria which the Managed Funds meet are: 1) these funds' primary business activity involves investment in the securities of other entities not under common management for current income, appreciation or both; 2) ownership in the funds is represented by units of investments to which proportionate shares of net assets can be attributed; 3) the assets of the funds are pooled to avail owners of professional management; 4) the funds are the primary reporting entities; and 5) the funds do not have an obligation (explicit or implicit) to fund losses of the entities that could be potentially significant.

For the Managed Funds, our primary beneficiary assessment applies prior accounting guidance which assesses who will absorb a majority of the entity's expected losses, receive a majority of the entity's expected residual returns, or both. Based upon the outcome of our assessments, we have determined that we are not required to consolidate the Managed Funds.

NOTE 3 – ACQUISITIONS

Acquisitions during fiscal year 2015

Cougar Global Investments Limited

On April 30, 2015, we completed our acquisition of Cougar, which at such time had more than $1 billion in assets under advisement. For purposes of certain acquisition related financial reporting requirements, the Cougar acquisition is not considered to be a "material" acquisition as defined by Securities and Exchange Commission ("SEC") rules. We accounted for this acquisition under the acquisition method of accounting with the assets and liabilities of Cougar recorded as of the acquisition date at their respective fair value and consolidated in our financial statements. Cougar's results of operations have been included in our results prospectively since April 30, 2015, in our asset management segment.

See Note 13 for information regarding the identifiable intangible assets which resulted from the Cougar acquisition.

The Producers Choice LLC

On May 28, 2015, RJF entered into a definitive agreement to acquire TPC (the "TPC Agreement"). On July 31, 2015 (the "TPC Closing Date"), we completed our acquisition of TPC. For purposes of certain acquisition related financial reporting requirements, the TPC acquisition is not considered to be a "material" acquisition as defined by SEC rules. We accounted for this acquisition under the acquisition method of accounting with the assets and liabilities of TPC recorded as of the acquisition date at their respective fair value and consolidated in our financial statements. TPC's results of operations have been included in our results prospectively since July 31, 2015, in our private client group segment.

See Note 13 for information regarding the identifiable intangible assets and goodwill which resulted from the TPC acquisition. See Note 21 for additional information regarding the contingent consideration associated with this acquisition.

Acquisition during fiscal year 2013

On December 24, 2012, (the "ClariVest Acquisition Date") we completed our acquisition of a 45% interest in ClariVest.

As a result of certain protective rights we have under the operating agreement with ClariVest, we are consolidating ClariVest in our financial statements as of the ClariVest Acquisition Date. In addition, a put and call agreement was entered into on the ClariVest Acquisition Date that provides our Eagle subsidiary with various paths to majority ownership in ClariVest, the timing of which would depend upon the financial results of ClariVest's business and the tenure of existing ClariVest management. For purposes of certain acquisition related financial reporting requirements, the ClariVest acquisition is not considered to be a "material" acquisition as defined by SEC rules. We accounted for this acquisition under the acquisition method of accounting with the assets and liabilities of ClariVest recorded as of the ClariVest Acquisition Date at their respective fair value and consolidated in our financial statements. The results of operations of ClariVest have been included in our results prospectively since the ClariVest Acquisition Date, in our asset management segment.

See Note 13 for information regarding the identifiable intangible assets we recorded as a result of the ClariVest acquisition.

Acquisition related expenses

Acquisition related expenses associated with material acquisitions are separately reported in the Consolidated Statement of Income and Comprehensive Income and include certain incremental expenses arising from our acquisitions. Acquisition related expenses in fiscal year 2015 and 2014 are not material for separate reporting. In fiscal year 2013, we substantially completed the integration of Morgan Keegan, which we acquired during our fiscal year 2012, and we incurred the following acquisition related expenses related thereto during fiscal year 2013:

	Year ended September 30, 2013
	(in thousands)
Information systems integration and conversion costs [1]	$ 33,021
Occupancy and equipment [2]	15,999
Severance [3]	12,734
Temporary services	4,106
Financial advisory fees	1,176
Legal	476
Other integration costs	5,942
Total acquisition related expenses	$ 73,454

(1) Includes equipment costs related to the disposition of information systems equipment, and temporary services incurred specifically related to the information systems conversion.

(2) Includes lease costs associated with the abandonment of certain facilities resulting from the Morgan Keegan acquisition.

(3) Represents all costs associated with eliminating positions as a result of the Morgan Keegan acquisition, partially offset by the favorable impact arising from the forfeiture of any unvested accrued benefits.

NOTE 4 – CASH AND CASH EQUIVALENTS, ASSETS SEGREGATED PURSUANT TO REGULATIONS, AND DEPOSITS WITH CLEARING ORGANIZATIONS

Our cash and cash equivalents, assets segregated pursuant to regulations and other segregated assets, and deposits with clearing organization balances are as follows:

	September 30,	
	2015	2014
	(in thousands)	
Cash and cash equivalents:		
Cash in banks	$ 2,597,568	$ 2,195,683
Money market fund investments	3,438	3,380
Total cash and cash equivalents [1]	2,601,006	2,199,063
Cash segregated pursuant to federal regulations and other segregated assets [2]	2,905,324	2,489,264
Deposits with clearing organizations [3]	207,488	150,457
	$ 5,713,818	$ 4,838,784

(1) The total amounts presented include cash and cash equivalents of $1.22 billion and $1.21 billion as of September 30, 2015 and 2014, respectively, which are either held directly by RJF in depository accounts at third party financial institutions, held in a depository account at RJ Bank, or are otherwise invested by one of our subsidiaries on behalf of RJF, all of which are available without restrictions.

(2) Consists of cash maintained in accordance with Rule 15c3-3 under the Securities Exchange Act of 1934. RJ&A as a broker-dealer carrying client accounts, is subject to requirements related to maintaining cash or qualified securities in segregated reserve accounts for the exclusive benefit of its' clients. Additionally, RJ Ltd. is required to hold client Registered Retirement Savings Plan funds in trust.

(3) Consists of deposits of cash and cash equivalents or other marketable securities held by other clearing organizations or exchanges.

NOTE 5 – FAIR VALUE

Assets and liabilities measured at fair value on a recurring and nonrecurring basis are presented below:

September 30, 2015	Quoted prices in active markets for identical assets (Level 1) [1]	Significant other observable inputs (Level 2) [1]	Significant unobservable inputs (Level 3)	Netting adjustments [2]	Balance as of September 30, 2015
			(in thousands)		
Assets at fair value on a recurring basis:					
Trading instruments:					
Municipal and provincial obligations	$ 17,318	$ 188,745	$ —	$ —	$ 206,063
Corporate obligations	2,254	92,907	156	—	95,317
Government and agency obligations	7,781	108,166	—	—	115,947
Agency MBS and CMOs	253	117,317	—	—	117,570
Non-agency CMOs and ABS	—	46,931	9	—	46,940
Total debt securities	27,606	554,066	165	—	581,837
Derivative contracts	—	132,707	—	(90,621)	42,086
Equity securities	24,859	3,485	—	—	28,344
Corporate loans	—	4,814	—	—	4,814
Other	679	30,805	1,986	—	33,470
Total trading instruments	53,144	725,877	2,151	(90,621)	690,551
Available for sale securities:					
Agency MBS and CMOs	—	302,195	—	—	302,195
Non-agency CMOs	—	71,369	—	—	71,369
Other securities	1,402	—	—	—	1,402
ARS:					
Municipals	—	—	28,015	—	28,015
Preferred securities	—	—	110,749	—	110,749
Total available for sale securities	1,402	373,564	138,764	—	513,730
Private equity investments	—	—	209,088 [3]	—	209,088
Other investments [4]	230,839	17,347	565	—	248,751
Derivative instruments associated with offsetting matched book positions	—	389,457	—	—	389,457
Deposits with clearing organizations[5]	29,701	—	—	—	29,701
Other assets:					
Derivative contracts[6]	—	917	—	—	917
Other assets	—	—	4,975 [7]	—	4,975
Total other assets	—	917	4,975	—	5,892
Total assets at fair value on a recurring basis	$ 315,086	$ 1,507,162	$ 355,543	$ (90,621)	$ 2,087,170
Assets at fair value on a nonrecurring basis:					
Bank loans, net:					
Impaired loans	$ —	$ 28,082	$ 37,830	$ —	$ 65,912
Loans held for sale [8]	—	14,334	—	—	14,334
Total bank loans, net	—	42,416	37,830	—	80,246
OREO [9]	—	671	—	—	671
Total assets at fair value on a nonrecurring basis	$ —	$ 43,087	$ 37,830	$ —	$ 80,917

(continued on next page)

September 30, 2015	Quoted prices in active markets for identical assets (Level 1) [1]	Significant other observable inputs (Level 2) [1]	Significant unobservable inputs (Level 3)	Netting adjustments [2]	Balance as of September 30, 2015
			(in thousands)		
			(continued from previous page)		
Liabilities at fair value on a recurring basis:					
Trading instruments sold but not yet purchased:					
Municipal and provincial obligations	$ 17,966	$ 347	$ —	$ —	$ 18,313
Corporate obligations	167	33,017	—	—	33,184
Government obligations	205,658	—	—	—	205,658
Agency MBS and CMOs	5,007	—	—	—	5,007
Total debt securities	228,798	33,364	—	—	262,162
Derivative contracts	—	109,120	—	(88,881)	20,239
Equity securities	3,098	—	—	—	3,098
Other securities	—	2,494	—	—	2,494
Total trading instruments sold but not yet purchased	231,896	144,978	—	(88,881)	287,993
Derivative instruments associated with offsetting matched book positions	—	389,457	—	—	389,457
Trade and other payables:					
Derivative contracts [6]	—	7,545	—	—	7,545
Other liabilities	—	—	58	—	58
Total trade and other payables	—	7,545	58	—	7,603
Total liabilities at fair value on a recurring basis	$ 231,896	$ 541,980	$ 58	$ (88,881)	$ 685,053

(1) We had $1.1 million in transfers of financial instruments from Level 1 to Level 2 during the year ended September 30, 2015. These transfers were a result of a decrease in availability and reliability of the observable inputs utilized in the respective instruments' fair value measurement. We had $1.8 million in transfers of financial instruments from Level 2 to Level 1 during the year ended September 30, 2015. These transfers were a result of an increase in availability and reliability of the observable inputs utilized in the respective instruments' fair value measurement. Our policy is that the end of each respective quarterly reporting period determines when transfers of financial instruments between levels are recognized.

(2) For derivative transactions not cleared through an exchange, and where permitted, we have elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists (see Note 19 for additional information regarding offsetting financial instruments). Deposits associated with derivative transactions cleared through an exchange are included in deposits with clearing organizations on our Consolidated Statements of Financial Condition.

(3) The portion of these investments we do not own is approximately $52 million as of September 30, 2015 and are included as a component of noncontrolling interest in our Consolidated Statements of Financial Condition. The weighted average portion we own is approximately $157 million or 75% of the total private equity investments of $209 million included in our Consolidated Statements of Financial Condition.

(4) Other investments include $106 million of financial instruments that are related to obligations to perform under certain deferred compensation plans (see Note 2 and Note 24 for further information regarding these plans).

(5) Consists of deposits we provide to clearing organizations or exchanges that are in the form of marketable securities.

(6) Consists of derivatives arising from RJ Bank's business operations, see Note 18 for additional information.

(7) Includes forward commitments to purchase GNMA or FNMA MBS arising from our fixed income public finance operations (see Note 21 for additional information regarding these commitments).

(8) Includes individual loans classified as held for sale, which were recorded at a fair value lower than cost.

(9) Represents the fair value of foreclosed properties which were measured at a fair value subsequent to their initial classification as OREO. The recorded value in the Consolidated Statements of Financial Condition is net of the estimated selling costs.

September 30, 2014	Quoted prices in active markets for identical assets (Level 1) [1]	Significant other observable inputs (Level 2) [1]	Significant unobservable inputs (Level 3)	Netting adjustments [2]	Balance as of September 30, 2014
			(in thousands)		
Assets at fair value on a recurring basis:					
Trading instruments:					
Municipal and provincial obligations	$ 11,407	$ 192,482	$ —	$ —	$ 203,889
Corporate obligations	1,989	109,939	—	—	111,928
Government and agency obligations	7,376	93,986	—	—	101,362
Agency MBS and CMOs	247	127,172	—	—	127,419
Non-agency CMOs and ABS	—	58,364	11	—	58,375
Total debt securities	21,019	581,943	11	—	602,973
Derivative contracts	—	89,923	—	(61,718)	28,205
Equity securities	28,834	5,264	44	—	34,142
Corporate loans	—	990	—	—	990
Other	566	10,208	2,309	—	13,083
Total trading instruments	50,419	688,328	2,364	(61,718)	679,393
Available for sale securities:					
Agency MBS and CMOs	—	267,720	—	—	267,720
Non-agency CMOs	—	91,918	—	—	91,918
Other securities	1,916	—	—	—	1,916
ARS:					
Municipals	—	—	86,696 [3]	—	86,696
Preferred securities	—	—	114,039	—	114,039
Total available for sale securities	1,916	359,638	200,735	—	562,289
Private equity investments	—	—	211,666 [4]	—	211,666
Other investments [5]	212,753	1,267	1,731	—	215,751
Derivative instruments associated with offsetting matched book positions	—	323,337	—	—	323,337
Other assets:					
Derivative contracts[6]	—	2,462	—	—	2,462
Other assets	—	—	787 [7]	—	787
Total other assets	—	2,462	787	—	3,249
Total assets at fair value on a recurring basis	$ 265,088	$ 1,375,032	$ 417,283	$ (61,718)	$ 1,995,685
Assets at fair value on a nonrecurring basis:					
Bank loans, net					
Impaired loans	$ —	$ 34,799	$ 55,528	$ —	$ 90,327
Loans held for sale [8]	—	22,611	—	—	22,611
Total bank loans, net	—	57,410	55,528	—	112,938
OREO [9]	—	768	—	—	768
Total assets at fair value on a nonrecurring basis	$ —	$ 58,178	$ 55,528	$ —	$ 113,706

(continued on next page)

September 30, 2014	Quoted prices in active markets for identical assets (Level 1) [1]	Significant other observable inputs (Level 2) [1]	Significant unobservable inputs (Level 3)	Netting adjustments [2]	Balance as of September 30, 2014
			(in thousands)		
			(continued from previous page)		
Liabilities at fair value on a recurring basis:					
Trading instruments sold but not yet purchased:					
Municipal and provincial obligations	$ 11,093	$ 554	$ —	$ —	$ 11,647
Corporate obligations	29	15,304	—	—	15,333
Government obligations	187,424	—	—	—	187,424
Agency MBS and CMOs	738	—	—	—	738
Total debt securities	199,284	15,858	—	—	215,142
Derivative contracts	—	75,668	—	(63,296)	12,372
Equity securities	10,884	2	—	—	10,886
Total trading instruments sold but not yet purchased	210,168	91,528	—	(63,296)	238,400
Derivative instruments associated with offsetting matched book positions	—	323,337	—	—	323,337
Other liabilities	—	—	58	—	58
Total liabilities at fair value on a recurring basis	$ 210,168	$ 414,865	$ 58	$ (63,296)	$ 561,795

(1) We had $800 thousand in transfers of financial instruments from Level 1 to Level 2 during the year ended September 30, 2014. These transfers were a result of a decrease in availability and reliability of the observable inputs utilized in the respective instruments' fair value measurement. We had $1.3 million in transfers of financial instruments from Level 2 to Level 1 during the year ended September 30, 2014. These transfers were a result of an increase in availability and reliability of the observable inputs utilized in the respective instruments' fair value measurement. Our policy is that the end of each respective quarterly reporting period determines when transfers of financial instruments between levels are recognized.

(2) For derivative transactions not cleared through an exchange, and where permitted, we have elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists (see Note 19 for additional information regarding offsetting financial instruments). Deposits associated with derivative transactions cleared through an exchange are included in deposits with clearing organizations on our Consolidated Statements of Financial Condition.

(3) Includes $58 million of Jefferson County, Alabama Limited Obligation School Warrants ARS.

(4) The portion of these investments we do not own is approximately $55 million as of September 30, 2014 and are included as a component of noncontrolling interest in our Consolidated Statements of Financial Condition. The weighted average portion we own is approximately $157 million or 74% of the total private equity investments of $212 million included in our Consolidated Statements of Financial Condition.

(5) Other investments include $144 million of financial instruments that are related to obligations to perform under certain deferred compensation plans (see Note 2 and Note 24 for further information regarding these plans).

(6) Consists of derivatives arising from RJ Bank's business operations, see Note 18 for additional information.

(7) Primarily comprised of forward commitments to purchase GNMA or FNMA MBS arising from our fixed income public finance operations (see Note 21 for additional information regarding these commitments) and to a much lesser extent, other certain commitments.

(8) Includes individual loans classified as held for sale, which were recorded at a fair value lower than cost.

(9) Represents the fair value of foreclosed properties which were measured at a fair value subsequent to their initial classification as OREO. The recorded value in the Consolidated Statements of Financial Condition is net of the estimated selling costs.

The adjustment to fair value of the nonrecurring fair value measures for the year ended September 30, 2015 resulted in a $900 thousand additional provision for loan losses relating to impaired loans and $300 thousand in other losses relating to loans held for sale and OREO. The adjustment to fair value of the nonrecurring fair value measures for the year ended September 30, 2014 resulted in a $500 thousand additional provision for loan losses relating to impaired loans and $200 thousand in other losses relating to loans held for sale and OREO.

Changes in Level 3 recurring fair value measurements

The realized and unrealized gains and losses for assets and liabilities within the Level 3 category presented in the tables below may include changes in fair value that were attributable to both observable and unobservable inputs.

Additional information about Level 3 assets and liabilities measured at fair value on a recurring basis is presented below:

Year ended September 30, 2015
Level 3 assets at fair value
(in thousands)

	Financial assets									Financial liabilities
	Trading instruments				Available for sale securities		Private equity, other investments and other assets			Payables-trade and other
	Corporate Obligations	Non-agency CMOs & ABS	Equity securities	Other	ARS – municipals	ARS - preferred securities	Private equity investments	Other investments	Other assets	Other liabilities
Fair value September 30, 2014	$ —	$ 11	$ 44	$ 2,309	$ 86,696	$ 114,039	$ 211,666	$ 1,731	$ 787	$ (58)
Total gains (losses) for the year:										
Included in earnings	(40)	1	5	(180)	11,042	25	43,091 [1]	57	4,188	—
Included in other comprehensive income	—	—	—	—	(6,112)	(3,065)	—	—	—	—
Purchases and contributions	33	—	20	34,478	—	—	7,831	—	—	—
Sales	(31)	—	—	(34,621)	(63,611)	—	(4,343)	—	—	—
Redemptions by issuer	—	—	—	—	—	(250)	—	(681)	—	—
Distributions	—	(3)	—	—	—	—	(49,157)	(542)	—	—
Transfers: [2]										
Into Level 3	209	—	—	—	—	—	—	—	—	—
Out of Level 3	(15)	—	(69)	—	—	—	—	—	—	—
Fair value September 30, 2015	$ 156	$ 9	$ —	$ 1,986	$ 28,015	$ 110,749	$ 209,088	$ 565	$ 4,975	$ (58)
Change in unrealized gains (losses) for the year included in earnings (or changes in net assets) for assets held at the end of the year	$ (40)	$ 1	$ —	$ 11	$ (910)	$ (3,065)	$ 41,625	$ 57	$ 4,203	$ —

(1) Primarily results from valuation adjustments of certain private equity investments. Since we only own a portion of these investments, our share of the net valuation adjustments resulted in a gain of $31.6 million which is included in net income attributable to RJF (after noncontrolling interests). The noncontrolling interests' share of the net valuation adjustments was a gain of approximately $11.5 million.

(2) Our policy is that the end of each respective quarterly reporting period determines when transfers of financial instruments between levels are recognized.

Year ended September 30, 2014
Level 3 assets at fair value
(in thousands)

	Financial assets										Financial liabilities
	Trading instruments			Available for sale securities			Private equity, other investments, other receivables and other assets				Payables-trade and other
	Non-agency CMOs & ABS	Equity securities	Other	Non-agency CMOs	ARS – municipals	ARS - preferred securities	Private equity investments	Other investments	Other receivables	Other assets	Other liabilities
Fair value September 30, 2013	$ 14	$ 35	$ 3,956	$ 78	$ 130,934	$ 110,784	$ 216,391	$ 4,607	$ 2,778	$ 15	$ (60)
Total gains (losses) for the year:											
Included in earnings	(1)	6	(371)	(27)	7,046	44	15,883 [(1)]	174	(2,778)	772	2
Included in other comprehensive income	—	—	—	22	(403)	3,536	—	—	—	—	—
Purchases and contributions	—	103	18,628	—	—	—	16,192	63	—	—	—
Sales	—	(98)	(19,904)	(38)	(23,355)	—	(7,076)	(2,698)	—	—	—
Redemptions by issuer	—	—	—	—	(27,526)	(325)	—	(64)	—	—	—
Distributions	(2)	—	—	(35)	—	—	(39,053)	(351)	—	—	—
Transfers: [(2)]											
Into Level 3	—	—	—	—	—	—	11,924 [(3)]	—	—	—	—
Out of Level 3	—	(2)	—	—	—	—	(2,595) [(4)]	—	—	—	—
Fair value September 30, 2014	$ 11	$ 44	$ 2,309	$ —	$ 86,696	$ 114,039	$ 211,666	$ 1,731	$ —	$ 787	$ (58)
Change in unrealized gains (losses) for the year included in earnings (or changes in net assets) for assets held at the end of the year	$ 20	$ 6	$ (7)	$ —	$ (403)	$ 3,536	$ 15,883	$ 267	$ —	$ 772	$ —

(1) Primarily results from valuation adjustments of certain private equity investments. Since we only own a portion of these investments, our share of the net valuation adjustments resulted in a gain of $12.2 million which is included in net income attributable to RJF (after noncontrolling interests). The noncontrolling interests' share of the net valuation adjustments was a gain of approximately $3.7 million.

(2) Our policy is that the end of each respective quarterly reporting period determines when transfers of financial instruments between levels are recognized.

(3) The transfers into Level 3 were comprised of transfers of balances previously included in other receivables on our Consolidated Statements of Financial Condition.

(4) The transfers out of Level 3 were comprised of transfers of cash and cash equivalent balances previously included in private equity investments on our Consolidated Statements of Financial Condition.

Year ended September 30, 2013
Level 3 assets at fair value
(in thousands)

	Financial assets											Financial liabilities
	Trading instruments				Available for sale securities			Private equity, other investments, other receivables and other assets				Payables-trade and other
	Municipal & provincial obligations	Non-agency CMOs & ABS	Equity securities	Other	Non-agency CMOs	ARS – municipals	ARS - preferred securities	Private equity investments	Other investments	Other receivables	Other assets	Other liabilities
Fair value September 30, 2012	$ 553	$ 29	$ 6	$ 5,850	$ 249	$ 123,559	$ 110,193	$ 336,927	$ 4,092	$ —	$ —	$ (98)
Total gains (losses) for the year:												
Included in earnings	—	(4)	1	(140)	(396)	439	1,164	70,688 [1]	1,390	2,778	—	38
Included in other comprehensive income	—	—	—	—	281	13,212	7,504	—	—	—	—	—
Purchases and contributions	—	—	63	9,885	—	—	25	20,416	—	—	—	—
Sales	(553)	—	(37)	(9,234)	—	(4,971)	(90)	(165,878) [2]	(691)	—	—	—
Redemptions by issuer	—	—	—	—	—	(1,305)	(8,012)	—	—	—	—	—
Distributions	—	(11)	—	(2,390)	(56)	—	—	(45,762)	(315)	—	—	—
Transfers: [3]										—		
Into Level 3	—	—	2	—	—	—	—	—	131	—	15	—
Out of Level 3	—	—	—	(15)	—	—	—	—	—	—	—	—
Fair value September 30, 2013	$ —	$ 14	$ 35	$ 3,956	$ 78	$ 130,934	$ 110,784	$ 216,391	$ 4,607	$ 2,778	$ 15	$ (60)
Change in unrealized gains (losses) for the year included in earnings (or changes in net assets) for assets held at the end of the year	$ —	$ 38	$ (1)	$ (140)	$ (396)	$ 13,212	$ 7,504	$ 5,354	$ 1,511	$ 2,778	$ —	$ —

(1) Results from valuation adjustments of certain private equity investments and the April 29, 2013 sale of our indirect investment in Albion Medical Holdings, Inc. ("Albion"). Since we only own a portion of these investments, our share of the net valuation adjustments and Albion sale resulted in a gain of $28.4 million which is included in net income attributable to RJF (after noncontrolling interests). The noncontrolling interests' share of the net gain is approximately $42.3 million.

(2) Results primarily from the April 29, 2013 sale of our indirect investment in Albion. The amount is presented gross, and therefore includes amounts pertaining to interests held by others.

(3) Our policy is that the end of each respective quarterly reporting period determines when transfers of financial instruments between levels are recognized.

As of September 30, 2015, 7.9% of our assets and 3.2% of our liabilities are instruments measured at fair value on a recurring basis. Instruments measured at fair value on a recurring basis categorized as Level 3 as of September 30, 2015 represent 17% of our assets measured at fair value. In comparison as of September 30, 2014, 8.6% and 3% of our assets and liabilities, respectively, represented instruments measured at fair value on a recurring basis. Instruments measured at fair value on a recurring basis categorized as Level 3 as of September 30, 2014 represented 21% of our assets measured at fair value. The balances of our level 3 assets have decreased compared to September 30, 2014, primarily as a result of the sale or redemption of a portion of our ARS portfolio. Accordingly, Level 3 instruments as a percentage of total financial instruments have decreased by 4% as compared to September 30, 2014.

Gains and losses included in earnings are presented in net trading profit and other revenues in our Consolidated Statements of Income and Comprehensive Income as follows:

For the year ended September 30, 2015	Net trading profits	Other revenues
	(in thousands)	
Total (losses) gains included in revenues	$ (214)	$ 58,403
Change in unrealized (losses) gains for assets held at the end of the year	$ (28)	$ 41,910

For the year ended September 30, 2014	Net trading profits	Other revenues
	(in thousands)	
Total (losses) gains included in revenues	$ (366)	$ 21,116
Change in unrealized gains for assets held at the end of the year	$ 19	$ 20,055

For the year ended September 30, 2013	Net trading profits	Other revenues
	(in thousands)	
Total (losses) gains included in revenues	$ (143)	$ 76,101
Change in unrealized (losses) gains for assets held at the end of the year	$ (103)	$ 29,963

Quantitative information about level 3 fair value measurements

The significant assumptions used in the valuation of level 3 financial instruments are as follows (the table that follows includes the significant majority of the financial instruments we hold that are classified as level 3 measures):

Level 3 financial instrument	Fair value at September 30, 2015 (in thousands)	Valuation technique(s)	Unobservable input	Range (weighted-average)
Recurring measurements:				
Available for sale securities:				
ARS:				
Municipals	$ 10,547	Discounted cash flow		
			Average discount rate[a]	5.51% - 7.33% (6.42%)
			Average interest rates applicable to future interest income on the securities[b]	1.33% - 3.15% (2.24%)
			Prepayment year[c]	2018 - 2025 (2022)
Municipals	$ 17,468	Discounted cash flow	Average discount rate[a]	3.39% - 4.39% (3.89%)
			Average interest rates applicable to future interest income on the securities[b]	1.25% - 1.25% (1.25%)
			Prepayment year[c]	2015 - 2020 (2020)
Preferred securities	$ 110,749	Discounted cash flow	Average discount rate[a]	3.51% - 5.27% (4.32%)
			Average interest rates applicable to future interest income on the securities[b]	1.7% - 2.96% (1.81%)
			Prepayment year[c]	2015 - 2020 (2020)
Private equity investments:	$ 53,653	Income or market approach:		
		Scenario 1 - income approach - discounted cash flow	Discount rate[a]	13% - 21% (17.5%)
			Terminal growth rate of cash flows	3% - 3% (3%)
			Terminal year	2017 - 2019 (2018)
		Scenario 2 - market approach - market multiple method	EBITDA Multiple[d]	4.75 - 7.5 (6.1)
			Weighting assigned to outcome of scenario 1/scenario 2	72%/28%
	$ 155,435	Transaction price or other investment-specific events[e]	Not meaningful[e]	Not meaningful[e]
Nonrecurring measurements:				
Impaired loans: residential	$ 23,567	Discounted cash flow	Prepayment rate	7 yrs. - 12 yrs. (10.2 yrs.)
Impaired loans: corporate	$ 14,263	Appraisal or discounted cash flow value[f]	Not meaningful[f]	Not meaningful[f]

(a) Represents discount rates used when we have determined that market participants would take these discounts into account when pricing the investments.

(b) Future interest rates are projected based upon a forward interest rate path, plus a spread over such projected base rate that is applicable to each future period for each security within this portfolio segment. The interest rates presented represent the average interest rate over all projected periods for securities within the portfolio segment.

(c) Assumed year of at least a partial redemption of the outstanding security by the issuer.

(d) Represents amounts used when we have determined that market participants would use such multiples when pricing the investments.

(e) Certain private equity investments are valued initially at the transaction price until either our annual review, significant transactions occur, new developments become known, or we receive information from the fund manager that allows us to update our proportionate share of net assets, when any of which indicate that a change in the carrying values of these investments is appropriate.

(f) The valuation techniques used for the impaired corporate loan portfolio as of September 30, 2015 were appraisals less selling costs for the collateral dependent loans and discounted cash flows for the remaining impaired loans that are not collateral dependent.

Qualitative disclosure about unobservable inputs

For our recurring fair value measurements categorized within Level 3 of the fair value hierarchy, the sensitivity of the fair value measurement to changes in significant unobservable inputs and interrelationships between those unobservable inputs are described below:

Auction rate securities:

One of the significant unobservable inputs used in the fair value measurement of auction rate securities presented within our available for sale securities portfolio relates to judgments regarding whether the level of observable trading activity is sufficient to conclude markets are active. Where insufficient levels of trading activity are determined to exist as of the reporting date, then management's assessment of how much weight to apply to trading prices in inactive markets versus management's own valuation models could significantly impact the valuation conclusion. The valuation of the securities impacted by changes in management's assessment of market activity levels could be either higher or lower, depending upon the relationship of the inactive trading prices compared to the outcome of management's internal valuation models.

The future interest rate and maturity assumptions impacting the valuation of the auction rate securities are directly related. As short-term interest rates rise, due to the variable nature of the penalty interest rate provisions embedded in most of these securities in the event auctions fail to set the security's interest rate, then a penalty rate that is specified in the security increases. These penalty rates are based upon a stated interest rate spread over what is typically a short-term base interest rate index. Management estimates that at some level of increase in short-term interest rates, issuers of the securities will have the economic incentive to refinance (and thus prepay) the securities. Therefore, the short-term interest rate assumption directly impacts the input related to the timing of any projected prepayment. The faster and steeper short-term interest rates rise, the earlier prepayments will likely occur and the higher the fair value of the security.

Private equity investments:

The significant unobservable inputs used in the fair value measurement of private equity investments relate to the financial performance of the investment entity and the market's required return on investments from entities in industries in which we hold investments. Significant increases (or decreases) in our investment entities' future economic performance will have a directly proportional impact on the valuation results. The value of our investment moves inversely with the market's expectation of returns from such investments. Should the market require higher returns from industries in which we are invested, all other factors held constant, our investments will decrease in value. Should the market accept lower returns from industries in which we are invested, all other factors held constant, our investments will increase in value.

Fair value option

The fair value option is an accounting election that allows the reporting entity to apply fair value accounting for certain financial assets and liabilities on an instrument by instrument basis. As of September 30, 2015 and 2014, we have elected not to choose the fair value option for any of our financial assets or liabilities not already recorded at fair value.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated Statements of Financial Condition at fair value

Many, but not all, of the financial instruments we hold are recorded at fair value in the Consolidated Statements of Financial Condition.

The following represent financial instruments in which the ending balance at September 30, 2015 and 2014 is not carried at fair value, as computed in accordance with the GAAP definition of fair value (an exit price concept, refer to Note 2 for further discussion), on our Consolidated Statements of Financial Condition:

Short-term financial instruments: The carrying value of short-term financial instruments, including cash and cash equivalents, assets segregated pursuant to federal regulations and other segregated assets, securities either purchased or sold under agreements to resell and other collateralized financings are recorded at amounts that approximate the fair value of these instruments. These financial instruments generally expose us to limited credit risk and have no stated maturities or have short-term maturities and carry interest rates that approximate market rates. Under the fair value hierarchy, cash and cash equivalents and assets segregated pursuant to federal regulations and other segregated assets are classified as Level 1. Securities either purchased or sold under agreements to resell and other collateralized financings are classified as Level 2 under the fair value hierarchy because they are generally variable rate instruments collateralized by U.S. government or agency securities.

Bank loans, net: These financial instruments are primarily comprised of loans originated or purchased by RJ Bank and include C&I loans, commercial and residential real estate loans, tax-exempt loans, as well as SBL intended to be held until maturity or payoff, and are recorded at amounts that result from the application of the loans held for investment methodologies summarized in Note 2. In addition, these financial instruments consist of loans held for sale, which are carried at the lower of cost or market value. A portion of these loans held for sale are included in the nonrecurring fair value measurements in addition to any impaired loans held for investment.

Fair values for both variable and fixed-rate loans held for investment are estimated using discounted cash flow analyses, based on interest rates currently being offered for loans with similar terms to borrowers of similar credit quality. This methodology for estimating the fair value of loans does not consider other market variables and, therefore, is not based on an exit price concept. Refer to Note 2 for information regarding the fair value policies specific to loans held for sale.

Receivables and other assets: Brokerage client receivables, receivables from broker-dealers and clearing organizations, stock borrowed receivables, loans to financial advisors, net, other receivables, and certain other assets are recorded at amounts that approximate fair value and are classified as Level 2 and 3 under the fair value hierarchy. As specified under GAAP, the FHLB and FRB stock are recorded at cost, which we have determined to approximate their estimated fair value, and are classified as Level 2 under the fair value hierarchy.

Bank deposits: The fair values for demand deposits are equal to the amount payable on demand at the reporting date (that is, their carrying amounts). The carrying amounts of variable-rate money market and savings accounts approximate their fair values at the reporting date as these are short-term in nature. Due to their demand or short-term nature, the demand deposits and variable rate money market and savings accounts are classified as Level 2 under the fair value hierarchy. Fair values for fixed-rate certificate accounts are estimated using a discounted cash flow calculation that applies interest rates currently being offered on certificates to a schedule of expected monthly maturities on time deposits. These fixed rate certificate accounts are classified as Level 3 under the fair value hierarchy.

Payables: Brokerage client payables, payables due to broker-dealers and clearing organizations, stock loaned payables, and trade and other payables are recorded at amounts that approximate fair value and are classified as Level 2 under the fair value hierarchy.

Other borrowings: The fair value of the mortgage note payable associated with the financing of our Saint Petersburg, Florida corporate offices is based upon an estimate of the current market rates for similar loans. The carrying amount of the remaining components of our other borrowings approximate their fair value due to the relative short-term nature of such borrowings, some of which are day-to-day. In addition to the mortgage note payable, the portion of other borrowings which are not “day-to-day” are primarily comprised of RJ Bank’s borrowings from the FHLB which, by their nature, reflect terms that approximate current market rates for similar loans. Under the fair value hierarchy, our other borrowings are classified as Level 2.

Senior notes payable: The fair value of our senior notes payable is based upon recent trades of those or other similar debt securities in the market.

Off-balance sheet financial instruments: The fair value of unfunded commitments to extend credit is based on a methodology similar to that described above for bank loans and further adjusted for the probability of funding. The fair value of these unfunded lending commitments, in addition to the fair value of other off-balance sheet financial instruments, are classified as Level 3 under the fair value hierarchy. See Note 27 for further discussion of off-balance sheet financial instruments.

The estimated fair values by level within the fair value hierarchy and the carrying amounts of certain of our financial instruments not carried at fair value are as follows:

	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total estimated fair value	Carrying amount
			(in thousands)		
September 30, 2015					
Financial assets:					
Bank loans, net[1]	$ —	$ 105,199	$ 12,799,065	$ 12,904,264	$ 12,907,776
Financial liabilities:					
Bank deposits	$ —	$ 11,564,963	$ 358,981	$ 11,923,944	$ 11,919,881
Other borrowings[2]	$ —	$ 38,455	$ —	$ 38,455	$ 37,716
Senior notes payable	$ 368,760	$ 892,963	$ —	$ 1,261,723	$ 1,149,222
September 30, 2014					
Financial assets:					
Bank loans, net[1]	$ —	$ 23,678	$ 10,738,136	$ 10,761,814	$ 10,857,662
Financial liabilities:					
Bank deposits	$ —	$ 9,684,221	$ 344,234	$ 10,028,455	$ 10,028,924
Other borrowings[2]	$ —	$ 42,309	$ —	$ 42,309	$ 41,802
Senior notes payable	$ 366,100	$ 912,861	$ —	$ 1,278,961	$ 1,149,034

(1) Excludes all impaired loans and loans held for sale which have been recorded at fair value in the Consolidated Statements of Financial Condition at September 30, 2015 and 2014.

(2) Excludes the components of other borrowings that are recorded at amounts that approximate their fair value in the Consolidated Statements of Financial Condition at September 30, 2015 and 2014.

NOTE 6 – TRADING INSTRUMENTS AND TRADING INSTRUMENTS SOLD BUT NOT YET PURCHASED

	September 30, 2015		September 30, 2014	
	Trading instruments	Instruments sold but not yet purchased	Trading instruments	Instruments sold but not yet purchased
	(in thousands)			
Municipal and provincial obligations	$ 206,063	$ 18,313	$ 203,889	$ 11,647
Corporate obligations	95,317	33,184	111,928	15,333
Government and agency obligations	115,947	205,658	101,362	187,424
Agency MBS and CMOs	117,570	5,007	127,419	738
Non-agency CMOs and ABS	46,940	—	58,375	—
Total debt securities	581,837	262,162	602,973	215,142
Derivative contracts [1]	42,086	20,239	28,205	12,372
Equity securities	28,344	3,098	34,142	10,886
Corporate loans	4,814	—	990	—
Other [2]	33,470	2,494	13,083	—
Total	$ 690,551	$ 287,993	$ 679,393	$ 238,400

(1) Represents the derivative contracts held for trading purposes. These balances do not include all derivative instruments. See Note 18 for further information regarding all of our derivative transactions, and see Note 19 for additional information regarding offsetting financial instruments.

(2) Of the trading instruments balance as of September 30, 2015, $30.8 million is comprised of brokered certificates of deposit issued by third party financial institutions. As of September 30, 2014, we held $10.2 million of such instruments.

See Note 5 for additional information regarding the fair value of trading instruments and trading instruments sold but not yet purchased.

NOTE 7 – AVAILABLE FOR SALE SECURITIES

Available for sale securities are comprised of MBS and CMOs owned by RJ Bank and ARS owned by one of our non-broker-dealer subsidiaries.

Certain available for sale securities owned by RJ Bank were sold during the year ended September 30, 2015. The sales resulted in proceeds of $12.2 million, and a loss of $600 thousand which is included in other revenues on our Consolidated Statements of Income and Comprehensive Income. During the year ended September 30, 2014, there were $26.6 million in proceeds, and a gain of $300 thousand, from sales of available for sale securities owned by RJ Bank. There were no sales of available for sale securities owned by RJ Bank during the year ended September 30, 2013.

Certain securities in the ARS portion of the available for sale securities portfolio have been redeemed by their issuer or sold in market transactions. Sale or redemption activities within the ARS portion of the portfolio resulted in aggregate proceeds of $63.9 million, and a gain of $11.1 million in the year ended September 30, 2015 which is included in other revenues on our Consolidated Statements of Income and Comprehensive Income. Nearly all of the ARS proceeds as well as the gain on sale arising during the year ended September 30, 2015, resulted from the sale of Jefferson County, Alabama Limited Obligation School Warrants ARS. During the year ended September 30, 2014, sales or redemption activities within the ARS portion of the available for sale securities portfolio resulted in proceeds of $51.2 million, and a gain of $7.1 million, which includes $26.5 million in proceeds, and a gain of $5.5 million, from the redemption of Jefferson County, Alabama Sewer Revenue Refunding Warrants ARS. During the year ended September 30, 2013, sales or redemption activities within the ARS portfolio resulted in proceeds of $14.4 million, and a gain of $1.6 million.

The amortized cost and fair values of available for sale securities are as follows:

	Cost basis	Gross unrealized gains	Gross unrealized losses	Fair value
		(in thousands)		
September 30, 2015				
Available for sale securities:				
Agency MBS and CMOs	$ 301,001	$ 1,538	$ (344)	$ 302,195
Non-agency CMOs [1]	75,678	18	(4,327)	71,369
Other securities	1,575	—	(173)	1,402
Total RJ Bank available for sale securities	378,254	1,556	(4,844)	374,966
Auction rate securities:				
Municipal obligations	28,966	576	(1,527)	28,015
Preferred securities	104,302	6,447	—	110,749
Total auction rate securities	133,268	7,023	(1,527)	138,764
Total available for sale securities	$ 511,522	$ 8,579	$ (6,371)	$ 513,730
September 30, 2014				
Available for sale securities:				
Agency MBS and CMOs	$ 267,927	$ 822	$ (1,029)	$ 267,720
Non-agency CMOs [2]	98,946	56	(7,084)	91,918
Other securities	1,575	341	—	1,916
Total RJ Bank available for sale securities	368,448	1,219	(8,113)	361,554
Auction rate securities:				
Municipal obligations	81,535	6,240	(1,079)	86,696
Preferred securities	104,526	9,513	—	114,039
Total auction rate securities	186,061	15,753	(1,079)	200,735
Total available for sale securities	$ 554,509	$ 16,972	$ (9,192)	$ 562,289
September 30, 2013				
Available for sale securities:				
Agency MBS and CMOs	$ 326,858	$ 707	$ (1,536)	$ 326,029
Non-agency CMOs [3]	142,169	4	(13,152)	129,021
Other securities	1,575	501	—	2,076
Total RJ Bank available for sale securities	470,602	1,212	(14,688)	457,126
Auction rate securities:				
Municipal obligations	125,371	6,831	(1,268)	130,934
Preferred securities	104,808	5,976	—	110,784
Total auction rate securities	230,179	12,807	(1,268)	241,718
Total available for sale securities	$ 700,781	$ 14,019	$ (15,956)	$ 698,844

(1) As of September 30, 2015, the non-credit portion of OTTI recorded in AOCI was $3.6 million (before taxes).

(2) As of September 30, 2014, the non-credit portion of OTTI recorded in AOCI was $6.1 million (before taxes).

(3) As of September 30, 2013, the non-credit portion of OTTI recorded in AOCI was $11.1 million (before taxes).

See Note 5 for additional information regarding the fair value of available for sale securities.

The contractual maturities, amortized cost, carrying values and current yields for our available for sale securities are as presented below. Since RJ Bank's available for sale securities are backed by mortgages, actual maturities will differ from contractual maturities because borrowers may have the right to prepay obligations without prepayment penalties. Expected maturities of ARS may differ significantly from contractual maturities, as issuers may have the right to call or prepay obligations with or without call or prepayment penalties.

	September 30, 2015				
	Within one year	After one but within five years	After five but within ten years	After ten years	Total
	($ in thousands)				
Agency MBS & CMOs:					
Amortized cost	$ —	$ 14,107	$ 30,989	$ 255,905	$ 301,001
Carrying value	—	14,202	31,145	256,848	302,195
Weighted-average yield	—	1.28%	1.51%	1.23%	1.26%
Non-agency CMOs:					
Amortized cost	$ —	$ —	$ —	$ 75,678	$ 75,678
Carrying value	—	—	—	71,369	71,369
Weighted-average yield	—	—	—	2.44%	2.44%
Other securities:					
Amortized cost	$ —	$ —	$ —	$ 1,575	$ 1,575
Carrying value	—	—	—	1,402	1,402
Weighted-average yield	—	—	—	—	—
Sub-total agency MBS & CMOs, non-agency CMOs and other securities:					
Amortized cost	$ —	$ 14,107	$ 30,989	$ 333,158	$ 378,254
Carrying value	—	14,202	31,145	329,619	374,966
Weighted-average yield	—	1.28%	1.51%	1.49%	1.49%
Auction rate securities					
Municipal obligations:					
Amortized cost	$ —	$ —	$ —	$ 28,966	$ 28,966
Carrying value	—	—	—	28,015	28,015
Weighted-average yield	—	—	—	0.13%	0.13%
Preferred securities:					
Amortized cost	$ —	$ —	$ —	$ 104,302	$ 104,302
Carrying value	—	—	—	110,749	110,749
Weighted-average yield	—	—	—	0.33%	0.33%
Sub-total auction rate securities:					
Amortized cost	$ —	$ —	$ —	$ 133,268	$ 133,268
Carrying value	—	—	—	138,764	138,764
Weighted-average yield	—	—	—	0.29%	0.29%
Total available for sale securities:					
Amortized cost	$ —	$ 14,107	$ 30,989	$ 466,426	$ 511,522
Carrying value	—	14,202	31,145	468,383	513,730
Weighted-average yield	—	1.28%	1.51%	1.13%	1.17%

The gross unrealized losses and fair value, aggregated by investment category and length of time the individual securities have been in a continuous unrealized loss position, are as follows:

	September 30, 2015					
	Less than 12 months		12 months or more		Total	
	Estimated fair value	Unrealized losses	Estimated fair value	Unrealized losses	Estimated fair value	Unrealized losses
	(in thousands)					
Agency MBS and CMOs	$ 3,488	$ (37)	$ 29,524	$ (307)	$ 33,012	$ (344)
Non-agency CMOs	—	—	65,854	(4,327)	65,854	(4,327)
Other securities	1,402	(173)	—	—	1,402	(173)
ARS municipal obligations	225	(3)	11,627	(1,524)	11,852	(1,527)
Total	$ 5,115	$ (213)	$ 107,005	$ (6,158)	$ 112,120	$ (6,371)

	September 30, 2014					
	Less than 12 months		12 months or more		Total	
	Estimated fair value	Unrealized losses	Estimated fair value	Unrealized losses	Estimated fair value	Unrealized losses
	(in thousands)					
Agency MBS and CMOs	$ 18,062	$ (53)	$ 71,688	$ (976)	$ 89,750	$ (1,029)
Non-agency CMOs	5,506	(357)	69,970	(6,727)	75,476	(7,084)
ARS municipal obligations	—	—	12,072	(1,079)	12,072	(1,079)
Total	$ 23,568	$ (410)	$ 153,730	$ (8,782)	$ 177,298	$ (9,192)

The reference point for determining when securities are in a loss position is the reporting period end. As such, it is possible that a security had a fair value that exceeded its amortized cost on other days during the period.

Agency MBS and CMOs

The FNMA, the Federal Home Loan Mortgage Corporation ("FHLMC"), as well the GNMA, guarantee the contractual cash flows of the agency MBS and CMOs. At September 30, 2015, of the six U.S. government-sponsored enterprise MBS and CMOs in an unrealized loss position, two were in a continuous unrealized loss position for less than 12 months and four were for 12 months or more. We do not consider these securities other-than-temporarily impaired due to the guarantee provided by FNMA, FHLMC, and GNMA as to the full payment of principal and interest, and the fact that we have the ability and intent to hold these securities to maturity.

Non-agency CMOs

All individual non-agency securities are evaluated for OTTI on a quarterly basis. Only those non-agency CMOs whose amortized cost basis we do not expect to recover in full are considered to be other than temporarily impaired as we have the ability and intent to hold these securities to maturity. To assess whether the amortized cost basis of non-agency CMOs will be recovered, RJ Bank performs a cash flow analysis for each security. This comprehensive process considers borrower characteristics and the particular attributes of the loans underlying each security. Loan level analysis includes a review of historical default rates, loss severities, liquidations, prepayment speeds and delinquency trends. In addition to historical details, home prices and the economic outlook are considered to derive the assumptions utilized in the discounted cash flow model to project security specific cash flows, which factors in the amount of credit enhancement specific to the security. The difference between the present value of the cash flows expected and the amortized cost basis is the credit loss, and it is recorded as OTTI.

The significant assumptions used in the cash flow analysis of non-agency CMOs are as follows:

	September 30, 2015	
	Range	Weighted-average [1]
Default rate	0% - 5.4%	3.4%
Loss severity	0% - 71.3%	36.39%
Prepayment rate	5.9% - 32.1%	8.69%

(1) Represents the expected activity for the next twelve months.

At September 30, 2015, 14 of the 16 non-agency CMOs were in a continuous unrealized loss position. All of these securities were in that position for 12 months or more. Based on the expected cash flows derived from the model utilized in our analysis, we expect to recover all unrealized losses not already recorded in earnings on our non-agency CMOs. However, it is possible that the underlying loan collateral of these securities will perform worse than current expectations, which may lead to adverse changes in the cash flows expected to be collected on these securities and potential future OTTI losses. As residential mortgage loans are the underlying collateral of these securities, the unrealized losses at September 30, 2015 reflect the uncertainty in the markets for these instruments.

ARS

Our cost basis in the ARS we hold is the fair value of the securities in the period in which we acquired them. The par value of the ARS we hold as of September 30, 2015 is $155.9 million. Only those ARS whose amortized cost basis we do not expect to recover in full are considered to be other-than-temporarily impaired as we have the ability and intent to hold these securities to maturity. All of our ARS securities are evaluated for OTTI on a quarterly basis.

Within our ARS preferred securities, we analyze the credit ratings associated with each security as an indicator of potential credit impairment. As of September 30, 2015, and including subsequent ratings changes, all of the ARS preferred securities were rated investment grade by at least one rating agency and there is no potential impairment since the fair values of these securities exceed their cost basis.

Within our municipal ARS holdings as of September 30, 2015, there are three municipal ARS securities with a fair value less than their cost basis, indicating potential impairment. We analyzed the credit ratings associated with these securities as an indicator of potential credit impairment, and including subsequent ratings changes, determined that these securities maintained investment grade ratings by at least one rating agency. We have the ability and intent to hold these securities to maturity and expect to recover their entire cost basis and therefore concluded that none of the potential impairment within our municipal ARS portfolio is related to potential credit loss.

Other-than-temporarily impaired securities

Although there is no intent to sell either our ARS or our non-agency CMOs and it is not more likely than not that we will be required to sell these securities, as of September 30, 2015 we do not expect to recover the entire amortized cost basis of certain securities within our non-agency CMO portfolio.

Changes in the amount of OTTI related to credit losses recognized in other revenues on available for sale securities are as follows:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Amount related to credit losses on securities we held at the beginning of the year	$ 18,703	$ 28,217	$ 27,581
Decreases to the amount related to credit loss for securities sold during the year	(6,856)	(9,541)	—
Additional increases to the amount related to credit loss for which an OTTI was previously recognized	—	27	636
Amount related to credit losses on securities we held at the end of the year	$ 11,847	$ 18,703	$ 28,217

NOTE 8 - RECEIVABLES FROM AND PAYABLES TO BROKERAGE CLIENTS

The information presented below is exclusive of the transactions and balances that arise between RJ Bank and clients of our broker-dealer subsidiaries. Such transactions include those arising from the RJBDP program (as hereinafter defined in Note 14) and securities that serve as collateral under RJ Bank's SBL program (see Note 9 for additional information).

Receivables from brokerage clients

Receivables from brokerage clients include amounts arising from normal cash and margin transactions and fees receivable. Margin receivables are collateralized by securities owned by brokerage clients. Such collateral is not included within any balances reflected on our Consolidated Statements of Financial Condition (see Note 19 for information regarding our use of a portion of this collateral in certain borrowing transactions). The amount receivable from clients is as follows:

	September 30,	
	2015	2014
	(in thousands)	
Brokerage client receivables	$ 2,185,586	$ 2,127,078
Allowance for doubtful accounts	(290)	(274)
Brokerage client receivables, net	$ 2,185,296	$ 2,126,804

Payables to brokerage clients

Payables to brokerage clients include brokerage client funds on deposit awaiting reinvestment. The following table presents a summary of such payables:

	September 30,		
	2015	2014	
Brokerage client payables:	(in thousands)		
Interest bearing	$ 4,148,952	$ 3,447,720	(1)
Non-interest bearing	522,121	508,384	(1)
Total brokerage client payables	$ 4,671,073	$ 3,956,104	

(1) Revised from the amount reported in the prior year, as $130.4 million of the September 30, 2014 reported balance associated with our Canadian operations has been reclassified from interest bearing, to non-interest bearing, in order to present both periods on a consistent basis.

NOTE 9 – BANK LOANS, NET

Bank client receivables are comprised of loans originated or purchased by RJ Bank and include C&I loans, tax-exempt loans, SBL, as well as commercial and residential real estate loans. These receivables are collateralized by first or second mortgages on residential or other real property, other assets of the borrower, a pledge of revenue or are unsecured.

We segregate our loan portfolio into six loan portfolio segments: C&I, CRE, CRE construction, tax-exempt, residential mortgage, and SBL. These portfolio segments also serve as the portfolio loan classes for purposes of credit analysis, except for residential mortgage loans which are further disaggregated into residential first mortgage and residential home equity classes.

The following table presents the balances for both the held for sale and held for investment loan portfolios as well as the associated percentage of each portfolio segment in RJ Bank's total loan portfolio:

	September 30,					
	2015		2014		2013	
	Balance	%	Balance	%	Balance	%
	($ in thousands)					
Loans held for sale, net[1]	$ 119,519	1%	$ 45,988	—	$ 110,292	1%
Loans held for investment:						
Domestic:						
C&I loans	5,893,631	44%	5,378,592	49%	4,439,668	50%
CRE construction loans	126,402	1%	76,733	1%	38,964	—
CRE loans	1,679,332	13%	1,415,093	13%	1,075,986	12%
Tax-exempt loans	484,537	4%	122,218	1%	—	—
Residential mortgage loans	1,959,786	15%	1,749,513	16%	1,743,787	20%
SBL	1,479,562	11%	1,021,358	9%	554,210	6%
Foreign:						
C&I loans	1,034,387	8%	1,043,755	9%	806,337	9%
CRE construction loans	35,954	—	17,462	—	21,876	—
CRE loans	374,822	3%	274,070	2%	207,060	2%
Residential mortgage loans	2,828	—	2,234	—	1,863	—
SBL	1,942	—	2,390	—	1,595	—
Total loans held for investment	13,073,183		11,103,418		8,891,346	
Net unearned income and deferred expenses	(32,424)		(37,533)		(43,936)	
Total loans held for investment, net[1]	13,040,759		11,065,885		8,847,410	
Total loans held for sale and investment	13,160,278	100%	11,111,873	100%	8,957,702	100%
Allowance for loan losses	(172,257)		(147,574)		(136,501)	
Bank loans, net	$ 12,988,021		$ 10,964,299		$ 8,821,201	

	September 30,			
	2012		2011	
	Balance	%	Balance	%
	($ in thousands)			
Loans held for sale, net[1]	$ 160,515	2%	$ 102,236	2%
Loans held for investment:				
Domestic:				
C&I loans	4,553,061	55%	3,987,122	59%
CRE construction loans	26,360	1%	29,087	—
CRE loans	828,414	10%	742,889	11%
Residential mortgage loans	1,690,465	21%	1,754,925	26%
SBL	350,770	4%	7,438	—
Foreign:				
C&I loans	465,770	6%	113,817	2%
CRE construction loans	23,114	—	—	—
CRE loans	108,036	1%	—	—
Residential mortgage loans	1,521	—	1,561	—
SBL	1,725	—	—	—
Total loans held for investment	8,049,236		6,636,839	
Net unearned income and deferred expenses	(70,698)		(45,417)	
Total loans held for investment, net[1]	7,978,538		6,591,422	
Total loans held for sale and investment	8,139,053	100%	6,693,658	100%
Allowance for loan losses	(147,541)		(145,744)	
Bank loans, net	$ 7,991,512		$ 6,547,914	

(1) Net of unearned income and deferred expenses, which includes purchase premiums, purchase discounts, and net deferred origination fees and costs.

At September 30, 2015, the FHLB had a blanket lien on RJ Bank's residential mortgage loan portfolio as security for the repayment of certain borrowings. See Note 15 for more information regarding borrowings from the FHLB.

Loans held for sale

RJ Bank originated or purchased $1.2 billion, $1.0 billion and $1.3 billion of loans held for sale during the years ended September 30, 2015, 2014 and 2013, respectively. Proceeds from the sale of held for sale loans amounted to $213 million, $189 million and $300 million for the years ended September 30, 2015, 2014 and 2013, respectively. Net gains resulting from such sales amounted to $1.7 million, $800 thousand and $3.6 million for the years ended September 30, 2015, 2014 and 2013, respectively. Unrealized losses recorded in the Consolidated Statements of Income and Comprehensive Income to reflect the loans held for sale at the lower of cost or market value were $400 thousand, $400 thousand and $2.9 million for the years ended September 30, 2015, 2014 and 2013, respectively.

Purchases and sales of loans held for investment

The following table presents purchases and sales of any loans held for investment by portfolio segment:

	C&I	CRE	Residential mortgage	Total
	(in thousands)			
Year ended September 30, 2015				
Purchases	$ 792,921	$ —	$ 220,311 [2]	$ 1,013,232
Sales[1]	$ 108,983	$ —	$ —	$ 108,983
Year ended September 30, 2014				
Purchases	$ 536,167	$ 5,000	$ 29,667	$ 570,834
Sales[1]	$ 219,914	$ —	$ —	$ 219,914
Year ended September 30, 2013				
Purchases	$ 358,309	$ 5,048	$ 26,618	$ 389,975
Sales[1]	$ 176,186	$ —	$ —	$ 176,186

(1) Represents the recorded investment of loans held for investment that were transferred to loans held for sale during the respective period and subsequently sold to a third party during the same period. Corporate loan sales generally occur as part of a loan workout situation.

(2) Includes the purchase from another financial institution of residential mortgage loans totaling $207.3 million in principal loan balance.

Aging analysis of loans held for investment

The following table presents an analysis of the payment status of loans held for investment by portfolio segment:

	30-89 days and accruing	90 days or more and accruing	Total past due and accruing	Nonaccrual [1]	Current and accruing	Total loans held for investment [2]
	(in thousands)					
As of September 30, 2015:						
C&I loans	$ 163	$ —	$ 163	$ —	$ 6,927,855	$ 6,928,018
CRE construction loans	—	—	—	—	162,356	162,356
CRE loans	—	—	—	4,796	2,049,358	2,054,154
Tax-exempt loans	—	—	—	—	484,537	484,537
Residential mortgage loans:						
First mortgage loans	2,906	—	2,906	47,504	1,891,384	1,941,794
Home equity loans/lines	30	—	30	319	20,471	20,820
SBL	—	—	—	—	1,481,504	1,481,504
Total loans held for investment, net	$ 3,099	$ —	$ 3,099	$ 52,619	$ 13,017,465	$ 13,073,183
As of September 30, 2014:						
C&I loans	$ 124	$ —	$ 124	$ —	$ 6,422,223	$ 6,422,347
CRE construction loans	—	—	—	—	94,195	94,195
CRE loans	—	—	—	18,876	1,670,287	1,689,163
Tax-exempt loans	—	—	—	—	122,218	122,218
Residential mortgage loans:						
First mortgage loans	1,648	—	1,648	61,391	1,668,724	1,731,763
Home equity loans/lines	57	—	57	398	19,529	19,984
SBL	—	—	—	—	1,023,748	1,023,748
Total loans held for investment, net	$ 1,829	$ —	$ 1,829	$ 80,665	$ 11,020,924	$ 11,103,418

(1) Includes $22.4 million and $41.4 million of nonaccrual loans at September 30, 2015 and 2014, respectively, which are performing pursuant to their contractual terms.

(2) Excludes any net unearned income and deferred expenses.

Nonperforming loans represent those loans on nonaccrual status, troubled debt restructurings, and accruing loans which are 90 days or more past due and in the process of collection. The gross interest income related to these nonperforming loans reflected in the previous table, which would have been recorded had these loans been current in accordance with their original terms, totaled $1.3 million, $3.7 million and $3.2 million for the years ended September 30, 2015, 2014 and 2013, respectively. The interest income recognized on nonperforming loans was $1 million, $1.3 million and $1.5 million for the years ended September 30, 2015, 2014 and 2013, respectively.

Impaired loans and troubled debt restructurings

The following table provides a summary of RJ Bank's impaired loans:

	September 30,					
	2015			2014		
	Gross recorded investment	Unpaid principal balance	Allowance for losses	Gross recorded investment	Unpaid principal balance	Allowance for losses
	(in thousands)					
Impaired loans with allowance for loan losses:[1]						
C&I loans	$ 10,599	$ 11,204	$ 1,132	$ 11,959	$ 12,563	$ 1,289
Residential - first mortgage loans	35,442	48,828	4,014	43,806	61,372	5,012
Total	46,041	60,032	5,146	55,765	73,935	6,301
Impaired loans without allowance for loan losses:[2]						
CRE loans	4,796	11,611	—	18,876	39,717	—
Residential - first mortgage loans	20,221	29,598	—	21,987	32,949	—
Total	25,017	41,209	—	40,863	72,666	—
Total impaired loans	$ 71,058	$ 101,241	$ 5,146	$ 96,628	$ 146,601	$ 6,301

(1) Impaired loan balances have had reserves established based upon management's analysis.

(2) When the discounted cash flow, collateral value or market value equals or exceeds the carrying value of the loan, then the loan does not require an allowance. These are generally loans in process of foreclosure that have already been adjusted to fair value.

The preceding table includes $4.8 million CRE, $10.6 million C&I, and $32.8 million residential first mortgage TDRs at September 30, 2015 and $18.9 million CRE and $36.6 million residential first mortgage TDRs at September 30, 2014.

The average balance of the total impaired loans and the related interest income recognized in the Consolidated Statements of Income and Comprehensive Income are as follows:

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Average impaired loan balance:			
C&I loans	$ 11,311	$ 6,183	$ 15,398
CRE loans	14,694	23,416	13,352
Residential mortgage loans:			
First mortgage loans	59,049	70,370	77,511
Home equity loans/lines	—	21	93
Total	$ 85,054	$ 99,990	$ 106,354
Interest income recognized:			
Residential mortgage loans:			
First mortgage loans	$ 1,426	$ 1,592	$ 1,644
Total	$ 1,426	$ 1,592	$ 1,644

During the years ended September 30, 2015, 2014, and 2013, RJ Bank granted concessions to borrowers having financial difficulties, for which the resulting modification was deemed a TDR. The concessions granted for the respective first mortgage residential loans were interest rate reductions, amortization and maturity date extensions, capitalization of past due payments, or release of liability ordered under Chapter 7 bankruptcy not reaffirmed by the borrower. The concessions granted for the corporate loans were amortization and maturity date extensions.

The table below presents the TDRs that occurred during the respective periods presented:

	Number of contracts	Pre-modification outstanding recorded investment	Post-modification outstanding recorded investment
		($ in thousands)	
Year ended September 30, 2015			
Residential – first mortgage loans	6	$ 1,117	$ 1,196
Year ended September 30, 2014			
C&I loans	1	$ 19,200	$ 15,035
CRE loans	2	22,291	22,291
Residential – first mortgage loans	14	3,599	3,892
Total	17	$ 45,090	$ 41,218
Year ended September 30, 2013			
Residential – first mortgage loans	56	$ 13,270	$ 13,551

There were no TDRs for which there was a payment default and for which the respective loan was modified as a TDR during the year ended September 30, 2015. During the years ended September 30, 2014, and 2013, there were three, and two residential first mortgage TDRs, respectively, with recorded investments of $900 thousand and $300 thousand, respectively, for which there was a payment default and for which the respective loan was modified as a TDR within the 12 months prior to the default.

As of September 30, 2015 and 2014 , RJ Bank had one outstanding commitment on a C&I TDR in the amount $600 thousand.

Credit quality indicators

The credit quality of RJ Bank's loan portfolio is summarized monthly by management using the standard asset classification system utilized by bank regulators for the SBL and residential mortgage loan portfolios and internal risk ratings, which correspond to the same standard asset classifications for the corporate loan portfolios. These classifications are divided into three groups: Not Classified (Pass), Special Mention, and Classified or Adverse Rating (Substandard, Doubtful and Loss). These terms are defined as follows:

Pass – Loans which are well protected by the current net worth and paying capacity of the obligor (or guarantors, if any) or by the fair value, less costs to acquire and sell, of any underlying collateral in a timely manner.

Special Mention – Loans which have potential weaknesses that deserve management's close attention. These loans are not adversely classified and do not expose RJ Bank to sufficient risk to warrant an adverse classification.

Substandard – Loans which are inadequately protected by the current sound worth and paying capacity of the obligor or by the collateral pledged, if any. Loans with this classification are characterized by the distinct possibility that RJ Bank will sustain some loss if the deficiencies are not corrected.

Doubtful – Loans which have all the weaknesses inherent in loans classified as substandard with the added characteristic that the weaknesses make collection or liquidation in full highly questionable and improbable on the basis of currently known facts, conditions and values.

Loss – Loans which are considered by management to be uncollectible and of such little value that their continuance on RJ Bank's books as an asset, without establishment of a specific valuation allowance or charge-off, is not warranted. RJ Bank does not have any loan balances within this classification because, in accordance with its accounting policy, loans, or a portion thereof considered to be uncollectible, are charged-off prior to the assignment of this classification.

The credit quality of RJ Bank's held for investment loan portfolio is as follows:

	Pass	Special mention[1]	Substandard[1]	Doubtful[1]	Total
			(in thousands)		
September 30, 2015					
C&I	$ 6,739,179	$ 97,623	$ 91,216	$ —	$ 6,928,018
CRE construction	162,356	—	—	—	162,356
CRE	2,034,692	39	19,423	—	2,054,154
Tax-exempt	484,537	—	—	—	484,537
Residential mortgage					—
First mortgage	1,868,044	14,890	58,860	—	1,941,794
Home equity	20,372	128	320	—	20,820
SBL	1,481,504	—	—	—	1,481,504
Total	$ 12,790,684	$ 112,680	$ 169,819	$ —	$ 13,073,183
September 30, 2014					
C&I	$ 6,321,662	$ 83,101	$ 17,584	$ —	$ 6,422,347
CRE construction	94,195	—	—	—	94,195
CRE	1,669,897	191	18,167	908	1,689,163
Tax-exempt	122,218	—	—	—	122,218
Residential mortgage					—
First mortgage	1,647,325	15,346	69,092	—	1,731,763
Home equity	19,572	—	412	—	19,984
SBL	1,023,748	—	—	—	1,023,748
Total	$ 10,898,617	$ 98,638	$ 105,255	$ 908	$ 11,103,418

(1) Loans classified as special mention, substandard or doubtful are all considered to be "criticized" loans.

The credit quality of RJ Bank's performing residential first mortgage loan portfolio is additionally assessed utilizing updated LTV ratios. RJ Bank segregates all of its performing residential first mortgage loan portfolio with higher reserve percentages allocated to the higher LTV loans. Current LTVs are updated using the most recently available information (generally on a one quarter lag) and are estimated based on the initial appraisal obtained at the time of origination, adjusted using relevant market indices for housing price changes that have occurred since origination. The value of the homes could vary from actual market values due to changes in the condition of the underlying property, variations in housing price changes within current valuation indices, and other factors.

The table below presents the most recently available update of the performing residential first mortgage loan portfolio summarized by current LTV. The amounts in the table represent the entire loan balance:

	Balance[1]
	(in thousands)
LTV range:	
LTV less than 50%	$ 606,093
LTV greater than 50% but less than 80%	984,470
LTV greater than 80% but less than 100%	110,388
LTV greater than 100%, but less than 120%	17,595
LTV greater than 120%	2,282
Total	$ 1,720,828

(1) Excludes loans that have full repurchase recourse for any delinquent loans.

Allowance for loan losses

Changes in the allowance for loan losses of RJ Bank by portfolio segment are as follows:

	Loans held for investment						
	C&I	CRE construction	CRE	Tax-exempt	Residential mortgage	SBL	Total
	(in thousands)						
Year ended September 30, 2015							
Balance at beginning of year:	$ 103,179	$ 1,594	$ 25,022	$ 1,380	$ 14,350	$ 2,049	$ 147,574
Provision (benefit) for loan losses	16,091	1,176	2,205	4,569	(1,363)	892	23,570
Net (charge-offs)/recoveries:							
Charge-offs	(1,191)	—	—	—	(1,667)	—	(2,858)
Recoveries	611	—	3,773	—	1,206	25	5,615
Net (charge-offs)/recoveries	(580)	—	3,773	—	(461)	25	2,757
Foreign currency translation adjustment	(1,067)	(63)	(514)	—	—	—	(1,644)
Balance at September 30, 2015	$ 117,623	$ 2,707	$ 30,486	$ 5,949	$ 12,526	$ 2,966	$ 172,257
Year ended September 30, 2014							
Balance at beginning of year:	$ 95,994	$ 1,000	$ 19,266	$ —	$ 19,126	$ 1,115	$ 136,501
Provision (benefit) for loan losses	9,560	625	5,860	1,380	(4,759)	899	13,565
Net (charge-offs)/recoveries:							
Charge-offs	(1,845)	—	(16)	—	(2,015)	—	(3,876)
Recoveries	16	—	80	—	1,998	35	2,129
Net (charge-offs)/recoveries	(1,829)	—	64	—	(17)	35	(1,747)
Foreign currency translation adjustment	(546)	(31)	(168)	—	—	—	(745)
Balance at September 30, 2014	$ 103,179	$ 1,594	$ 25,022	$ 1,380	$ 14,350	$ 2,049	$ 147,574
Year ended September 30, 2013							
Balance at beginning of year:	$ 92,409	$ 739	$ 27,546	$ —	$ 26,138	$ 709	$ 147,541
Provision (benefit) for loan losses	4,505	273	(301)	—	(2,540)	628	2,565
Net (charge-offs)/recoveries:							
Charge-offs	(813)	—	(9,599)	—	(6,771)	(254)	(17,437)
Recoveries	117	—	1,680	—	2,299	32	4,128
Net charge-offs	(696)	—	(7,919)	—	(4,472)	(222)	(13,309)
Foreign currency translation adjustment	(224)	(12)	(60)	—	—	—	(296)
Balance at September 30, 2013	$ 95,994	$ 1,000	$ 19,266	$ —	$ 19,126	$ 1,115	$ 136,501

The following table presents, by loan portfolio segment, RJ Bank's recorded investment and related allowance for loan losses:

	Loans held for investment					
	Allowance for loan losses			Recorded investment[1]		
	Individually evaluated for impairment	Collectively evaluated for impairment	Total	Individually evaluated for impairment	Collectively evaluated for impairment	Total
	(in thousands)					
September 30, 2015						
C&I	$ 1,132	$ 116,491	$ 117,623	$ 10,599	$ 6,917,419	$ 6,928,018
CRE construction	—	2,707	2,707	—	162,356	162,356
CRE	—	30,486	30,486	4,796	2,049,358	2,054,154
Tax-exempt	—	5,949	5,949	—	484,537	484,537
Residential mortgage	4,046	8,480	12,526	62,706	1,899,908	1,962,614
SBL	—	2,966	2,966	—	1,481,504	1,481,504
Total	$ 5,178	$ 167,079	$ 172,257	$ 78,101	$ 12,995,082	$ 13,073,183
September 30, 2014						
C&I	$ 1,289	101,890	$ 103,179	$ 11,959	$ 6,410,388	$ 6,422,347
CRE construction	—	1,594	1,594	—	94,195	94,195
CRE	—	25,022	25,022	18,876	1,670,287	1,689,163
Tax-exempt	—	1,380	1,380	—	122,218	122,218
Residential mortgage	5,012	9,338	14,350	65,793	1,685,954	1,751,747
SBL	—	2,049	2,049	—	1,023,748	1,023,748
Total	$ 6,301	$ 141,273	$ 147,574	$ 96,628	$ 11,006,790	$ 11,103,418

(1) Excludes any net unearned income and deferred expenses.

The reserve for unfunded lending commitments, included in trade and other payables on our Consolidated Statements of Financial Condition, was $9.7 million and $10 million at September 30, 2015 and 2014, respectively.

NOTE 10 - PREPAID EXPENSES AND OTHER ASSETS

Prepaid expenses and other assets include the following:

	September 30,	
	2015	2014
	(in thousands)	
Investments in company-owned life insurance [1]	$ 320,523	$ 287,144
Indemnification asset [2]	143,144	154,681
Prepaid expenses	87,180	83,509
Investment in FHLB stock	35,582	32,636
Direct investment in LIHTC project partnerships by RJ Bank [3]	33,267	16,031
Low-income housing tax credit fund financing asset [4]	24,452	28,421
Investment in FRB stock	24,450	22,950
OREO [5]	4,631	5,380
Other assets	32,162	24,504
Prepaid expenses and other assets	$ 705,391	$ 655,256

(1) As of September 30, 2015, we own life insurance policies with a cumulative face value of $794.7 million.

(2) The indemnification asset pertains to legal matters for which Regions has indemnified RJF in connection with our acquisition of Morgan Keegan. The liabilities related to such matters are included in trade and other payables on our Consolidated Statements of Financial Condition. See Note 21 for additional information.

(3) See the discussion of the accounting policies regarding these investments in the "direct investments in LIHTC project partnerships" section of Note 2.

(4) In a prior year, we sold an investment in a low-income housing tax credit fund and we guaranteed the return on investment to the purchaser. As a result of this guarantee obligation, we are the primary beneficiary of the fund (see Note 11 for further information regarding the consolidation of this fund) and we have accounted for this transaction as a financing. As a financing transaction, we continue to account for the asset transferred to the purchaser, and maintain a related liability corresponding to our obligations under the guarantee. As the benefits are delivered to the purchaser of the investment, this financing asset and the related liability decrease. A related financing liability in the amount of $24.5 million and $28.4 million is included in trade and other payables on our Consolidated Statements of Financial Condition as of September 30, 2015 and 2014, respectively. See Note 21 for further discussion of our obligations under the guarantee.

(5) See the discussion of the accounting policies regarding OREO in the "nonperforming assets" section of Note 2.

NOTE 11 – VARIABLE INTEREST ENTITIES

A VIE requires consolidation by the entity's primary beneficiary. We evaluate all of the entities in which we are involved to determine if the entity is a VIE and if so, whether we hold a variable interest and are the primary beneficiary. See the "Evaluation of VIE's to determine whether consolidation is required" section of Note 2 for a discussion of our principal involvement with the VIE's and a summary of our accounting policies regarding our evaluations of VIE's to determine whether we hold a variable interest and whether we are deemed to be the primary beneficiary of any VIE's in which we hold an interest.

VIEs where we are the primary beneficiary

Of the VIEs in which we hold an interest, we have determined that the EIF Funds, the Restricted Stock Trust Fund and certain LIHTC Funds require consolidation in our financial statements as we are deemed the primary beneficiary of those VIEs (see Note 2 for discussion of our accounting policies governing these determinations). The aggregate assets and liabilities of the VIEs we consolidate are provided in the table below.

	Aggregate assets [1]	Aggregate liabilities [1]
	(in thousands)	
September 30, 2015		
LIHTC Funds	$ 143,111	$ 41,125
Guaranteed LIHTC Fund [2]	71,231	2,263
Restricted Stock Trust Fund	6,405	6,405
EIF Funds	4,627	—
Total	$ 225,374	$ 49,793
September 30, 2014		
LIHTC Funds	$ 179,050	$ 60,180
Guaranteed LIHTC Fund [2]	74,798	—
Restricted Stock Trust Fund	6,608	6,608
EIF Funds	6,041	—
Total	$ 266,497	$ 66,788

(1) Aggregate assets and aggregate liabilities differ from the consolidated carrying value of assets and liabilities due to the elimination of intercompany assets and liabilities held by the consolidated VIE.

(2) In connection with one of the multi-investor tax credit funds in which RJTCF is the managing member, RJTCF has provided one investor member with a guaranteed return on their investment in the fund. See Note 10 for information regarding the financing asset associated with this fund, and see Note 21 for additional information regarding this commitment.

The following table presents information about the carrying value of the assets, liabilities and equity of the VIEs which we consolidate and which are included within our Consolidated Statements of Financial Condition. The noncontrolling interests presented in this table represent the portion of these net assets which are not ours.

	September 30, 2015	September 30, 2014
	(in thousands)	
Assets:		
Assets segregated pursuant to regulations and other segregated assets	$ 8,525	$ 10,887
Receivables, other	5,542	5,812
Investments in real estate partnerships held by consolidated variable interest entities	199,678	235,858
Trust fund investment in RJF common stock [1]	6,404	6,607
Prepaid expenses and other assets	4,297	5,728
Total assets	$ 224,446	$ 264,892
Liabilities and equity:		
Trade and other payables	$ 12,424	$ 10,157
Intercompany payables	6,400	6,608
Loans payable of consolidated variable interest entities [2]	25,960	43,877
Total liabilities	44,784	60,642
RJF equity	6,121	6,165
Noncontrolling interests	173,541	198,085
Total equity	179,662	204,250
Total liabilities and equity	$ 224,446	$ 264,892

(1) Included in treasury stock in our Consolidated Statements of Financial Condition.

(2) Comprised of several non-recourse loans. We are not contingently liable under any of these loans (see Note 16 for additional information).

The following table presents information about the net (loss) income of the VIEs which we consolidate, and is included within our Consolidated Statements of Income and Comprehensive Income. The noncontrolling interests presented in this table represents the portion of the net loss from these VIEs which is not ours.

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Revenues:			
Interest	$ 2	$ 1	$ 4
Other	(817)	1,334	3,538
Total revenues	(815)	1,335	3,542
Interest expense	(1,879)	(2,900)	(3,959)
Net expense	(2,694)	(1,565)	(417)
Non-interest expenses [1]	38,179	40,819	27,292
Net loss including noncontrolling interests	(40,873)	(42,384)	(27,709)
Net loss attributable to noncontrolling interests	(40,829)	(42,374)	(27,779)
Net (loss) income attributable to RJF	$ (44)	$ (10)	$ 70

(1) Primarily comprised of items reported in other expense on our Consolidated Statements of Income and Comprehensive Income.

Low-income housing tax credit funds

As of September 30, 2015, RJTCF is the managing member or general partner in 101 separate low-income housing tax credit funds having one or more investor members or limited partners, 90 of which are determined to be VIEs and 11 of which are determined not to be VIEs. RJTCF has concluded that it is the primary beneficiary of seven non-guaranteed LIHTC Fund VIEs and accordingly, consolidates these funds. In addition, RJTCF consolidates the one Guaranteed LIHTC Fund VIE it sponsors. See Note 21 for further discussion of the guarantee obligation as well as other RJTCF commitments. RJTCF also consolidates five of the funds it determined not to be VIEs.

VIEs where we hold a variable interest but are not the primary beneficiary

Low-income housing tax credit funds

RJTCF does not consolidate the LIHTC Fund VIEs that it determines it is not the primary beneficiary of. Our risk of loss is limited to our investments in, advances to, and receivables due from these funds.

New market tax credit funds

As of September 30, 2015, one of our affiliates is the managing member of six NMTC Funds, and, as discussed in Note 2, this affiliate is not deemed to be the primary beneficiary of these NMTC Funds. These NMTC Funds are therefore not consolidated. Our risk of loss is limited to our receivables due from these funds.

Other real estate limited partnerships and LLCs

We have a variable interest in several limited partnerships involved in various real estate activities in which a subsidiary is either the general partner or a limited partner. As discussed in Note 2, we have determined that we are not the primary beneficiary of these VIEs. Accordingly, we do not consolidate these partnerships or LLCs. The carrying value of our investment in these partnerships or LLCs represents our risk of loss.

Aggregate assets, liabilities and risk of loss

The aggregate assets, liabilities, and our exposure to loss from those VIEs in which we hold a variable interest, but as to which we have concluded we are not the primary beneficiary, are provided in the table below.

	September 30,					
	2015			2014		
	Aggregate assets	Aggregate liabilities	Our risk of loss	Aggregate assets	Aggregate liabilities	Our risk of loss
	(in thousands)					
LIHTC Funds	$ 3,317,594	$ 951,465	$ 42,244	$ 2,988,224	$ 899,586	$ 48,915
NMTC Funds	65,388	40	12	83,474	2	13
Other Real Estate Limited Partnerships and LLCs	29,523	37,062	163	30,202	36,262	183
Total	$ 3,412,505	$ 988,567	$ 42,419	$ 3,101,900	$ 935,850	$ 49,111

VIEs where we hold a variable interest but we are not required to consolidate

Managed Funds

As described in Note 2, we have subsidiaries which serve as the general partner of the Managed Funds, which we have concluded we are not required to consolidate.

The aggregate assets, liabilities, and our exposure to loss from Managed Funds are provided in the table below:

	September 30,					
	2015			2014		
	Aggregate assets	Aggregate liabilities	Our risk of loss	Aggregate assets	Aggregate liabilities	Our risk of loss
	(in thousands)					
Managed Funds	$ 83,132	$ 22	$ 53	$ 103,618	$ 11	$ 94

NOTE 12 - PROPERTY AND EQUIPMENT

	September 30,	
	2015	2014
	(in thousands)	
Land	$ 20,104	$ 20,104
Buildings, leasehold and land improvements	241,457	234,104
Furniture, fixtures, and equipment	179,952	176,564
Software	189,227	151,590
Construction in process	5,973	3,295
	636,713	585,657
Less: Accumulated depreciation and amortization	(380,838)	(340,256)
Total property and equipment, net	$ 255,875	$ 245,401

NOTE 13 - GOODWILL AND IDENTIFIABLE INTANGIBLE ASSETS

The following are our goodwill and net identifiable intangible asset balances as of the dates indicated:

	September 30,	
	2015	2014
	(in thousands)	
Goodwill	$ 307,635	$ 295,486
Identifiable intangible assets, net	69,327	58,775
Total goodwill and identifiable intangible assets, net	$ 376,962	$ 354,261

Goodwill

Our goodwill as of September 30, 2015 results from our fiscal year 1999 acquisition of Roney & Co. (now part of RJ&A), our fiscal year 2001 acquisition of Goepel McDermid, Inc. (now RJ Ltd.), our April 1, 2011 acquisition of Howe Barnes Hoefer & Arnett, our April 2, 2012 acquisition of Morgan Keegan, and our July 31, 2015 acquisition of TPC (see Note 3 for additional information regarding this acquisition). The goodwill that arose from our April 4, 2011 acquisition of a controlling interest in Raymond James European Securities, S.A.S ("RJES") was determined to be completely impaired in fiscal year 2013.

The following summarizes our goodwill by segment, along with the balance and activity for the years indicated:

	Segment		
	Private client group	Capital markets	Total
		(in thousands)	
Goodwill at September 30, 2012	$ 173,317	$ 126,794	$ 300,111
Additions[1]	1,267	1,041	2,308
Impairment losses	—	(6,933) [2]	(6,933)
Goodwill at September 30, 2013	$ 174,584	$ 120,902	$ 295,486
Additions	—	—	—
Impairment losses	—	—	—
Goodwill at September 30, 2014	$ 174,584	$ 120,902	$ 295,486
Additions	12,149 [3]	—	12,149
Impairment losses	—	—	—
Goodwill at September 30, 2015	$ 186,733	$ 120,902	$ 307,635

(1) The goodwill additions in the fiscal year ended September 30, 2013 arose from an adjustment due to a change in a tax election pertaining to whether assets acquired and liabilities assumed are written-up to fair value for tax purposes. This election is made on an entity-by-entity basis, and during the year indicated, our assumption regarding whether we would make such election changed for one of the Morgan Keegan entities we acquired in the prior fiscal year. The offsetting balance associated with this adjustment to goodwill was the net deferred tax asset.

(2) The impairment expense in the fiscal year ended September 30, 2013 is associated with the RJES reporting unit. We concluded the goodwill associated with this reporting unit to be completely impaired during fiscal year 2013. Since we did not own 100% of RJES as of the goodwill impairment testing date, for the year ended September 30, 2013 the effect of this impairment expense on the pre-tax income attributable to Raymond James Financial, Inc. is approximately $4.6 million and the portion of the impairment expense attributable to the noncontrolling interests is approximately $2.3 million. RJES is an entity that provides research coverage on European corporations as well as having sales and trading operations. The decline in value of RJES as of December 31, 2012 was primarily due to the economic slowdown experienced in Europe at that time which was having a negative impact on the financial services entities operating therein, as well as certain management decisions that were made during the quarter ended March 31, 2013 which impacted RJES' operating plans on a going forward basis. In April 2013, we purchased all of the outstanding equity in RJES that was held by others, thus we now have sole control over RJES. There was no goodwill impairment in any other reporting unit in fiscal year 2013.

(3) The addition in fiscal year 2015 is directly attributable to the acquisition of TPC (see Notes 1 and 3 for additional information).

As described in Note 2, goodwill is subject to an evaluation of potential impairment on an annual basis, or more often if events or circumstances indicate there may be impairment.

We performed our annual goodwill impairment testing during the quarter ended March 31, 2015, evaluating the balances as of December 31, 2014. We performed a qualitative assessment for each reporting unit that includes an allocation of goodwill to determine whether it is more likely than not that the carrying value of such reporting unit, including the recorded goodwill, is in excess of the fair value of the reporting unit. In any instance in which we are unable to qualitatively conclude that it is more likely than not that the fair value of the reporting unit exceeds the reporting unit carrying value including goodwill, a quantitative analysis of the fair value of the reporting unit would be performed. Based upon the outcome of our qualitative assessment, we determined that no quantitative analysis of the fair value of any reporting unit as of December 31, 2014 was required, and we concluded that none of the goodwill allocated to any of our reporting units as of December 31, 2014 was impaired. No events have occurred since December 31, 2014 that would cause us to update our latest annual impairment testing.

In fiscal year 2014, we performed our annual goodwill impairment testing during the quarter ended March 31, 2014, evaluating the balances as of December 31, 2013. Similar to fiscal year 2015, we performed a qualitative assessment for each reporting unit that includes an allocation of goodwill. Based upon the outcome of our qualitative assessment, we determined that no quantitative analysis of the fair value of any reporting unit as of December 31, 2013 was required, and we concluded that none of the goodwill allocated to any of our reporting units as of December 31, 2013 was impaired.

Identifiable intangible assets, net

The following table sets forth our identifiable intangible asset balances by segment, net of accumulated amortization, and activity for the years indicated:

	Segment				
	Private client group	Capital markets	Asset management	RJ Bank	Total
	(in thousands)				
Net identifiable intangible assets as of September 30, 2012	$ 9,829	$ 51,306	$ —	$ —	$ 61,135
Additions	—	—	13,329 (1)	1,085 (2)	14,414
Amortization expense	(638)	(7,832)	(1,000)	(101)	(9,571)
Impairment losses	—	—	—	—	—
Net identifiable intangible assets as of September 30, 2013	$ 9,191	$ 43,474	$ 12,329	$ 984	$ 65,978
Additions	—	—	—	408 (2)	408
Amortization expense	(580)	(5,499)	(1,333)	(199)	(7,611)
Impairment losses	—	—	—	—	—
Net identifiable intangible assets as of September 30, 2014	$ 8,611	$ 37,975	$ 10,996	$ 1,193	$ 58,775
Additions	10,290 (3)	—	7,974 (4)	574 (2)	18,838
Amortization expense	(719)	(5,443)	(1,833)	(291)	(8,286)
Impairment losses	—	—	—	—	—
Net identifiable intangible assets as of September 30, 2015	$ 18,182	$ 32,532	$ 17,137	$ 1,476	$ 69,327

(1) This fiscal year 2013 addition is directly attributable to the customer list asset associated with our first quarter fiscal year 2013 acquisition of a 45% interest in ClariVest (see Note 3 for additional information). Since we are consolidating ClariVest, the amount represents the entire customer relationship intangible asset associated with the acquisition transaction; the amount shown is unadjusted by the 55% share of ClariVest attributable to others.

(2) The additions are the result of mortgage servicing rights held by RJ Bank. The estimated useful life associated with these additions is approximately 10 years.

(3) The additions are directly attributable to the acquisition of identifiable intangible assets, which include customer relationships, a trade name, developed technology, and non-compete agreements, arising from our July 31, 2015 acquisition of TPC (see Note 3 for additional information). The weighted-average useful life associated with the additions is 12.9 years.

(4) The additions are directly attributable to the acquisition of identifiable intangible assets, which include customer relationships, a trade name, intellectual property, and a non-compete agreement, arising from our April 30, 2015 acquisition of Cougar (see Note 3 for additional information). The weighted-average useful life associated with the additions is 9.5 years.

Identifiable intangible assets by type are presented below:

	September 30,			
	2015		2014	
	Gross carrying value	Accumulated amortization	Gross carrying value	Accumulated amortization
	(in thousands)			
Customer relationships	$ 75,217	$ (17,759)	$ 65,957	$ (13,875)
Trade name	4,278	(111)	2,000	(2,000)
Developed technology	12,630	(7,754)	11,000	(5,500)
Intellectual property	561	(23)	—	—
Non-compete agreements	1,018	(206)	1,000	(1,000)
Mortgage servicing rights	2,067	(591)	1,493	(300)
Total	$ 95,771	$ (26,444)	$ 81,450	$ (22,675)

Projected amortization expense by fiscal year associated with the identifiable intangible assets as of September 30, 2015 is as follows:

Fiscal year ended September 30,	(in thousands)
2016	$ 9,332
2017	7,952
2018	6,837
2019	6,822
2020	6,736
Thereafter	31,648
	$ 69,327

NOTE 14 – BANK DEPOSITS

Bank deposits include Negotiable Order of Withdrawal ("NOW") accounts, demand deposits, savings and money market accounts and certificates of deposit of RJ Bank. The following table presents a summary of bank deposits including the weighted-average rate:

	September 30,			
	2015		2014	
	Balance	Weighted-average rate [1]	Balance	Weighted-average rate [1]
	($ in thousands)			
Bank deposits:				
NOW accounts	$ 4,752	0.01%	$ 5,792	0.01%
Demand deposits (non-interest-bearing)	9,295	—	8,386	—
Savings and money market accounts	11,550,917	0.02%	9,670,043	0.02%
Certificates of deposit	354,917	1.64%	344,703	1.81%
Total bank deposits[2]	$ 11,919,881	0.07%	$ 10,028,924	0.09%

(1) Weighted-average rate calculation is based on the actual deposit balances at September 30, 2015 and 2014, respectively.

(2) Bank deposits exclude affiliate deposits of approximately $458 million and $509 million at September 30, 2015 and 2014, respectively. These affiliate deposits include $451 million and $500 million at September 30, 2015 and 2014, respectively, which are held in a deposit account at RJ Bank on behalf of RJF (see Note 30 for additional information).

RJ Bank's savings and money market accounts in the table above consist primarily of deposits that are cash balances swept from the investment accounts maintained at RJ&A. These balances are held in Federal Deposit Insurance Corporation ("FDIC") insured bank accounts through the Raymond James Bank Deposit Program ("RJBDP") administered by RJ&A. The aggregate amount of time deposit account balances that exceed the FDIC insurance limit at September 30, 2015 is $24.4 million.

Scheduled maturities of certificates of deposit are as follows:

	September 30,			
	2015		2014	
	Denominations greater than or equal to $100,000	Denominations less than $100,000	Denominations greater than or equal to $100,000	Denominations less than $100,000
	(in thousands)			
Three months or less	$ 6,206	$ 7,610	$ 11,761	$ 9,482
Over three through six months	11,731	7,304	9,067	10,317
Over six through twelve months	18,341	14,807	15,809	21,002
Over one through two years	43,133	33,163	33,366	27,722
Over two through three years	33,556	10,825	45,842	33,529
Over three through four years	51,140	23,616	35,362	11,301
Over four through five years	63,351	30,134	55,556	24,587
Total	$ 227,458	$ 127,459	$ 206,763	$ 137,940

Interest expense on deposits is summarized as follows:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Certificates of deposit	$ 5,839	$ 6,126	$ 6,239
Money market, savings and NOW accounts	2,543	1,833	2,793
Total interest expense on deposits	$ 8,382	$ 7,959	$ 9,032

NOTE 15 – OTHER BORROWINGS

The following table details the components of other borrowings:

	September 30,	
	2015	2014
	(in thousands)	
Other borrowings:		
FHLB advances	$ 550,000 [1]	$ 500,000 [2]
Borrowings on secured lines of credit [3]	115,000 [4]	154,700 [5]
Mortgage notes payable [6]	37,716	41,802
Borrowings on ClariVest revolving credit facility [7]	349	216
Borrowings on unsecured lines of credit [8]	—	—
Total other borrowings	$ 703,065	$ 696,718

(1) Borrowings from the FHLB as of September 30, 2015 are comprised of two floating-rate advances, one in the amount of $250 million and the other in the amount of $300 million. Both FHLB advances mature in March 2017 and have an interest rate which resets quarterly. We use interest rate swaps to manage the risk of increases in interest rates associated with floating-rate advances by converting a portion of the variable interest rate to a fixed interest rate. Refer to Note 18 for information regarding these interest rate swaps which are accounted for as hedging instruments. Both of the FHLB advances are secured by a blanket lien granted to the FHLB on RJ Bank's residential mortgage loan portfolio. The weighted average interest rate on these advances is 0.36%.

(2) Borrowings from the FHLB at September 30, 2014 were comprised of two $250 million floating-rate advances. The weighted average interest rate on these advances was 0.20%. These advances were secured by a blanket lien granted to the FHLB on RJ Bank's residential loan portfolio and were scheduled to mature in September 2017. The interest rate reset on a monthly basis for one of the advances, and a quarterly basis for the other. RJ Bank had the option to prepay each advance without penalty on each interest reset date. Both of these advances were prepaid during fiscal year 2015.

(3) Other than any borrowing outstanding on either the RJF Credit Facility (as hereinafter defined), or as of September 30, 2014, the ARS Credit Facility (as hereinafter defined), any borrowings on secured lines of credit are day-to-day and are generally utilized to finance certain fixed income securities.

(4) On August 6, 2015, RJF entered into a revolving credit facility agreement in which the lenders are a number of financial institutions (the "RJF Credit Facility"). This committed unsecured borrowing facility provides for maximum borrowings of up to $300 million, at variable rates, with a facility maturity date of August 6, 2020. There are no borrowings outstanding on the RJF Credit Facility as of September 30, 2015. The interest rate associated with the RJF Credit Facility is a variable rate that, among other factors, varies depending upon RJF's credit rating. Based upon RJF's credit rating as of September 30, 2015, the variable borrowing rate is 1.75% per annum over LIBOR. There is a variable rate commitment fee associated with the RJF Credit Facility, such fee varying depending upon RJF's credit rating. Based upon RJF's credit rating as of September 30, 2015, the variable rate commitment fee which applies to any difference between the daily borrowed amount and the committed amount, is 0.25% per annum.

(5) As of September 30, 2014, a subsidiary of RJF was a party to a Revolving Credit Agreement (the "ARS Credit Facility") with Regions Bank. The ARS Credit Facility provided for a revolving line of credit and was subject to a guarantee in favor of Regions Bank provided by RJF. The obligations under the ARS Credit Facility were secured by, subject to certain exceptions, all of the ARS owned by the borrower. The interest rate associated with the ARS Credit Facility was a variable rate which was 2.75% over LIBOR. On April 2, 2015, the ARS Credit Facility expired, was not renewed, and a $5 million outstanding balance as of the expiration date was paid to Regions Bank.

See the following page for the continuation of the explanations to the footnotes in the above table.

Continuation of the footnote explanations pertaining to the table on the previous page.

(6) Mortgage notes payable pertain to mortgage loans on our corporate headquarters offices located in St. Petersburg, Florida. These mortgage loans are secured by land, buildings, and improvements with a net book value of $47.6 million at September 30, 2015. These mortgage loans bear interest at 5.7% with repayment terms of monthly interest and principal debt service and have a January 2023 maturity.

(7) ClariVest, is a party to a revolving line of credit provided by a third party lender (the "ClariVest Facility"). The maximum amount available to borrow under the ClariVest Facility is $500 thousand, bearing interest at a variable rate which is 1% over the lenders prime rate. The ClariVest Facility expires on September 10, 2018.

(8) Any borrowings on unsecured lines of credit are day-to-day and are generally utilized for cash management purposes.

The interest rates for all of our U.S. and Canadian secured and unsecured financing facilities are variable and are based on the Fed Funds rate, LIBOR, a lenders prime rate, or the Canadian prime rate, as applicable. For the fiscal year ended September 30, 2015, interest rates on the U.S. facilities that were utilized during the year, other than the ClariVest Facility, the ARS Credit Facility, and the RJF Credit Facility which are each previously described, ranged from 0.19% to 2.25% (on a 360 days per year basis). The interest rate on the ClariVest Facility during the fiscal year ended September 30, 2015 was 4.25% (on a 360 days per year basis). The interest rate on the Canadian facility which was utilized from time-to-time throughout fiscal year 2015 ranged from 1.95% to 2.25% (on a 360 days per year basis).

Our other borrowings as of September 30, 2015, mature as follows based on their contractual terms:

Fiscal year ended September 30,	(in thousands)
2016	$ 119,325
2017	554,578
2018	5,195
2019	5,130
2020	5,430
Thereafter	13,407
Total	$ 703,065

There were other collateralized financings outstanding in the amount of $333 million and $244 million as of September 30, 2015 and 2014, respectively. These other collateralized financings are included in securities sold under agreements to repurchase on the Consolidated Statements of Financial Condition. These financings are collateralized by non-customer, RJ&A-owned securities. See Note 19 for additional information regarding offsetting asset and liability balances as well as additional information regarding the collateral.

NOTE 16 - LOANS PAYABLE OF CONSOLIDATED VARIABLE INTEREST ENTITIES

Certain of the VIEs that we consolidate have borrowings which are comprised of non-recourse loans. These loans have imputed interest rates ranging from 5.17% to 6.38%. Payments on these loans are made semi-annually by the borrowing VIE directly to the third party lender. These loans mature on dates ranging from January 4, 2016 through January 2, 2019. We are not contingently obligated under any of these loans. See Note 11 for additional information regarding the entities determined to be VIEs, and which of those entities we consolidate.

VIEs' loans payable are presented below:

	September 30,	
	2015	2014
	(in thousands)	
Current portion of loans payable	$ 13,363	$ 17,949
Long-term portion of loans payable	12,597	25,928
Total loans payable	$ 25,960	$ 43,877

The principal amount of the VIEs' borrowings as of September 30, 2015, mature as follows based on their contractual terms:

Fiscal year ended September 30,	(in thousands)
2016	$ 13,363
2017	8,240
2018	3,668
2019	689
Total	$ 25,960

NOTE 17 – SENIOR NOTES PAYABLE

The following summarizes our senior notes payable:

	September 30,	
	2015	2014
	(in thousands)	
4.25% senior notes, due 2016, net of unaccreted discount of $54 thousand and $154 thousand at September 30, 2015 and 2014, respectively [1]	$ 249,946	$ 249,846
8.60% senior notes, due 2019, net of unaccreted discount of $20 thousand and $25 thousand at September 30, 2015 and 2014, respectively [2]	299,980	299,975
5.625% senior notes, due 2024, net of unaccreted discount of $704 thousand and $787 thousand at September 30, 2015 and 2014, respectively [3]	249,296	249,213
6.90% senior notes, due 2042 [4]	350,000	350,000
Total senior notes payable	$ 1,149,222	$ 1,149,034

(1) In April 2011, we sold in a registered underwritten public offering, $250 million in aggregate principal amount of 4.25% senior notes due April 2016. Interest on these senior notes is payable semi-annually. We may redeem some or all of these senior notes at any time prior to their maturity at a redemption price equal to the greater of (i) 100% of the principal amount of the notes to be redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest thereon, discounted to the redemption date at a discount rate equal to a designated U.S. Treasury rate, plus 30 basis points, plus accrued and unpaid interest thereon to the redemption date.

(2) In August 2009, we sold in a registered underwritten public offering, $300 million in aggregate principal amount of 8.60% senior notes due August 2019. Interest on these senior notes is payable semi-annually. We may redeem some or all of these senior notes at any time prior to their maturity, at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest thereon, discounted to the redemption date at a discount rate equal to a designated U.S. Treasury rate, plus 50 basis points, plus accrued and unpaid interest thereon to the redemption date.

(3) In March 2012, we sold in a registered underwritten public offering, $250 million in aggregate principal amount of 5.625% senior notes due April 2024. Interest on these senior notes is payable semi-annually. We may redeem some or all of these senior notes at any time prior to their maturity, at a redemption price equal to the greater of (i) 100% of the principal amount of the notes redeemed, or (ii) the sum of the present values of the remaining scheduled payments of principal and interest thereon, discounted to the redemption date at a discount rate equal to a designated U.S. Treasury rate, plus 50 basis points, plus accrued and unpaid interest thereon to the redemption date.

(4) In March 2012, we sold in a registered underwritten public offering, $350 million in aggregate principal amount of 6.90% senior notes due March 2042. Interest on these senior notes is payable quarterly in arrears. On or after March 15, 2017, we may redeem some or all of the senior notes at any time at the redemption price equal to 100% of the principal amount of the notes being redeemed plus accrued interest thereon to the redemption date.

Our senior notes payable outstanding as of September 30, 2015, mature as follows based on their contractual terms:

Fiscal year ended September 30,	(in thousands)
2016	$ 249,946
2017	—
2018	—
2019	299,980
2020	—
Thereafter	599,296
Total	$ 1,149,222

NOTE 18 – DERIVATIVE FINANCIAL INSTRUMENTS

The significant accounting policies governing our derivative financial instruments, including our methodologies for determining fair value, are described in Note 2.

Derivatives arising from our fixed income business operations

We enter into derivatives contracts as part of our fixed income operations in either over-the-counter market activities, or through "matched book" activities. Each of these activities are described further below.

We enter into interest rate swaps, futures contracts, and forward foreign exchange contracts either as part of our fixed income business to facilitate client transactions, to hedge a portion of our trading inventory, or to a limited extent for our own account. The majority of these derivative positions are executed in the over-the-counter market either directly with financial institutions or trades cleared through an exchange (together referred to as the "OTC Derivatives Operations"). Cash flows related to the interest rate contracts arising from the OTC Derivative Operations, are included as operating activities (the "trading instruments, net" line) on the Consolidated Statements of Cash Flows.

RJSS enters into derivative transactions (primarily interest rate swaps) with clients. For every derivative transaction RJSS enters into with a customer, RJSS enters into an offsetting transaction, on terms that mirror the customer transaction, with a credit support provider which is a third party financial institution. Due to this "pass-through" transaction structure, RJSS has completely mitigated the market and credit risk related to these derivative contracts. Therefore, the ultimate credit and market risk resides with the third party financial institution. RJSS only has credit risk related to its uncollected derivative transaction fee revenues. In these activities, we do not use derivative instruments for trading or hedging purposes. As a result of the structure of these transactions, we refer to the derivative contracts we enter into as a result of these operations as our offsetting "matched book" derivative operations (the "Offsetting Matched Book Derivatives Operations").

Any collateral required to be exchanged under the contracts arising from the Offsetting Matched Book Derivatives Operations is administered directly by the client and the third party financial institution. RJSS does not hold any collateral, or administer any collateral transactions, related to these instruments. We record the value of each derivative position arising from the Offsetting Matched Book Derivatives Operations at fair value, as either an asset or offsetting liability, presented as "derivative instruments associated with offsetting matched book positions," as applicable, on our Consolidated Statements of Financial Condition.

The receivable for uncollected derivative transaction fee revenues of RJSS is $7 million at both September 30, 2015 and 2014, and is included in other receivables on our Consolidated Statements of Financial Condition.

None of the derivatives described above arising from either our OTC Derivatives Operations or our Offsetting Matched Book Derivatives Operations are designated as fair value or cash flow hedges.

Derivatives arising from RJ Bank's business operations

We enter into derivatives contracts as part of RJ Bank's business operations through its hedging activities, which include forward foreign exchange contracts and interest rate swaps. Each of these activities is described in the "derivative contracts" section of Note 2.

See Note 22 for additional information on the impact of these hedging activities on our Other Comprehensive (Loss) Income.

Description of the collateral we hold related to derivative contracts

Where permitted, we elect to net-by-counterparty certain derivative contracts entered into in our OTC Derivatives Operations. Certain of these contracts contain a legally enforceable master netting arrangement that allows for netting of all derivative transactions with each counterparty and, therefore, the fair value of those derivative contracts are netted by counterparty in the Consolidated Statements of Financial Condition. The credit support annex related to the interest rate swaps and certain forward foreign exchange contracts allows parties to the master agreement to mitigate their credit risk by requiring the party which is out of the money to post collateral. We accept collateral in the form of cash or other marketable securities. As we elect to net-by-counterparty the fair value of derivative contracts arising from our OTC Derivatives Operations, we also net-by-counterparty any cash collateral exchanged as part of those derivative agreements. Refer to Note 19 for additional information regarding offsetting asset and liability balances.

This cash collateral is recorded net-by-counterparty at the related fair value. The cash collateral included in the net fair value of all open derivative asset positions arising from our OTC Derivatives Operations aggregates to a net liability of $44 million and $21 million at September 30, 2015 and 2014, respectively. The cash collateral included in the net fair value of all open derivative liability positions from our OTC Derivatives Operations aggregates to a net asset of $26 million and $23 million at September 30, 2015 and September 30, 2014, respectively. Our maximum loss exposure under the interest rate swap contracts arising from our OTC Derivatives Operations at September 30, 2015 is $43 million.

RJ Bank provides to counterparties for the benefit of its U.S. subsidiaries, a guarantee of payment in the event of the subsidiaries' default under forward foreign exchange contracts. Due to this RJ Bank guarantee and the short-term nature of these derivatives, RJ Bank's U.S. subsidiaries are not required to post collateral and do not receive collateral with respect to certain derivative contracts with the respective counterparties. As of September 30, 2015, all of RJ Bank's forward foreign exchange contracts are assets, therefore we consider there to be no significant exposure to loss under these contracts.

Derivative balances included in our financial statements

The notional and fair value amounts of both the asset and liability derivatives are as reflected in the table below.

	September 30, 2015			September 30, 2014		
	Balance sheet location	Notional amount	Fair value[1]	Balance sheet location	Notional amount	Fair value[1]
		(in thousands)				
	Asset derivatives					
Derivatives designated as hedging instruments:						
Forward foreign exchange contracts[2]	Prepaid expenses and other assets	$ 752,600 [3]	$ 613	Prepaid expenses and other assets	$ 682,100 [3]	$ 2,101
Derivatives not designated as hedging instruments:						
Interest rate contracts[5]	Trading instruments	$ 2,473,946	$ 130,095	Trading instruments	$ 2,198,357	$ 89,923
Interest rate contracts[6]	Derivative instruments associated with offsetting matched book positions	$ 1,649,863	$ 389,457	Derivative instruments associated with offsetting matched book positions	$ 1,796,288	$ 323,337
Forward foreign exchange contracts[5]	Trading instruments	$ 74,873 [3]	$ 2,612	Trading instruments	$ —	$ —
Forward foreign exchange contracts[2]	Prepaid expenses and other assets	$ 214,300 [3]	$ 304	Prepaid expenses and other assets	$ 117,800 [3]	$ 361
	Liability derivatives					
Derivatives designated as hedging instruments:						
Interest rate contracts[4]	Prepaid expenses and other assets	$ 300,000	$ 7,545	Prepaid expenses and other assets	$ —	$ —
Derivatives not designated as hedging instruments:						
Interest rate contracts[5]	Trading instruments sold	$ 1,906,766	$ 104,255	Trading instruments sold	$ 2,185,085	$ 75,668
Interest rate contracts[6]	Derivative instruments associated with offsetting matched book positions	$ 1,649,863	$ 389,457	Derivative instruments associated with offsetting matched book positions	$ 1,796,288	$ 323,337
Forward foreign exchange contracts[5]	Trading instruments sold	$ 136,710 [6]	$ 4,865	Trading instruments sold	$ —	$ —

(1) The fair value in this table is presented on a gross basis before netting of cash collateral and before any netting by counterparty according to our legally enforceable master netting arrangements. The fair value in the Consolidated Statements of Financial Condition is presented net. See Note 19 for additional information regarding offsetting asset and liability balances.

(2) These contracts are associated with RJ Bank's activities to hedge its foreign currency exposure.

(3) The notional amount presented is denominated in Canadian currency.

(4) These contracts are associated with our RJ Bank Interest Hedges activities.

(5) These contracts arise from our OTC Derivatives Operations.

(6) These contracts arise from our Offsetting Matched Book Derivatives Operations.

Gains recognized on forward foreign exchange derivatives that are included in other comprehensive (loss) income presented on our Consolidated Statements of Income and Comprehensive Income ("OCI") totaled $60.3 million, $29.4 million and $14 million, net of income taxes, for the years ended September 30, 2015, 2014, and 2013 respectively (see Note 22 for additional information). There was no hedge ineffectiveness and no components of derivative gains or losses were excluded from the assessment of hedge effectiveness for any of the years ended September 30, 2015, 2014 or 2013.

A loss of $4.7 million on the RJ Bank Interest Hedges is included in OCI, net of income taxes, for the year ended September 30, 2015 (see Note 22 for additional information). There was no hedge ineffectiveness and no components of derivative gains or losses were excluded from the assessment of hedge effectiveness for the year ended September 30, 2015. RJ Bank expects to

reclassify an estimated $5.2 million as additional interest expense out of AOCI and into earnings within the next 12 months. The maximum length of time over which forecasted transactions are or will be hedged is 10 years.

The table below sets forth the impact of the derivatives not designated as hedging instruments on the Consolidated Statements of Income and Comprehensive Income:

	Location of gain (loss) recognized on derivatives in the Consolidated Statements of Income and Comprehensive Income	Amount of gain (loss) on derivatives recognized in income		
		Year ended September 30,		
		2015	2014	2013
			(in thousands)	
Derivatives not designated as hedging instruments:				
Interest rate contracts and forward foreign exchange contracts [1]	Net trading profit	$ 3,107	$ 1,554	$ 993
Interest rate contracts [2]	Other revenues	$ 901	$ 712	$ 225
Forward foreign exchange contracts [3]	Other revenues	$ 20,459	$ 5,694	$ 1,577

(1) These contracts arise from our OTC Derivatives Operations.

(2) These contracts arise from our Offsetting Matched Book Derivatives Operations.

(3) These contracts are associated with RJ Bank's activities to hedge its foreign currency exposure.

Risks associated with, and our risk mitigation related to, our derivative contracts

We are exposed to credit losses in the event of nonperformance by the counterparties to forward foreign exchange derivative agreements, futures contracts, and the interest rate contracts associated with our OTC Derivatives Operations that are not cleared through an exchange. Where we are subject to credit exposure, we perform a credit evaluation of counterparties prior to entering into derivative transactions and we monitor their credit standings. Currently, we anticipate that all of the counterparties will be able to fully satisfy their obligations under those agreements. For our OTC Derivatives Operations that are not cleared through an exchange, we may require collateral from counterparties in the form of cash deposits or other marketable securities to support certain of these obligations as established by the credit threshold specified by the agreement and/or as a result of monitoring the credit standing of the counterparties. We are required to maintain cash or marketable security deposits with the exchange we utilize to clear our OTC Derivatives transactions that are cleared through such exchanges. These deposits are a component of deposits with clearing organizations on our Consolidated Statements of Financial Condition.

We are exposed to interest rate risk related to the interest rate derivative agreements arising from certain of our OTC Derivatives Operations and RJ Bank Interest Hedges. We are also exposed to foreign exchange risk related to our futures contracts and forward foreign exchange derivative agreements. We monitor exposure in our derivative agreements which we have risk daily based on established limits with respect to a number of factors, including interest rate, foreign exchange spot and forward rates, spread, ratio, basis and volatility risks. These exposures are monitored both on a total portfolio basis and separately for each agreement for selected maturity periods.

Certain of the derivative instruments arising from our OTC Derivatives Operations and from RJ Bank's forward foreign exchange contracts contain provisions that require our debt to maintain an investment grade rating from one or more of the major credit rating agencies. If our debt were to fall below investment grade, we would be in breach of these provisions, and the counterparties to the derivative instruments could request immediate payment or demand immediate and ongoing overnight collateralization on our derivative instruments in liability positions. The aggregate fair value of all derivative instruments with such credit-risk-related contingent features that are in a liability position at September 30, 2015 is $39 million, for which we have posted collateral of $37 million in the normal course of business. If the credit-risk-related contingent features underlying these agreements were triggered on September 30, 2015, we would have been required to post an additional $2 million of collateral to our counterparties.

Our only exposure to credit risk in the Offsetting Matched Book Derivatives Operations is related to our uncollected derivative transaction fee revenues. We are not exposed to market risk as it relates to these derivative contracts due to the "pass-through" transaction structure previously described.

NOTE 19 – DISCLOSURE OF OFFSETTING ASSETS AND LIABILITIES, COLLATERAL, ENCUMBERED ASSETS AND REPURCHASE AGREEMENTS

Offsetting assets and liabilities

The following table presents information about the financial and derivative instruments that are offset or subject to an enforceable master netting arrangement or other similar agreement as of the dates indicated:

	Gross amounts of recognized assets (liabilities)	Gross amounts offset in the Statements of Financial Condition	Net amounts presented in the Statements of Financial Condition	Gross amounts not offset in the Statements of Financial Condition: Financial instruments	Gross amounts not offset in the Statements of Financial Condition: Cash (received)paid	Net amount
	(in thousands)					
As of September 30, 2015:						
Assets						
Securities purchased under agreements to resell and other collateralized financings	$ 474,144	$ —	$ 474,144	$ (474,144) [1]	$ —	$ —
Derivatives - interest rate contracts[2]	130,095	(90,621)	39,474	(12,609)	—	26,865
Derivative instruments associated with offsetting matched book positions	389,457	—	389,457	(389,457) [3]	—	—
Derivatives - forward foreign exchange contracts[4]	917	—	917	—	—	917
Derivatives - forward foreign exchange contracts[5]	2,612	—	2,612	—	—	2,612
Stock borrowed	124,373	—	124,373	(120,957)	—	3,416
Total assets	$ 1,121,598	$ (90,621)	$ 1,030,977	$ (997,167)	$ —	$ 33,810
Liabilities						
Securities sold under agreements to repurchase	$ (332,536)	$ —	$ (332,536)	$ 332,536 [7]	$ —	$ —
Derivatives - interest rate contracts[2]	(104,255)	88,881	(15,374)	3,528 [8]	7,399 [8]	(4,447)
Derivative instruments associated with offsetting matched book positions	(389,457)	—	(389,457)	389,457 [3]	—	—
Derivatives - forward foreign exchange contracts[5]	(4,865)	—	(4,865)	—	—	(4,865)
Derivatives - RJ Bank Interest Hedges	(7,545)	—	(7,545)	—	7,545 [6]	—
Stock loaned	(478,573)	—	(478,573)	472,379	—	(6,194)
Total liabilities	$ (1,317,231)	$ 88,881	$ (1,228,350)	$ 1,197,900	$ 14,944	$ (15,506)
As of September 30, 2014:						
Assets						
Securities purchased under agreements to resell and other collateralized financings	$ 446,016	$ —	$ 446,016	$ (446,016) [1]	$ —	$ —
Derivatives - interest rate contracts[2]	89,923	(61,718)	28,205	(3,877)	—	24,328
Derivative instruments associated with offsetting matched book positions	323,337	—	323,337	(323,337) [3]	—	—
Derivatives - forward foreign exchange contracts[4]	2,462	—	2,462	—	—	2,462
Stock borrowed	158,988	—	158,988	(153,261)	—	5,727
Total assets	$ 1,020,726	$ (61,718)	$ 959,008	$ (926,491)	$ —	$ 32,517
Liabilities						
Securities sold under agreements to repurchase	$ (244,495)	$ —	$ (244,495)	$ 244,495 [7]	$ —	$ —
Derivatives - interest rate contracts[2]	(75,668)	63,296	(12,372)	3,502 [8]	4,620 [8]	(4,250)
Derivative instruments associated with offsetting matched book positions	(323,337)	—	(323,337)	323,337 [3]	—	—
Stock loaned	(417,383)	—	(417,383)	402,180	—	(15,203)
Total liabilities	$ (1,060,883)	$ 63,296	$ (997,587)	$ 973,514	$ 4,620	$ (19,453)

The text of the footnotes in the above table are on the following page.

The text of the footnotes to the table on the previous page are as follows:

(1) We are over-collateralized since the actual amount of financial instruments pledged as collateral for securities purchased under agreements to resell and other collateralized financings amounts to $499.3 million and $463.7 million as of September 30, 2015 and 2014, respectively.

(2) Derivatives - interest rate contracts are included in Trading instruments on our Consolidated Statements of Financial Condition. See Note 18 for additional information.

(3) Although these derivative arrangements do not meet the definition of a master netting arrangement as specified by GAAP, the nature of the agreement with the third party intermediary includes terms that are similar to a master netting agreement, thus we present the offsetting amounts net in the table above. See Note 18 for further discussion of the "pass through" structure of the derivative instruments associated with Offsetting Matched Book Derivatives Operations.

(4) As of September 30, 2015 and 2014, the fair value of the forward foreign exchange contract derivatives are in an asset position, and are included in prepaid expenses and other assets on our Consolidated Statements of Financial Condition. See Note 18 for additional information.

(5) See Note 18 for additional information on our forward foreign exchange contract derivatives associated with our OTC Derivatives Operations.

(6) Derivatives - RJ Bank Interest Hedges are included in prepaid expenses and other assets on our Consolidated Statements of Financial Condition. See Note 18 for additional information. The RJ Bank Interest Hedges are transacted through an exchange. The nature of the agreement with the clearing member exchange includes terms that are similar to a master netting agreement, thus we are over-collateralized since the actual amount of cash deposited with the exchange for these RJ Bank Interest Hedges amounts to $17.6 million as of September 30, 2015. This deposit is included in deposits with clearing organizations on our Consolidated Statements of Financial Condition.

(7) We are over-collateralized since the actual amount of financial instruments pledged as collateral for securities sold under agreements to repurchase amounts to $346.1 million and $253.7 million as of September 30, 2015 and 2014, respectively.

(8) For the portion of these derivative contracts that are transacted through an exchange, the nature of the agreement with the clearing member exchange include terms that are similar to a master netting agreement, thus we present offsetting deposits paid to the exchange associated with these contracts. These deposits are a component of deposits with clearing organizations on our Consolidated Statements of Financial Condition. See Note 18 for additional information.

For financial statement purposes, we do not offset our repurchase agreements or securities borrowing, securities lending transactions and certain of our derivative instruments including those transacted through an exchange, because the conditions for netting as specified by GAAP are not met. Our repurchase agreements, securities borrowing and securities lending transactions, and certain of our derivative instruments transacted through an exchange, are governed by master agreements that are widely used by counterparties and that may allow for net settlements of payments in the normal course as well as offsetting of all contracts with a given counterparty in the event of bankruptcy or default of one of the two parties to the transaction. Although not offset on the Consolidated Statements of Financial Condition, these transactions are included in the preceding table.

Collateral and deposits with clearing organizations

We receive cash and securities as collateral, primarily in connection with Reverse Repurchase Agreements, securities borrowed, derivative transactions not transacted through an exchange, client margin loans arising from our domestic operations (see Note 8 for additional information), and the secured call loans that are held by RJ Ltd, if any. The cash collateral we receive is primarily associated with our OTC Derivative Operations (see Note 18 for additional information). The collateral we receive reduces our credit exposure to individual counterparties.

We also pay cash to the exchange, or receive cash from the exchange, related to derivative contracts transacted through an exchange. We account for such cash as a component of deposits with clearing organizations on our Consolidated Statements of Financial Condition.

In many cases, we are permitted to deliver or repledge financial instruments we have received as collateral, for our own use in our repurchase agreements, securities lending agreements, other secured borrowings, satisfaction of deposit requirements with clearing organizations, or otherwise meeting either our, or our clients, settlement requirements.

The table below presents financial instruments at fair value, that we received as collateral, are not included on our Consolidated Statements of Financial Condition, and that were available to be delivered or repledged, along with the balances of such instruments that were used to deliver or repledge, to satisfy one of our purposes described above:

	September 30,			
	2015		2014	
	(in thousands)			
Collateral we received that is available to be delivered or repledged	$ 2,308,277		$ 2,178,868	
Collateral that we delivered or repledged	1,122,540	(1)	879,071	(2)

(1) The collateral delivered or repledged as of September 30, 2015, includes client margin securities which we pledged with a clearing organization in the amount of $240.7 million which were applied against our requirement of $147.6 million.

(2) The collateral delivered or repledged as of September 30, 2014, includes client margin securities which we pledged with a clearing organization in the amount of $138.8 million which were applied against our requirement of $116.5 million.

Encumbered assets

We pledge certain of our trading instrument assets to collateralize either Repurchase Agreements, other secured borrowings, or to satisfy our settlement requirements, with counterparties who may or may not have the right to deliver or repledge such securities.

The table below presents information about the fair value of our assets that have been pledged for one of the purposes described above:

	September 30,			
	2015		2014	
	(in thousands)			
Financial instruments owned, at fair value, pledged to counterparties that:				
Had the right to deliver or repledge	$ 424,668		$ 394,746	
Did not have the right to deliver or repledge	94,006	(1)	50,983	(2)

(1) Assets delivered or repledged as of September 30, 2015, includes securities which we pledged with a clearing organization in the amount of $30.5 million which were applied against our requirement of $147.6 million (client margin securities we pledged which are described in the preceding table constitute the remainder of the assets pledged to meet the requirement).

(2) Assets delivered or repledged as of September 30, 2014, includes securities which we pledged with a clearing organization in the amount of $18.9 million which were applied against our requirement of $116.5 million (client margin securities we pledged which are described in the preceding table constitute the remainder of the assets pledged to meet the requirement).

Repurchase agreements, repurchase-to-maturity transactions and securities lending transactions accounted for as secured borrowings

We enter into Repurchase Agreements where we sell securities under agreements to repurchase, and also engage in securities lending transactions. These activities are accounted for as collateralized financings. Our Repurchase Agreements would include "repurchase-to-maturity" agreements, which are repurchase agreements where a security is transferred under an agreement to repurchase and the maturity date of the repurchase agreement matches the maturity date of the underlying security, if any, that we are a party to as of period-end. As of September 30, 2015, we did not have any "repurchase-to-maturity" agreements. See Note 2 for a discussion of our respective Repurchase Agreement and securities lending accounting policies.

The following table presents the remaining contractual maturity of securities under agreements to repurchase and securities lending transactions accounted for as secured borrowings:

As of September 30, 2015:	Overnight and continuous	Up to 30 days	30-90 days	Greater than 90 days	Total
			(in thousands)		
Repurchase agreements					
Government and agency obligations	$ 211,594	$ 5,250	$ —	$ —	$ 216,844
Agency MBS and CMOs	112,941	2,751	—	—	115,692
Total Repurchase Agreements	$ 324,535	$ 8,001	$ —	$ —	$ 332,536
Securities lending					
Corporate obligations	$ —	$ —	$ —	$ —	$ —
Equity securities	478,573	—	—	—	478,573
Total securities lending	$ 478,573	$ —	$ —	$ —	$ 478,573
Total	**$ 803,108**	**$ 8,001**	**$ —**	**$ —**	**$ 811,109**
Gross amounts of recognized liabilities for repurchase agreements and securities lending transactions included in the Offsetting Assets and Liabilities table included within this footnote					$ 811,109
Amounts related to repurchase agreements and securities lending transactions not included in the Offsetting Assets and Liabilities table included within this footnote					$ —

We enter into Repurchase Agreements and conduct securities lending activities as components of the financing of certain of our operating activities. In the event the market value of the securities we pledge as collateral in these activities declines, we may have to post additional collateral or reduce the borrowing amounts. We monitor such levels daily.

NOTE 20 – INCOME TAXES

Total income taxes are allocated as follows:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Recorded in:			
Income including noncontrolling interests	$ 296,034	$ 267,797	$ 197,033
Equity, arising from compensation expense for tax purposes which is less than (in excess of) amounts recognized for financial reporting purposes	8,115	(7,437)	(2,590)
Equity, arising from cumulative currency translation adjustments and net investment hedges recorded through OCI	31,078	15,142	6,861
Equity, arising from available for sale securities recorded through OCI	(2,246)	3,694	8,986
Equity, arising from cash flow hedges recorded through OCI	(2,850)	—	—
Total	$ 330,131	$ 279,196	$ 210,290

Our provision (benefit) for income taxes consists of the following:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Current:			
Federal	$ 266,359	$ 260,504	$ 182,862
State and local	48,130	29,904	37,491
Foreign	5,007	12,560	8,469
	319,496	302,968	228,822
Deferred:			
Federal	(20,567)	(35,262)	(25,673)
State and local	(5,127)	(410)	(5,023)
Foreign	2,232	501	(1,093)
	(23,462)	(35,171)	(31,789)
Total provision for income tax	$ 296,034	$ 267,797	$ 197,033

Our income tax expense differs from the amount computed by applying the statutory federal income tax rate of 35% due to the following:

	Year ended September 30,					
	2015		2014		2013	
	Amount	%	Amount	%	Amount	%
	($ in thousands)					
Provision calculated at statutory rate	$ 279,361	35 %	$ 261,816	35 %	$ 197,466	35 %
State income tax, net of federal benefit	29,224	3.6 %	18,826	2.5 %	21,662	3.8 %
Tax-exempt interest income	(4,335)	(0.5)%	(2,146)	(0.3)%	(2,074)	(0.4)%
Losses (income) associated with company-owned life insurance which are not deductible (subject to) tax	3,040	0.4 %	(6,365)	(0.8)%	(7,809)	(1.3)%
General business tax credits	(7,166)	(0.9)%	(3,910)	(0.5)%	(1,056)	(0.2)%
Reversal of deferred taxes provided on foreign earnings [1]	—	—	—	—	(10,676)	(1.9)%
Other, net	(4,090)	(0.5)%	(424)	(0.1)%	(480)	(0.1)%
Total provision for income tax	$ 296,034	37.1 %	$ 267,797	35.8 %	$ 197,033	34.9 %

(1) Prior to fiscal year 2013, we had historically provided deferred taxes for the presumed repatriation to the U.S. of earnings from certain foreign subsidiaries. In fiscal year 2013, management changed its assertion related to the earnings of one of our Canadian subsidiaries resulting in a prior year decrease in deferred tax liabilities related to undistributed foreign earnings.

U.S. and foreign components of income excluding noncontrolling interests and before provision for income taxes are as follows:

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
U.S.	$ 782,146	$ 705,878	$ 550,113
Foreign	16,028	42,167	14,074
Income excluding noncontrolling interest and before provision for income taxes	$ 798,174	$ 748,045	$ 564,187

The cumulative effects of temporary differences that give rise to significant portions of the deferred tax asset (liability) items are as follows:

	September 30,	
	2015	2014
	(in thousands)	
Deferred tax assets:		
Deferred compensation	$ 150,949	$ 150,392
Allowances for loan losses and reserves for unfunded commitments	68,445	59,078
Unrealized loss associated with foreign currency translations	22,892	8,133
Unrealized loss associated with available for sale securities	7,764	9,230
Accrued expenses	40,075	38,100
Other	27,008	16,234
Total gross deferred tax assets	317,133	281,167
Less: valuation allowance	(9)	(9)
Total deferred tax assets	317,124	281,158
Deferred tax liabilities:		
Partnership investments	(11,909)	(19,295)
Goodwill and other intangibles	(23,967)	(16,925)
Undistributed earnings of foreign subsidiaries	(12,592)	(11,197)
Other	(1,757)	(2,416)
Total deferred tax liabilities	(50,225)	(49,833)
Net deferred tax assets	$ 266,899	$ 231,325

We have a net deferred tax asset at September 30, 2015 and 2014. This asset includes net operating losses that will expire between 2016 and 2030. A valuation allowance for the fiscal year ended September 30, 2015 has been established for certain state net operating losses due to management's belief that, based on our historical operating income, projection of future taxable income,

scheduled reversal of taxable temporary differences, and implemented tax planning strategies, it is more likely than not that the tax carryforwards will expire unutilized. We believe that the realization of the remaining net deferred tax asset of $266.9 million is more likely than not based on the ability to carry back losses against prior year taxable income and expectations of future taxable income.

We have provided for U.S. deferred income taxes in the amount of $12.6 million on undistributed earnings not considered permanently reinvested in our non-U.S. subsidiaries. To the extent that the cumulative undistributed earnings of non-U.S. subsidiaries are considered to be permanently invested, no deferred U.S. federal income taxes have been provided. As of September 30, 2015, we have approximately $185 million of cumulative undistributed earnings attributable to foreign subsidiaries for which no provisions have been recorded for income taxes that could arise upon repatriation. Because the time or manner of repatriation is uncertain, we cannot determine the impact of local taxes, withholding taxes and foreign tax credits associated with the future repatriation of such earnings, and therefore cannot quantify the tax liability that would be payable in the event all such foreign earnings are repatriated.

As of September 30, 2015, the current tax receivable included in other receivables is $35.7 million, and a current tax payable of $46.9 million is included in trade and other payables on our Consolidated Statements of Financial Condition. As of September 30, 2014 the current tax receivable included in other receivables is $10.7 million and a current tax payable of $30.1 million is included in trade and other payables on our Consolidated Statements of Financial Condition.

Balances associated with unrecognized tax benefits

We recognize the accrual of interest and penalties related to income tax matters in interest expense and other expense, respectively. During the year ended September 30, 2015, accrued interest expense related to unrecognized tax benefits increased by approximately $1 million. During the year ended September 30, 2015, penalty expense related to unrecognized tax benefits decreased by approximately $300 thousand. As of September 30, 2015 and 2014, accrued interest and penalties were approximately $5.7 million and $4.9 million, respectively.

The aggregate changes in the balances for uncertain tax positions are as follows:

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Balance for uncertain tax positions at beginning of year	$ 15,804	$ 13,663	$ 9,473
Increases for tax positions related to the current year	4,954	3,228	2,020
Increases for tax positions related to prior years [1]	3,466	2,455	3,107
Decreases for tax positions related to prior years	(204)	(1,642)	(284)
Decreases due to lapsed statute of limitations	(1,566)	(1,218)	(653)
Decreases related to settlements	—	(682)	—
Balance for uncertain tax positions at end of year	$ 22,454	$ 15,804	$ 13,663

(1) The increases are primarily due to tax positions taken in previously filed tax returns with certain states. We continue to evaluate these positions and intend to contest any proposed adjustments made by taxing authorities.

The total amount of uncertain tax positions that, if recognized, would impact the effective tax rate (the items included in the table above after considering the federal tax benefit associated with any state tax provisions) was $15 million, $10.3 million, and $9.5 million at September 30, 2015, 2014, 2013, respectively. We anticipate that the uncertain tax position balance may decrease by $6.2 million over the next twelve months as a result of the resolution of outstanding state tax audits.

We file U. S. federal income tax returns as well as returns with various state, local and foreign jurisdictions. With few exceptions, we are generally no longer subject to U.S. federal, state and local, or foreign income tax examination by tax authorities for years prior to fiscal year 2013 for federal tax returns, fiscal year 2011 for state and local tax returns and fiscal year 2010 for foreign tax returns. Various state audits in process are expected to be completed in fiscal year 2016.

NOTE 21 – COMMITMENTS, CONTINGENCIES AND GUARANTEES

Commitments and contingencies

In the normal course of business we enter into underwriting commitments. As of September 30, 2015, RJ&A had no open underwriting commitments. As of September 30, 2015, RJ Ltd. had five open equity underwriting commitments that were recorded on the Consolidated Statements of Financial Condition in the approximate amount of $18.9 million in Canadian currency ("CDN"). Subsequent to September 30, 2015, these underwritings were successfully sold in the equity markets and RJ Ltd. incurred no significant loss on the committed underwritings.

As part of our recruiting efforts, we offer loans to prospective financial advisors and certain key revenue producers primarily for recruiting, transitional cost assistance, and retention purposes (see Note 2 for a discussion of our accounting policies governing these transactions). These commitments are contingent upon certain events occurring, including, but not limited to, the individual joining us. As of September 30, 2015 we had made commitments, to either prospects that had accepted our offer, or recently hired producers, of approximately $63.9 million that had not yet been funded.

As of September 30, 2015, RJ Bank had not settled purchases of $156.1 million in syndicated loans. These loan purchases are expected to be settled within 90 days.

A subsidiary of RJ Bank has committed $61.6 million as an investor member in a low-income housing tax credit fund in which a subsidiary of RJTCF is the managing member (see the discussion of "direct investments in LIHTC project partnerships" in Note 2 for information regarding the accounting policies governing these investments). As of September 30, 2015, the RJ Bank subsidiary has invested $34.3 million of the committed amount.

RJ Bank has a committed limited partner investment of $3 million to a limited partnership, $2 million of this committed amount has been invested as of September 30, 2015.

As of September 30, 2015, RJ Bank is a party to a forward-starting advance transaction with the FHLB to borrow $25 million on October 13, 2015. This borrowing was funded subsequent to our year-end, bears interest at the rate of 3.4%, and matures on October 13, 2020.

See Note 27 for additional information regarding RJ Bank's commitments to extend credit and other credit-related off-balance sheet financial instruments such as standby letters of credit and loan purchases.

We have unfunded commitments to various venture capital or private equity partnerships, which aggregate to approximately $54 million as of September 30, 2015. Of the total, we have unfunded commitments to internally-sponsored private equity limited partnerships in which we control the general partner of approximately $20 million.

As part of the terms governing the TPC acquisition (see Note 3 for additional information regarding this acquisition), within 90 days of the TPC Closing Date, the value of certain net assets of TPC as of the TPC Closing Date is subject to determination, as defined by the TPC Agreement, and additional consideration may be paid to the sellers, or a portion of the consideration paid on the TPC Closing Date will be returned to us, depending upon the final determination of the parties. Our estimate of the outcome of this final net asset determination is included in trade and other payables on our September 30, 2015 Consolidated Statements of Financial Condition. On certain dates specified in the TPC Agreement, there are a number of "earn-out" computations to be performed. The result of these computations could result in additional cash paid to the sellers of TPC in the future. These elements of contingent consideration will be finally determined in the future based upon the outcome of either specific performance of defined tasks, or the achievement of specified revenue growth hurdles, over a measurement period ranging from 18 months to 3 years after the TPC Closing Date. Our estimate of the fair value of these elements of contingent consideration as of the TPC Closing Date are included in our determination of the goodwill arising from this acquisition (see Note 13 for additional information regarding the goodwill and identifiable intangible assets which resulted from this acquisition).

RJF has committed to lend to RJTCF, or to guarantee obligations in connection with RJTCF's low-income housing development/rehabilitation and syndication activities, in amounts aggregating up to $250 million upon request, subject to certain limitations and to annual review and renewal. At September 30, 2015, RJTCF has $35 million in outstanding cash borrowings and $36 million in unfunded commitments outstanding. RJTCF borrows from RJF in order to make investments in, or fund loans or advances to, either partnerships that purchase and develop properties qualifying for tax credits ("Project Partnerships") or LIHTC Funds. Investments in Project Partnerships are sold to various LIHTC Funds, which have third party investors, and for which RJTCF serves as the managing member or general partner. RJTCF typically sells investments in Project Partnerships to LIHTC

Funds within 90 days of their acquisition, and the proceeds from the sales are used to repay RJTCF's borrowings from RJF. RJTCF may also make short-term loans or advances to Project Partnerships, and LIHTC Funds.

Long-term lease agreements expire at various times through fiscal year 2026. Minimum annual rental payments under such agreements for the succeeding five fiscal years are approximately: $79.8 million in fiscal year 2016, $69.8 million in fiscal year 2017, $57.9 million in fiscal year 2018, $49 million in fiscal year 2019, $40 million in fiscal year 2020, and $72.7 million thereafter. Certain leases contain rent holidays, leasehold improvement incentives, renewal options and/or escalation clauses. Rental expense incurred under all leases, including equipment under short-term agreements, aggregated to $89.4 million, $90.8 million and $90.5 million in fiscal years 2015, 2014 and 2013, respectively.

As a part of our fixed income public finance operations, RJ&A enters into forward commitments to purchase GNMA or FNMA MBS (see the discussion of these activities within "financial instruments owned, financial instruments sold but not purchased and fair value" in Note 2). At September 30, 2015, RJ&A had approximately $847 million principal amount of outstanding forward MBS purchase commitments which are expected to be purchased over the following 90 days. In order to hedge the market interest rate risk to which RJ&A would otherwise be exposed between the date of the commitment and the date of sale of the MBS, RJ&A enters into TBA security contracts with investors for generic MBS securities at specific rates and prices to be delivered on settlement dates in the future. These TBA securities are accounted for at fair value and are included in Agency MBS securities in the table of assets and liabilities measured at fair value included in Note 5, and at September 30, 2015 aggregate to a net liability having a fair value of $5 million. The estimated fair value of the purchase commitment is a $5 million asset balance as of September 30, 2015.

As a result of extensive regulation of financial holding companies, banks, broker-dealers and investment advisory entities, RJF and certain of its subsidiaries are subject to regular reviews and inspections by regulatory authorities and self-regulatory organizations. The reviews can result in the imposition of sanctions for regulatory violations, ranging from non-monetary censure to fines and, in serious cases, temporary or permanent suspension from conducting business. In addition, regulatory agencies and self-regulatory organizations institute investigations from time to time into industry practices, which can also result in the imposition of sanctions. See Note 26 for additional information regarding regulatory capital requirements applicable to RJF and certain of its subsidiaries.

Guarantees

RJ Bank provides to its affiliate, Raymond James Capital Services, Inc. ("RJ Cap Services"), on behalf of certain corporate borrowers, a guarantee of payment in the event of the borrower's default for exposure under interest rate swaps entered into with RJ Cap Services. At September 30, 2015, the exposure under these guarantees is $5.6 million, which was underwritten as part of RJ Bank's corporate credit relationship with such borrowers. The outstanding interest rate swaps at September 30, 2015 have maturities ranging from November 2015 through December 2026. RJ Bank records an estimated reserve for its credit risk associated with the guarantee of these client swaps, which was insignificant as of September 30, 2015. The estimated total potential exposure under these guarantees is $32.9 million at September 30, 2015.

RJ Bank guarantees the forward foreign exchange contract obligations of its U.S. subsidiaries. See Note 18 for additional information regarding these derivatives.

RJF guarantees interest rate swap obligations of RJ Cap Services. See Note 18 for additional information regarding interest rate swaps.

We have from time to time authorized performance guarantees for the completion of trades with counterparties in Argentina. At September 30, 2015, there were no such outstanding performance guarantees.

In March 2008, RJF guaranteed an $8 million letter of credit issued for settlement purposes that was requested by the Capital Markets Board ("CMB") for a joint venture we were at one time affiliated with in the country of Turkey. While our Turkish joint venture ceased operations in December 2008, the CMB has not released this letter of credit. The issuing bank has instituted an action seeking payment of its fees on the underlying letter of credit and to confirm that the guarantee remains in effect.

RJF guarantees the existing mortgage debt of RJ&A of approximately $37.7 million. See Notes 15, 16 and 17 for information regarding our financing arrangements.

Our U.S. broker-dealer subsidiaries are required by federal law to be members of the Securities Investors Protection Corporation ("SIPC"). The SIPC fund provides protection for securities held in client accounts up to $500 thousand per client, with a limitation of $250 thousand on claims for cash balances. We have purchased excess SIPC coverage through various syndicates of Lloyd's

(the "Excess SIPC Insurer"). For RJ&A, our clearing broker-dealer, the additional protection currently provided has an aggregate firm limit of $750 million for cash and securities, including a sub-limit of $1.9 million per client for cash above basic SIPC. Account protection applies when a SIPC member fails financially and is unable to meet obligations to clients. This coverage does not protect against market fluctuations. RJF has provided an indemnity to the Excess SIPC Insurer against any and all losses they may incur associated with the excess SIPC policies.

RJTCF issues certain guarantees to various third parties related to Project Partnerships whose interests have been sold to one or more of the funds in which RJTCF is the managing member or general partner. In some instances, RJTCF is not the primary guarantor of these obligations, which aggregate to approximately $1.6 million as of September 30, 2015.

RJTCF has provided a guaranteed return on investment to a third party investor in one of its fund offerings ("Fund 34"), and RJF has guaranteed RJTCF's performance under the arrangement. Under the terms of the performance guarantee, should the underlying LIHTC project partnerships held by Fund 34 fail to deliver a certain amount of tax credits and other tax benefits to this investor over the next seven years, RJTCF is obligated to pay the investor an amount that results in the investor achieving a minimum specified return on their investment. A $24.5 million financing asset is included in prepaid expenses and other assets (see Note 10 for additional information), and a related $24.5 million liability is included in trade and other payables on our Consolidated Statements of Financial Condition as of September 30, 2015 related to this obligation. The maximum exposure to loss under this guarantee is approximately $29 million at September 30, 2015, which represents the undiscounted future payments due the investor.

Legal matter contingencies

Indemnification from Regions

On April 2, 2012, RJF completed its acquisition of all of the issued and outstanding shares of Morgan Keegan from Regions. The terms of the stock purchase agreement provide that Regions will indemnify RJF for losses incurred in connection with legal proceedings pending as of the closing date or commenced after the closing date and related to pre-closing matters that are received prior to April 2, 2015, as well as any cost of defense pertaining thereto. All of the Morgan Keegan matters described below are subject to such indemnification provisions. Management estimates the range of potential liability of all such matters subject to indemnification, including the cost of defense, to be from $63 million to $224 million. Any loss arising from such matters, after consideration of the applicable annual deductible, if any, will be borne by Regions. As of September 30, 2015 our Consolidated Statements of Financial Condition include an indemnification asset of approximately $143 million which is included in other assets (see Note 10 for additional information), and a liability for potential losses of approximately $143 million which is included within trade and other payables, pertaining to the matters described below and the related indemnification from Regions. The amount included within trade and other payables is the amount within the range of potential liability related to such matters which management estimates is more likely than any other amount within such range.

Morgan Keegan matters subject to indemnification

In July 2006, MK & Co. and a former MK & Co. analyst were named as defendants in a lawsuit filed by a Canadian insurance and financial services company, Fairfax Financial Holdings, and its American subsidiary in the Circuit Court of Morris County, New Jersey. Plaintiffs made claims under a civil Racketeer Influenced and Corrupt Organizations ("RICO") statute, for commercial disparagement, tortious interference with contractual relationships, tortious interference with prospective economic advantage and common law conspiracy. Plaintiffs alleged that defendants engaged in a multi-year conspiracy to publish and disseminate false and defamatory information about plaintiffs to improperly drive down plaintiff's stock price, so that others could profit from short positions. Plaintiffs alleged that defendants' actions damaged their reputations and harmed their business relationships. Plaintiffs alleged a number of categories of damages they sustained, including lost insurance business, lost financings and increased financing costs, increased audit fees and directors and officers insurance premiums and lost acquisitions, and have requested monetary damages. On May 11, 2012, the trial court ruled that New York law applied to plaintiff's RICO claims, therefore the claims were not subject to treble damages. On June 27, 2012, the trial court dismissed plaintiffs' tortious interference with prospective relations claim, but allowed other claims to go forward. A jury trial was set to begin on September 10, 2012. Prior to its commencement the court dismissed the remaining claims with prejudice. Plaintiffs have appealed the court's rulings.

Certain of the Morgan Keegan entities, along with Regions, have been named in class-action lawsuits filed in federal and state courts on behalf of shareholders of Regions and investors who purchased shares of certain mutual funds in the Regions Morgan Keegan Fund complex (the "Regions Funds"). The Regions Funds were formerly managed by Morgan Asset Management ("MAM"), an entity which was at one time a subsidiary of one of the Morgan Keegan affiliates, but an entity which was not part of our Morgan Keegan acquisition. The complaints contain various allegations, including claims that the Regions Funds and the defendants misrepresented or failed to disclose material facts relating to the activities of the funds. In August 2013, the United

States District Court for the Western District of Tennessee approved the settlement of the class action and the derivative action regarding the closed end funds for $62 million and $6 million, respectively. No class has been certified. Certain of the shareholders in the funds and other interested parties have entered into arbitration proceedings and individual civil claims, in lieu of participating in the class action lawsuits.

The SEC and states of Missouri and Texas are investigating alleged securities law violations by MK & Co. in the underwriting and sale of certain municipal bonds. An enforcement action was brought by the Missouri Secretary of State in April 2013, seeking monetary penalties and other relief, was dismissed and refiled in November 2013. A civil action was brought by institutional investors of the bonds in March 2012, seeking a return of their investment and unspecified compensatory and punitive damages, which has been resolved. A class action was brought on behalf of retail purchasers of the bonds in September 2012, seeking unspecified compensatory and punitive damages. In September 2014, the District Court for the Western District of Missouri granted class certification. The matter was resolved and settlement approved by the District Court in January 2015. Other individual investors and investor groups have also filed arbitration claims or separate civil claims, which have been resolved.

Prior to April 2, 2012, Morgan Keegan was involved in other litigation arising in the normal course of its business. On all such matters, RJF is subject to indemnification from Regions pursuant to the terms of the stock purchase agreement.

Other matters

We are a defendant or co-defendant in various lawsuits and arbitrations incidental to our securities business as well as regulatory investigations and other corporate litigation. We are contesting the allegations in these matters and believe that there are meritorious defenses in each. In view of the number and diversity of claims against us, the number of jurisdictions in which litigation is pending and the inherent difficulty of predicting the outcome of litigation and other claims, we cannot state with certainty what the eventual outcome of pending litigation or other claims will be. Refer to Note 2 for a discussion of our criteria for establishing a range of possible loss related to such matters. Excluding any amounts subject to indemnification from Regions related to pre-April 2, 2012 Morgan Keegan matters discussed above, as of September 30, 2015, management currently estimates the aggregate range of possible loss is from $0 to an amount of up to $22 million in excess of the accrued liability (if any) related to these matters. In the opinion of management, based on current available information, review with outside legal counsel, and consideration of the accrued liability amounts provided for in the accompanying consolidated financial statements with respect to these matters, ultimate resolution of these matters will not have a material adverse impact on our financial position or cumulative results of operations. However, resolution of one or more of these matters may have a material effect on the results of operations in any future period, depending upon the ultimate resolution of those matters and upon the level of income for such period.

NOTE 22 - OTHER COMPREHENSIVE (LOSS) INCOME

The Financial Accounting Standards Board issued new guidance that was first effective for us in our fiscal year 2014, related to the reporting of reclassifications out of AOCI. This guidance, which we adopted in the prior year, provides for it's application on a prospective basis, and did not require the periods prior to its effective date to be presented in a similar manner. Accordingly, the following tables present the relevant other comprehensive (loss) income information for our fiscal years 2015 and 2014, in accordance with such guidance.

Other comprehensive (loss) income

The activity in other comprehensive (loss) income and related tax effects are as follows:

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Unrealized (losses) gains on available for sale securities, (net of tax effect of $2.2 million in fiscal year 2015, $3.7 million in fiscal year 2014, and $9 million in fiscal year 2013)	$ (3,325)	$ 6,021	$ 15,042
Unrealized losses on currency translations net of the impact of net investment hedges (net of tax effect of $31.1 million in fiscal year 2015, $15.1 million in fiscal year 2014, and $6.9 million in fiscal year 2013)	(30,640)	(18,635)	(13,763)
Unrealized loss on cash flow hedges (net of tax effect of $2.9 million in fiscal year 2015)	(4,650)	—	—
Net other comprehensive (loss) income	$ (38,615)	$ (12,614)	$ 1,279

Accumulated other comprehensive (loss) income

The following table presents the changes, and the related tax effects, of each component of accumulated other comprehensive (loss) income for the fiscal years ended September 30, 2015 and 2014:

	Available for sale securities	Net investment hedges[1]	Currency translations	Sub-total: currency translations and net investment hedges	Cash flow hedges[2]	Total
	(in thousands)					
Year ended September 30, 2015						
Accumulated other comprehensive income (loss) as of the beginning of the year	$ 4,745	$ 32,872	$ (39,505)	$ (6,633)	$ —	$ (1,888)
Other comprehensive income (loss) before reclassifications and taxes	2,863	96,499	(96,061)	438	(9,407)	(6,106)
Amounts reclassified from accumulated other comprehensive (loss) income, before tax	(8,434)	—	—	—	1,907	(6,527)
Pre-tax other comprehensive (loss) income	(5,571)	96,499	(96,061)	438	(7,500)	(12,633)
Income tax effect	2,246	(36,168)	5,090	(31,078)	2,850	(25,982)
Net other comprehensive (loss) income for the year, net of tax	(3,325)	60,331	(90,971)	(30,640)	(4,650)	(38,615)
Accumulated other comprehensive income (loss) as of September 30, 2015	$ 1,420	$ 93,203	$ (130,476)	$ (37,273)	$ (4,650)	$ (40,503)
Year ended September 30, 2014						
Accumulated other comprehensive (loss) income as of the beginning of the year	$ (1,276)	$ 3,496	$ 8,506	$ 12,002	$ —	$ 10,726
Other comprehensive income (loss) before reclassifications and taxes	14,564	47,189	(50,682)	(3,493)	—	11,071
Amounts reclassified from accumulated other comprehensive loss, before tax	(4,849)	—	—	—	—	(4,849)
Pre-tax other comprehensive income (loss)	9,715	47,189	(50,682)	(3,493)	—	6,222
Income tax effect	(3,694)	(17,813)	2,671	(15,142)	—	(18,836)
Net other comprehensive income (loss) for the year, net of tax	6,021	29,376	(48,011)	(18,635)	—	(12,614)
Accumulated other comprehensive income (loss) as of September 30, 2014	$ 4,745	$ 32,872	$ (39,505)	$ (6,633)	$ —	$ (1,888)

(1) Comprised of net gains recognized on forward foreign exchange derivatives associated with hedges of RJ Bank's foreign currency exposure due to its non-U.S. dollar net investments (see Note 18 for additional information on these derivatives).

(2) Represents RJ Bank Interest Hedges (see Note 18 for additional information on these derivatives).

Reclassifications out of AOCI

The following table presents the income statement line items impacted by reclassifications out of accumulated other comprehensive (loss) income during the years ended September 30, 2015 and 2014:

Accumulated other comprehensive (loss) income components:	Increase (decrease) in amounts reclassified from accumulated other comprehensive (loss) income	Affected line items in income statement
	(in thousands)	
Year ended September 30, 2015		
Available for sale securities: [1]		
Auction rate securities [2]	$ (8,976)	Other revenue
RJ Bank available for sale securities [3]	542	Other revenue
RJ Bank Interest Hedges[4]	1,907	Interest expense
	(6,527)	Total before tax
Income tax effect	2,526	Provision for income taxes
Total reclassifications for the period	$ (4,001)	Net of tax
Year ended September 30, 2014		
Available for sale securities: [1]		
Auction rate securities [2]	$ (4,614)	Other revenue
RJ Bank available for sale securities [3]	(235)	Other revenue
	(4,849)	Total before tax
Income tax effect	1,866	Provision for income taxes
Total reclassifications for the period	$ (2,983)	Net of tax

(1) See Note 7 for additional information regarding the available for sale securities, and Note 5 for additional fair value information regarding these securities.

(2) Other revenues in our Consolidated Statements of Income and Comprehensive Income include realized gains on the sale or redemption of ARS (see Note 7 for further information). The amounts presented in the table represent the reversal out of AOCI associated with such ARS activities. The net of such realized gain and this reversal out of AOCI represents the net effect of such redemptions and sales activities on OCI for each respective fiscal year, on a pre-tax basis.

(3) Other revenues in our Consolidated Statements of Income and Comprehensive Income include realized gains or losses on the sale of certain available for sale securities held by RJ Bank (see Note 7 for further information). The amounts presented in the table represent the reversal out of AOCI associated with such securities sold. The net of such realized gains or losses and this reversal out of AOCI represents the net effect of such sales activities on OCI for each respective period, on a pre-tax basis.

(4) See Note 18 for additional information regarding the RJ Bank Interest Hedges, and Note 5 for additional fair value information regarding these derivatives.

All of the components of other comprehensive (loss) income described above, net of tax, are attributable to RJF.

NOTE 23 – INTEREST INCOME AND INTEREST EXPENSE

The components of interest income and interest expense are as follows:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Interest income:			
Margin balances	$ 67,573	$ 68,454	$ 60,931
Assets segregated pursuant to regulations and other segregated assets	13,792	15,441	17,251
Bank loans, net of unearned income	405,578	343,942	335,964
Available for sale securities	5,100	6,560	8,005
Trading instruments	19,450	17,883	20,089
Stock loan	12,036	8,731	8,271
Loans to financial advisors	7,056	6,427	6,510
Corporate cash and all other	12,622	13,448	16,578
Total interest income	$ 543,207	$ 480,886	$ 473,599
Interest expense:			
Brokerage client liabilities	$ 940	$ 1,269	$ 2,049
Retail bank deposits	8,382	7,959	9,032
Trading instruments sold but not yet purchased	4,503	4,327	3,595
Stock borrow	5,237	2,869	2,158
Borrowed funds	6,079	3,939	4,724
Senior notes	76,088	76,038	76,113
Interest expense of consolidated VIEs	1,879	2,900	3,959
Other	4,846	4,790	8,741
Total interest expense	107,954	104,091	110,371
Net interest income	435,253	376,795	363,228
Subtract: provision for loan losses	(23,570)	(13,565)	(2,565)
Net interest income after provision for loan losses	$ 411,683	$ 363,230	$ 360,663

NOTE 24 - EMPLOYEE SHARE-BASED AND OTHER COMPENSATION

Our profit sharing plan and employee stock ownership plan ("ESOP") provide certain death, disability or retirement benefits for all employees who meet certain service requirements. The plans are noncontributory. Our contributions, if any, are determined annually by our Board of Directors on a discretionary basis and are recognized as compensation cost throughout the year. Benefits become fully vested after six years of qualified service.

All shares owned by the ESOP are included in earnings per share calculations. Cash dividends paid to the ESOP are reflected as a reduction of retained earnings. The number of shares of our common stock held by the ESOP at September 30, 2015 and 2014 was approximately 4,719,000 and 4,814,000, respectively. The market value of our common stock held by the ESOP at September 30, 2015 was approximately $234 million, of which approximately $2.1 million is unearned (not yet vested) by ESOP plan participants.

We also offer a plan pursuant to section 401(k) of the Internal Revenue Code, which is a qualified plan that may provide for a discretionary contribution or a matching contribution each year. Matching contributions are 75% of the first $1,000 and 25% of the next $1,000 of eligible compensation deferred by each participant annually.

Our LTIP is a non-qualified deferred compensation plan that provides benefits to employees who meet certain compensation or production requirements. We have purchased and hold life insurance on the lives of certain current and former employee participants (see Note 10 for information regarding the carrying value of these insurance policies) to earn a competitive rate of return for participants and to provide the primary source of funds available to satisfy our obligations under this plan (the "Deferral Plan Funding Structure").

Contributions to the qualified plans and the LTIP, are approved annually by the Board of Directors or a committee thereof.

We have a Voluntary Deferred Compensation Plan (the "VDCP"), a non-qualified and voluntary opportunity for certain highly compensated employees to defer compensation. Eligible participants may elect to defer a percentage or specific dollar amount of their compensation into the VDCP. The Deferral Plan Funding Structure is the primary source of funding for this plan.

We also maintain non-qualified deferred compensation plans or arrangements for the benefit of certain employees that provide a return to the participating employees based upon the performance of various referenced investments. Under the terms of each applicable plan or arrangement, we invest directly as a principal in such investments, related to our obligations to perform under the respective deferred compensation plan (see Note 5 for the fair value of these investments as of September 30, 2015, and 2014).

Compensation expense associated with all of the qualified and non-qualified plans described above totaled $116.9 million, $111.3 million and $98.7 million for the fiscal years ended September 30, 2015, 2014 and 2013, respectively.

Share-based compensation plans

We have one share-based compensation plan for our employees, Board of Directors and non-employees (comprised of independent contractor financial advisors). The 2012 Stock Incentive Plan (the "2012 Plan") permits us to grant share-based and cash-based awards designed to be exempt from the limitation on deductible compensation under Section 162(m) of the Internal Revenue Code. Under the 2012 Plan, we may grant 15,400,000 new shares in addition to the shares available for grant under six predecessor plans which were terminated as of February 23, 2012 (except with respect to awards previously granted under such terminated predecessor plans which remain outstanding). The 2012 Plan is the successor to predecessor plans under which options, restricted stock or restricted stock units have previously been issued. We have issued new shares under the 2012 Plan and also are permitted to reissue our treasury shares.

We recognize the resulting realized tax benefit or deficit that exceeds or is less than the previously recognized deferred tax asset for share-based awards (the excess tax benefit) as additional paid-in capital.

Stock option awards

Options may be granted to key administrative employees and employee financial advisors who achieve certain gross commission levels. Options are exercisable in the 36th to 72nd months following the date of grant and only in the event that the grantee is an employee of ours or has terminated within 45 days, disabled, deceased or, in some instances, retired. Options are granted with an exercise price equal to the market price of our stock on the grant date.

Expense and income tax benefits related to our stock options awards granted to employees are presented below:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Total share-based expense	$ 10,169	$ 9,068	$ 8,382
Income tax benefits related to share-based expense	811	667	596

These amounts may not be representative of future share-based compensation expense since the estimated fair value of stock options is amortized over the requisite service period using the straight-line method, and in certain instances the graded vesting attribution method, and additional options may be granted in future years. The fair value of each fixed option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions used for stock option grants in the fiscal years ended September 30, 2015, 2014 and 2013:

	Year ended September 30,		
	2015	2014	2013
Dividend yield	1.30%	1.33%	1.37%
Expected volatility	29.55%	39.84%	39.38%
Risk-free interest rate	1.66%	1.43%	0.67%
Expected lives (in years)	5.48	5.50	5.50

The dividend yield assumption is based on our declared dividend as a percentage of the stock price at the date of the grant. The expected volatility assumption is based on our historical stock price and is a weighted average combining (1) the volatility of the most recent year, (2) the volatility of the most recent time period equal to the expected lives assumption, (3) the implied volatility of option contracts of RJF stock, and (4) the annualized volatility of the price of our stock since the late 1980s. The risk-

free interest rate assumption is based on the U.S. Treasury yield curve in effect at the time of grant of the options. The expected lives assumption is based on the average of (1) the assumption that all outstanding options will be exercised at the midpoint between their vesting date and full contractual term and (2) the assumption that all outstanding options will be exercised at their full contractual term.

A summary of option activity for grants to employees and members of our Board of Directors for the fiscal year ended September 30, 2015 is presented below:

	Options for shares	Weighted-average exercise price ($)	Weighted-average remaining contractual term (years)	Aggregate intrinsic value ($)
Outstanding at October 1, 2014	4,061,460	$ 33.90		
Granted	1,100,008	55.52		
Exercised	(1,015,914)	26.37		
Forfeited	(84,200)	42.15		
Outstanding at September 30, 2015	4,061,354	41.49	3.82	$ 39,482,000
Exercisable at September 30, 2015	535,491	$ 27.10	1.09	$ 12,062,000

As of September 30, 2015, there was $24.4 million of total unrecognized pre-tax compensation cost, net of estimated forfeitures, related to stock option awards. These costs are expected to be recognized over a weighted-average period of approximately 3.20 years.

The following stock option activity occurred under the 2012 Plan for grants to employees and members of our Board of Directors:

	Year ended September 30,		
	2015	2014	2013
	(in thousands, except per option amounts)		
Weighted-average grant date fair value per option	$ 14.36	$ 16.21	$ 12.06
Total intrinsic value of stock options exercised	29,574	15,570	14,240
Total grant date fair value of stock options vested	10,483	5,004	11,598

Cash received from stock option exercises during the fiscal year ended September 30, 2015 was $26.9 million.

Restricted stock awards

We may grant awards under the 2012 Plan in connection with initial employment or under various retention programs for individuals who are responsible for a contribution to our management, growth, and/or profitability. Through our Canadian subsidiary, we established a trust fund. This trust fund was established and funded to enable the trust fund to acquire our common stock in the open market to be used to settle restricted stock units granted as a retention vehicle for certain employees of the Canadian subsidiary (see Note 11 for discussion of our consolidation of this trust fund, which is a VIE). We may also grant awards to officers and certain other employees in lieu of cash for 10% to 50% of annual bonus amounts in excess of $250,000. The determination of the number of units or shares to be granted is determined by the Corporate Governance, Nominating and Compensation Committee of the Board of Directors. Under the plan, the awards are generally restricted for a three to five year period, during which time the awards are forfeitable in the event of termination other than for death, disability or retirement.

Prior to February 2011, non-employee members of our Board of Directors had been granted stock option awards annually. Commencing in February 2011, restricted stock unit awards are issued annually to such members of our Board of Directors, in lieu of stock option awards. The restricted stock units granted to these Directors vest over a one year period from their grant date, provided that the director is still serving on our Board of Directors at the end of such period.

The following restricted stock award activity occurred during the fiscal year ended September 30, 2015:

	Shares/Units	Weighted-average grant date fair value ($)
Non-vested at October 1, 2014	5,588,827	$ 35.61
Granted	1,265,271	56.30
Vested	(2,081,400)	32.85
Forfeited	(88,325)	42.83
Non-vested at September 30, 2015	4,684,373	$ 42.29

Expense and income tax benefits related to our restricted stock awards are presented below:

	Year ended September 30,		
	2015	2014	2013
	(in thousands)		
Total share-based expense	$ 57,587	$ 54,666	$ 48,621
Income tax benefits related to share-based expense	20,467	19,105	16,607

For the year ended September 30, 2015, we reduced the cumulative excess tax benefit realized in prior years related to our restricted stock awards by $2.4 million.

As of September 30, 2015, there was $90 million of total unrecognized pre-tax compensation cost, net of estimated forfeitures, related to restricted stock shares and restricted stock units. These costs are expected to be recognized over a weighted-average period of approximately 2.75 years. The total fair value of shares and unit awards vested under this plan during the fiscal year ended September 30, 2015 was $68.3 million.

Employee stock purchase plan

Under the 2003 Employee Stock Purchase Plan, we are authorized to issue up to 7,375,000 shares of common stock to our full-time employees, nearly all of whom are eligible to participate. Under the terms of the plan, share purchases in any calendar year are limited to the lesser of 1,000 shares or shares with a fair market value of $25,000. The purchase price of the stock is 85% of the average high and low market price on the day prior to the purchase date. Under the plan we sold approximately 430,000, 397,000 and 436,000 shares to employees during the years ended September 30, 2015, 2014 and 2013, respectively. The compensation cost is calculated as the value of the 15% discount from market value and was $3.5 million, $3 million and $2.7 million during the fiscal years ended September 30, 2015, 2014 and 2013, respectively.

Employee investment funds

Certain key employees participate in the EIF Funds, which are limited partnerships that invest in certain of our private equity and venture capital activities and other unaffiliated venture capital limited partnerships (see Notes 2 and 11 for further information on our consolidation of the EIF Funds, which are VIEs). We made non-recourse loans to these key employees for two-thirds of the purchase price per unit. All of these loans have been repaid.

We have various employee investment funds. Certain key employees participate in these funds, which are limited partnerships that invest in certain unaffiliated venture capital limited partnerships.

NOTE 25 - NON-EMPLOYEE SHARE-BASED AND OTHER COMPENSATION

Stock option awards

Under the 2012 Plan, we may grant stock options to our independent contractor financial advisors. The 2012 Plan is the successor to the prior plan under which options have previously been issued to independent contractor financial advisors. Options are exercisable five years after the grant date provided that the financial advisors are still associated with us or have terminated within 45 days, disabled, deceased or, in some instances, recently retired. Option terms are specified in individual agreements and expire on a date no later than the sixth anniversary of the grant date. Options are granted with an exercise price equal to the market price of our stock on the grant date.

Share-based awards granted to our independent contractor financial advisors are measured at their vesting date fair value and their fair value estimated at reporting dates prior to that time. The compensation expense recognized each period is based on the most recent estimated value. Further, we classify these non-employee awards as liabilities at fair value upon vesting, with changes in fair value reported in earnings until these awards are exercised or forfeited.

Expense and income tax benefits related to stock option grants to our independent contractor financial advisors are presented below:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Total share-based expense	$ 27	$ 2,523	$ 1,282
Income tax benefits related to share-based expense	10	959	487

The fair value of each option grant awarded to an independent contractor financial advisor is estimated on the date of grant and periodically revalued using the Black-Scholes option pricing model with the following weighted-average assumptions used for the fiscal years ended September 30, 2015, 2014 and 2013:

	Year ended September 30,		
	2015	2014	2013
Dividend yield	1.44%	1.19%	1.34%
Expected volatility	32.46%	40.27%	39.88%
Risk-free interest rate	1.36%	1.78%	1.16%
Expected lives (in years)	3.14	3.43	3.32

The dividend yield assumption is based on our declared dividend as a percentage of the stock price at each point in time the options are valued. The expected volatility assumption is based on our historical stock price and is a weighted average combining (1) the volatility of the most recent year, (2) the volatility of the most recent time period equal to the expected lives assumption, (3) the implied volatility of option contracts of RJF stock, and (4) the annualized volatility of the price of our stock since the late 1980s. The risk-free interest rate assumption is based on the U.S. Treasury yield curve in effect at each point in time the options are valued. The expected lives assumption is based on the difference between the average of (1) the assumption that all outstanding options will be exercised at the midpoint between their vesting date and full contractual term and (2) the assumption that all outstanding options will be exercised at their full contractual term and the date of the current reporting period.

A summary of independent contractor financial advisors option activity for the fiscal year ended September 30, 2015 is presented below:

	Options for shares	Weighted-average exercise price ($)	Weighted-average remaining contractual term (years)	Aggregate intrinsic value ($)
Outstanding at October 1, 2014	239,625	$ 34.37		
Granted	39,200	55.49		
Exercised	(35,000)	23.86		
Forfeited	(200)	55.49		
Outstanding at September 30, 2015	243,625	$ 39.26	3.05	$ 2,635,000
Exercisable at September 30, 2015	13,000	$ 25.28	0.15	$ 307,000

As of September 30, 2015, there was $1 million of total unrecognized pre-tax compensation cost, net of estimated forfeitures, related to unvested stock options granted to our independent contractor financial advisors based on an estimated weighted-average fair value of $15.91 per share at that date. These costs are expected to be recognized over a weighted-average period of approximately 2.98 years.

The intrinsic value of stock options exercised, and the fair value of stock options vested, as they pertain to our independent contractor financial advisors, for the years indicated are as follows:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Total intrinsic value of stock options exercised	$ 1,146	$ 1,329	$ 985
Total fair value of stock options vested	783	715	347

Cash received from stock option exercises for the fiscal year ended September 30, 2015 was $800 thousand.

Restricted stock awards

Under the 2012 Plan we may grant restricted shares of common stock or restricted stock units to our independent contractor financial advisors. The 2012 Plan is the successor to the prior plan under which restricted stock or restricted stock units have been issued to independent contractors. We issue new shares under this plan as it was approved by shareholders. Under the plan the awards are generally restricted for a five year period, during which time the awards are forfeitable in the event the independent contractor financial advisors are no longer associated with us, other than for death, disability or retirement.

The following activity pertaining to restricted stock awards to our independent contractor financial advisors occurred during the fiscal year ended September 30, 2015:

	Shares/Units	Weighted-average reporting date fair value ($)
Non-vested at October 1, 2014	14,906	$ 53.58
Granted	—	
Vested	(12,320)	
Forfeited	—	
Non-vested at September 30, 2015	2,586	$ 49.63

The weighted-average fair value of share and unit awards vested during the fiscal year ended September 30, 2015 was $57.51 per share. There were no restricted stock awards forfeited during the fiscal year ended September 30, 2015.

Expense and income tax benefits related to our restricted stock awards granted to our independent contractor financial advisors are presented below:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Total share-based expense	$ 129	$ 317	$ 829
Income tax benefits related to share-based expense	49	121	315

The total fair value of share and unit awards vested during the fiscal years ended September 30, 2015, 2014 and 2013 was $700 thousand, $500 thousand and $3.1 million, respectively.

Other compensation

We offer non-qualified deferred compensation plans that provide benefits to our independent contractor financial advisors who meet certain production requirements. The Deferral Plan Funding Structure is the primary source of funding for this plan. The contributions are made in amounts approved annually by management.

Certain independent contractor financial advisors are eligible to participate in our VDCP. Eligible participants may elect to defer a percentage or specific dollar amount of their compensation into the VDCP. The Deferral Plan Funding Structure is the primary source of funding for this plan.

NOTE 26 – REGULATIONS AND CAPITAL REQUIREMENTS

RJF, as a financial holding company, and RJ Bank, are subject to various regulatory capital requirements. Failure to meet minimum capital requirements can initiate certain mandatory and possibly additional discretionary actions by regulators that, if undertaken, could have a direct material effect on our and RJ Bank's financial results. Under capital adequacy guidelines, RJF and RJ Bank must meet specific capital guidelines that involve quantitative measures of our assets, liabilities, and certain off-balance-sheet items as calculated under regulatory accounting practices. RJF's and RJ Bank's capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk-weightings, and other factors.

Effective January 1, 2015, RJF and RJ Bank became subject to Basel III. Under the Basel III rules, the quantity and quality of regulatory capital increases, a capital conservation buffer was established, selected changes were made to the calculation of risk-weighted assets, and a new ratio, common equity Tier 1 was introduced, all of which are applicable to both RJF and RJ Bank. RJF and RJ Bank report regulatory capital under Basel III under the standardized approach. Various aspects of Basel III will be subject to multi-year transition periods through December 31, 2018. Prior to January 1, 2015, RJF and RJ Bank were subject to the capital requirements of Basel 2.5 and Basel 1, respectively.

RJF and RJ Bank are required to maintain minimum amounts and ratios of Total and Tier 1 capital (as defined in the regulations) to risk-weighted assets (as defined), Tier 1 capital to average assets (as defined), and under rules defined in Basel III, Common equity Tier 1 capital to risk-weighted assets. RJF and RJ Bank each calculate these ratios in order to assess compliance with both regulatory requirements and their internal capital policies. Effective January 1, 2016, RJF and RJ Bank will be required to report their capital conservation buffers. Capital levels are monitored to assess both RJF and RJ Bank's capital position. At current capital levels, RJF and RJ Bank are each categorized as "well capitalized."

To meet requirements for capital adequacy purposes or to be categorized as "well capitalized," RJF must maintain minimum Common equity Tier 1, Tier 1 risk-based, Total risk-based, and Tier 1 leverage amounts and ratios as set forth in the table below.

	Actual		Requirement for capital adequacy purposes		To be well capitalized under regulatory provisions	
	Amount	Ratio	Amount	Ratio	Amount	Ratio
	($ in thousands)					
RJF as of September 30, 2015:						
(computed in accordance with Basel III)						
Common equity Tier 1 capital	$ 4,101,353	22.1%	$ 834,677	4.5%	$ 1,205,644	6.5%
Tier 1 capital	$ 4,101,353	22.1%	$ 1,112,902	6.0%	$ 1,483,869	8.0%
Total capital	$ 4,290,431	23.1%	$ 1,483,869	8.0%	$ 1,854,837	10.0%
Tier 1 leverage	$ 4,101,353	16.1%	$ 1,018,859	4.0%	$ 1,273,574	5.0%
RJF as of September 30, 2014:						
(computed in accordance with Basel 2.5)						
Tier 1 capital	$ 3,775,385	19.7%	$ 765,589	4.0%	$ 1,148,384	6.0%
Total capital	$ 3,940,516	20.6%	$ 1,531,178	8.0%	$ 1,913,973	10.0%
Tier 1 leverage	$ 3,775,385	16.4%	$ 919,546	4.0%	$ 1,149,433	5.0%

The increase in RJF's Total capital and Tier 1 capital ratios at September 30, 2015 compared to September 30, 2014 is primarily the result of positive earnings during the year ended September 30, 2015 and the implementation of the Basel III rules in relation to margin loans and RJ Bank's SBL portfolio, which resulted in a reduced risk-weighting of the majority of these assets which are secured by marketable securities. RJF's Tier 1 leverage ratio declined slightly compared to September 30, 2014 due to the growth of RJ Bank's loan portfolio and an increase in segregated assets held for the exclusive benefit of our broker-dealer clients.

To meet the requirements for capital adequacy or to be categorized as "well capitalized," RJ Bank must maintain Common equity Tier 1, Tier 1 risk-based, Total risk-based, and Tier 1 leverage amounts and ratios as set forth in the table below.

	Actual		Requirement for capital adequacy purposes		To be well capitalized under regulatory provisions	
	Amount	Ratio	Amount	Ratio	Amount	Ratio
			($ in thousands)			
RJ Bank as of September 30, 2015:						
(computed in accordance with Basel III)						
Common equity Tier 1 capital	$ 1,525,942	13.0%	$ 526,577	4.5%	$ 760,611	6.5%
Tier 1 capital	$ 1,525,942	13.0%	$ 702,103	6.0%	$ 936,137	8.0%
Total capital	$ 1,672,577	14.3%	$ 936,137	8.0%	$ 1,170,171	10.0%
Tier 1 leverage	$ 1,525,942	10.9%	$ 558,829	4.0%	$ 698,536	5.0%
RJ Bank as of September 30, 2014:						
(computed in accordance with Basel 1)						
Tier 1 capital	$ 1,314,374	11.2%	$ 467,926	4.0%	$ 701,889	6.0%
Total capital	$ 1,460,895	12.5%	$ 935,852	8.0%	$ 1,169,815	10.0%
Tier 1 leverage	$ 1,314,374	10.7%	$ 492,186	4.0%	$ 615,232	5.0%

The increase in RJ Bank's Total and Tier 1 capital ratios at September 30, 2015 compared to September 30, 2014 is primarily due to the implementation of the Basel III rules in relation to RJ Bank's SBL portfolio, which resulted in a reduced risk-weighting of the majority of these loans which are secured by marketable securities.

Our intention is to maintain RJ Bank's "well capitalized" status. RJ Bank maintains a targeted total capital to risk-weighted assets ratio of at least 12.5%. In the unlikely event that RJ Bank failed to maintain its "well capitalized" status, the consequences could include a requirement to obtain a waiver prior to acceptance, renewal, or rollover of brokered deposits and higher FDIC premiums, but would not have a significant impact on our operations.

RJ Bank may pay dividends to the parent company without prior approval by its regulator as long as the dividend does not exceed the sum of RJ Bank's current calendar year and the previous two calendar years' retained net income, and RJ Bank maintains its targeted capital to risk-weighted assets ratios.

Certain of our broker-dealer subsidiaries are subject to the requirements of the Uniform Net Capital Rule (Rule 15c3-1) under the Securities Exchange Act of 1934. RJ&A and RJFS, each being member firms of the Financial Industry Regulatory Authority ("FINRA"), are subject to the rules of FINRA, whose capital requirements are substantially the same as Rule 15c3-1. Rule 15c3-1 requires that aggregate indebtedness, as defined, not exceed 15 times net capital, as defined. Rule 15c3-1 also provides for an "alternative net capital requirement," which RJ&A and RJFS have each elected. Regulations require that minimum net capital, as defined, be equal to the greater of $1 million, ($250 thousand for RJFS as of September 30, 2015) or two percent of aggregate debit items arising from client transactions. FINRA may require a member firm to reduce its business if its net capital is less than four percent of Aggregate Debit Items and may prohibit a member firm from expanding its business and declaring cash dividends if its net capital is less than five percent of aggregate debit items.

The net capital position of our wholly owned broker-dealer subsidiary RJ&A is as follows:

	As of September 30,	
	2015	2014
	($ in thousands)	
Raymond James & Associates, Inc.:		
(Alternative Method elected)		
Net capital as a percent of aggregate debit items	20.85%	24.14%
Net capital	$ 411,222	$ 442,866
Less: required net capital	(39,452)	(36,694)
Excess net capital	$ 371,770	$ 406,172

The net capital position of our wholly owned broker-dealer subsidiary RJFS is as follows:

	As of September 30,	
	2015	2014
	(in thousands)	
Raymond James Financial Services, Inc.:		
(Alternative Method elected)		
Net capital	$ 25,828	$ 23,748
Less: required net capital	(250)	(250)
Excess net capital	$ 25,578	$ 23,498

RJ Ltd. is subject to the Minimum Capital Rule (Dealer Member Rule No. 17 of the Investment Industry Regulatory Organization of Canada ("IIROC")) and the Early Warning System (Dealer Member Rule No. 30 of the IIROC). The Minimum Capital Rule requires that every member shall have and maintain at all times risk-adjusted capital greater than zero calculated in accordance with Form 1 (Joint Regulatory Financial Questionnaire and Report) and with such requirements as the Board of Directors of the IIROC may from time to time prescribe. Insufficient risk-adjusted capital may result in suspension from membership in the stock exchanges or the IIROC.

The Early Warning System is designed to provide advance warning that a member firm is encountering financial difficulties. This system imposes certain sanctions on members who are designated in Early Warning Level 1 or Level 2 according to their capital, profitability, liquidity position, frequency of designation or at the discretion of the IIROC. Restrictions on business activities and capital transactions, early filing requirements, and mandated corrective measures are sanctions that may be imposed as part of the Early Warning System. RJ Ltd. is not in Early Warning Level 1 or Level 2 at either September 30, 2015 or 2014.

The risk adjusted capital of RJ Ltd. is as follows (in Canadian currency):

	As of September 30,	
	2015	2014
	(in thousands)	
Raymond James Ltd.:		
Risk adjusted capital before minimum	$ 127,097	$ 107,645
Less: required minimum capital	(250)	(250)
Risk adjusted capital	$ 126,847	$ 107,395

Raymond James Trust, N.A., ("RJ Trust") is regulated by the OCC and is required to maintain sufficient capital and meet capital and liquidity requirements. As of September 30, 2015 and 2014, RJ Trust met the requirements.

At September 30, 2015, all of our other active regulated domestic and international subsidiaries are in compliance with and met all capital requirements.

RJF expects to continue paying cash dividends. However, the payment and rate of dividends on our common stock is subject to several factors including our operating results, financial requirements, and the availability of funds from our subsidiaries, including our broker-dealer and bank subsidiaries, which may be subject to restrictions under regulatory capital rules. The availability of funds from subsidiaries may also be subject to restrictions contained in loan covenants of certain broker-dealer loan agreements; dividends to the parent from RJ Bank may be subject to restrictions by bank regulators. None of these restrictions have ever limited our past dividend payments.

NOTE 27 – FINANCIAL INSTRUMENTS WITH OFF-BALANCE SHEET RISK

In the normal course of business, we purchase and sell securities as either principal or agent on behalf of our clients. If either the client or counterparty fails to perform, we may be required to discharge the obligations of the nonperforming party. In such circumstances, we may sustain a loss if the market value of the security or futures contract is different from the contract value of the transaction.

In a number of instances in the discussions that follow, reference is made to collateral. Note 19 provides additional information regarding the recorded balances in the Consolidated Statements of Financial Condition and the collateral balances related thereto.

We also act as an intermediary between broker-dealers and other financial institutions whereby we borrow securities from one broker-dealer and then lend them to another. Securities borrowed and securities loaned are carried at the amounts of cash

collateral advanced and received in connection with the transactions. We measure the market value of the securities borrowed and loaned against the cash collateral on a daily basis. The market value of securities borrowed was $83.4 million and securities loaned was $39.7 million at September 30, 2015, and the market value of securities borrowed was $113.3 million and securities loaned was $61 million at September 30, 2014. The contract value of securities borrowed and securities loaned was $86.3 million and $44.4 million, respectively, at September 30, 2015 and the contract value of securities borrowed and securities loaned was $117.7 million and $67.3 million, respectively, at September 30, 2014. Additional cash is obtained as necessary to ensure such transactions are adequately collateralized. If another party to the transaction fails to perform as agreed (for example, failure to deliver a security or failure to pay for a security), we may incur a loss if the market value of the security is different from the contract amount of the transaction.

We have also loaned, to broker-dealers and other financial institutions, securities owned by clients and others for which we have received cash or other collateral. The market value of securities loaned was $432.6 million and $341.2 million at September 30, 2015 and 2014, respectively. The contract value of securities loaned was $434.2 million and $350 million at September 30, 2015 and 2014, respectively. If a borrowing institution or broker-dealer does not return a security, we may be obligated to purchase the security in order to return it to the owner. In such circumstances, we may incur a loss equal to the amount by which the market value of the security on the date of nonperformance exceeds the value of the collateral received from the financial institution or the broker-dealer.

We have sold securities that we do not currently own, and will, therefore, be obligated to purchase such securities at a future date. We have recorded $288 million and $238.4 million at September 30, 2015 and 2014, respectively, which represents the market value of such securities (see Notes 5 and 6 for further information). We are subject to loss if the market price of those securities not covered by a hedged position increases subsequent to fiscal year-end. We utilize short positions on government obligations and equity securities to economically hedge long inventory positions.

We enter into security transactions on behalf of our clients and other brokers involving forward settlement. Forward contracts provide for the delayed delivery of the underlying instrument. The contractual amounts related to these financial instruments reflect the volume and activity and do not reflect the amounts at risk. The gain or loss on these transactions is recognized on a trade date basis. Transactions involving future settlement give rise to market risk, which represents the potential loss that can be caused by a change in the market value of a particular financial instrument. Our exposure to market risk is determined by a number of factors, including the duration, size, composition and diversification of positions held, the absolute and relative levels of interest rates, and market volatility. The credit risk for these transactions is limited to the unrealized market valuation gains recorded in the Consolidated Statements of Financial Condition.

The majority of our transactions and, consequently, the concentration of our credit exposure, is with clients, broker-dealers and other financial institutions in the U.S. These activities primarily involve collateralized arrangements and may result in credit exposure in the event that the counterparty fails to meet its contractual obligations. Our exposure to credit risk can be directly impacted by volatile securities markets, which may impair the ability of counterparties to satisfy their contractual obligations. We seek to control our credit risk through a variety of reporting and control procedures, including establishing credit limits based upon a review of the counterparties' financial condition and credit ratings. We monitor collateral levels on a daily basis for compliance with regulatory and internal guidelines and request changes in collateral levels as appropriate.

As a part of our fixed income public finance operations, RJ&A enters into forward commitments to purchase GNMA or FNMA MBS. See Note 2 and Note 21 for information on these commitments. We utilize TBA security contracts to hedge our interest rate risk associated with these commitments. We are subject to loss if the timing of, or the actual amount of, the MBS securities differs significantly from the term and notional amount of the TBA security contracts we enter into.

RJ Ltd. is subject to foreign exchange risk primarily due to financial instruments denominated in U.S. dollars that may be impacted by fluctuation in foreign exchange rates. In order to mitigate this risk, RJ Ltd. enters into forward foreign exchange contracts. The fair value of these contracts is not significant. As of September 30, 2015, forward contracts outstanding to buy and sell U.S. dollars totaled CDN $2.2 million and CDN $16.9 million, respectively. RJ Bank is also subject to foreign exchange risk related to its net investment in a Canadian subsidiary. See Note 18 for information regarding how RJ Bank utilizes net investment hedges to mitigate a portion of this risk.

RJ Bank has outstanding at any time a significant number of commitments to extend credit and other credit-related off-balance sheet financial instruments such as standby letters of credit and loan purchases, which then extend over varying periods of time. These arrangements are subject to strict credit control assessments and each customer's credit worthiness is evaluated on a case-by-case basis. Fixed-rate commitments are also subject to market risk resulting from fluctuations in interest rates and RJ Bank's exposure is limited to the replacement value of those commitments.

RJ Bank's commitments to extend credit and other credit-related off-balance sheet financial instruments outstanding are as follows:

	As of September 30,	
	2015	2014
	(in thousands)	
Standby letters of credit	$ 60,925	$ 100,582
Open end consumer lines of credit (primarily SBL)	$ 2,531,690	$ 1,585,717
Commercial lines of credit	$ 1,419,746	$ 1,692,896
Unfunded loan commitments	$ 322,419	$ 248,931

In the normal course of business, RJ Bank issues, or participates in the issuance of, financial standby letters of credit whereby it provides an irrevocable guarantee of payment in the event the letter of credit is drawn down by the beneficiary. These standby letters of credit generally expire in one year or less. As of September 30, 2015, $60.9 million of such letters of credit were outstanding. In the event that a letter of credit is drawn down, RJ Bank would pursue repayment from the party under the existing borrowing relationship, or would liquidate collateral, or both. The proceeds from repayment or liquidation of collateral are expected to satisfy the amounts drawn down under the existing letters of credit. The credit risk involved in issuing letters of credit is essentially the same as that involved with extending loan commitments to clients and, accordingly, RJ Bank uses a credit evaluation process and collateral requirements similar to those for loan commitments.

Open end consumer lines of credit primarily represent the unfunded amounts of RJ Bank loans to customers that are secured by marketable securities at advance rates consistent with industry standards. The proceeds from repayment or, if necessary, the liquidation of collateral, which is monitored daily, are expected to satisfy the amounts drawn against these existing lines of credit.

Because many of RJ Bank's lending commitments expire without being funded in whole or part, the contract amounts are not estimates of RJ Bank's actual future credit exposure or future liquidity requirements. RJ Bank maintains a reserve to provide for potential losses related to the unfunded lending commitments. See Note 9 for further discussion of this reserve for unfunded lending commitments. Credit risk represents the accounting loss that would be recognized at the reporting date if counterparties failed completely to perform as contracted. The credit risk amounts are equal to the contractual amounts, assuming that the amounts are fully advanced and that the collateral or other security is of no value. RJ Bank uses the same credit approval and monitoring process in extending loan commitments and other credit-related off-balance sheet instruments as it does in making loans.

NOTE 28 – EARNINGS PER SHARE

The following table presents the computation of basic and diluted earnings per share:

	Year ended September 30,		
	2015	2014	2013
	(in thousands, except per share amounts)		
Income for basic earnings per common share:			
Net income attributable to RJF	$ 502,140	$ 480,248	$ 367,154
Less allocation of earnings and dividends to participating securities [1]	(1,610)	(3,007)	(4,164)
Net income attributable to RJF common shareholders	$ 500,530	$ 477,241	$ 362,990
Income for diluted earnings per common share:			
Net income attributable to RJF	$ 502,140	$ 480,248	$ 367,154
Less allocation of earnings and dividends to participating securities [1]	(1,580)	(2,946)	(4,100)
Net income attributable to RJF common shareholders	$ 500,560	$ 477,302	$ 363,054
Common shares:			
Average common shares in basic computation	142,548	139,935	137,732
Dilutive effect of outstanding stock options and certain restricted stock units	3,391	3,654	2,809
Average common shares used in diluted computation	145,939	143,589	140,541
Earnings per common share:			
Basic	$ 3.51	$ 3.41	$ 2.64
Diluted	$ 3.43	$ 3.32	$ 2.58
Stock options and certain restricted stock units excluded from weighted-average diluted common shares because their effect would be antidilutive	2,849	1,503	1,153

(1) Represents dividends paid during the year to participating securities plus an allocation of undistributed earnings to participating securities. Participating securities represent unvested restricted stock and certain restricted stock units and amounted to weighted-average shares of 464 thousand, 887 thousand and 1.6 million for the years ended September 30, 2015, 2014 and 2013, respectively. Dividends paid to participating securities amounted to $300 thousand, $500 thousand and $800 thousand for the years ended September 30, 2015, 2014, and 2013 respectively. Undistributed earnings are allocated to participating securities based upon their right to share in earnings if all earnings for the period had been distributed.

Dividends per common share declared and paid are as follows:

	Year ended September 30,		
	2015	2014	2013
Dividends per common share - declared	$ 0.72	$ 0.64	$ 0.56
Dividends per common share - paid	$ 0.70	$ 0.62	$ 0.55

NOTE 29 – SEGMENT INFORMATION

We currently operate through the following five business segments: “Private Client Group;” “Capital Markets;” “Asset Management;” RJ Bank; and the “Other” segment.

The business segments are determined based upon factors such as the services provided and the distribution channels served and are consistent with how we assess performance and determine how to allocate our resources throughout our subsidiaries. The financial results of our segments are presented using the same policies as those described in Note 2, “Summary of Significant Accounting Policies.” Segment results include charges allocating most corporate overhead and benefits to each segment, refer to the discussion of the Other segment below for a description of the corporate expenses that are not allocated to segments. Intersegment revenues, expenses, receivables and payables are eliminated upon consolidation.

The Private Client Group segment includes the retail branches of our broker-dealer subsidiaries located throughout the U.S., Canada and the United Kingdom. These branches provide securities brokerage services including the sale of equities, mutual funds, fixed income products and insurance products to their individual clients. The segment includes net interest earnings on client margin loans and cash balances and certain fee revenues generated by the multi-bank aspect of the RJBDP. Additionally, this segment includes the activities associated with the borrowing and lending of securities to and from other broker-dealers,

financial institutions and other counterparties, generally as an intermediary or to facilitate RJ&A's clearance and settlement obligations, and the correspondent clearing services that we provide to other broker-dealer firms.

The Capital Markets segment includes institutional sales and trading in the U.S., Canada and Europe. We provide securities brokerage, trading, and research services to institutions with an emphasis on the sale of U.S. and Canadian equities and fixed income products. This segment also includes our management of and participation in underwritings, merger and acquisition services, public finance activities, the operations of RJTCF, and our Latin American joint ventures.

The Asset Management segment includes the operations of Eagle, the Eagle Family of Funds, Cougar, the asset management operations of RJ&A, trust services of RJ Trust, and other fee-based asset management programs.

RJ Bank originates and purchases C&I loans, tax-exempt loans, SBL, as well as commercial and residential real estate loans, all of which are funded primarily by cash balances swept from the investment accounts of our broker-dealer subsidiaries' clients.

The Other segment includes our principal capital and private equity activities as well as certain corporate costs of RJF that are not allocated to operating segments including the interest cost on our public debt and in fiscal year 2013, certain acquisition and integration costs (see Note 3 for additional information).

Information concerning operating results in these segments are as follows:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Revenues:			
Private Client Group	$ 3,519,558	$ 3,289,503	$ 2,930,603
Capital Markets	975,064	968,635	945,477
Asset Management	392,378	369,690	292,817
RJ Bank	425,988	360,317	356,130
Other	66,967	42,203	126,401
Intersegment eliminations	(71,791)	(64,888)	(55,630)
Total revenues[1]	$ 5,308,164	$ 4,965,460	$ 4,595,798
Income (loss) excluding noncontrolling interests and before provision for income taxes:			
Private Client Group	$ 342,243	$ 330,278	$ 230,315
Capital Markets	107,009	130,565	102,171
Asset Management	135,050	128,286	96,300
RJ Bank	278,721	242,834	267,714
Other	(64,849)	(83,918)	(132,313) [2]
Pre-tax income excluding noncontrolling interests	798,174	748,045	564,187
Add: net (loss) income attributable to noncontrolling interests	(21,462)	(32,097)	29,723
Income including noncontrolling interests and before provision for income taxes	$ 776,712	$ 715,948	$ 593,910

(1) No individual client accounted for more than ten percent of total revenues in any of the years presented.

(2) The Other segment includes acquisition and integration related expenses pertaining to our material acquisitions (for fiscal year 2013, our integration of Morgan Keegan) in the amount of $73.5 million for the year ended September 30, 2013. For the years ended September 30, 2015 and 2014, acquisition and integration related expenses are not material for separate disclosure as our Morgan Keegan integration activities were substantially complete as of September 30, 2013. See Note 3 for additional information.

The following table presents our net interest income on a segment basis:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Net interest income (expense):			
Private Client Group	$ 88,842	$ 89,527	$ 85,301
Capital Markets	7,634	5,326	4,076
Asset Management	127	92	81
RJ Bank	403,578	346,757	338,844
Other	(64,928)	(64,907)	(65,074)
Net interest income	$ 435,253	$ 376,795	$ 363,228

The following table presents our total assets on a segment basis:

	September 30,	
	2015	2014
	(in thousands)	
Total assets:		
Private Client Group [1]	$ 6,870,379	$ 6,255,176
Capital Markets [2]	2,780,733	2,645,926
Asset Management	187,378	186,170
RJ Bank	14,191,566	12,036,945
Other	2,449,628	2,201,435
Total	$ 26,479,684	$ 23,325,652

(1) Includes $186.7 million and $174.6 million of goodwill at September 30, 2015 and 2014, respectively.

(2) Includes $120.9 million of goodwill at September 30, 2015 and 2014.

We have operations in the United States, Canada, Europe and joint ventures in Latin America. Substantially all long-lived assets are located in the United States. Revenues and income before provision for income taxes and excluding noncontrolling interests, classified by major geographic areas in which they are earned, are as follows:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Revenues:			
United States	$ 4,911,304	$ 4,512,808	$ 4,177,712
Canada	279,200	323,038	310,616
Europe	85,289	95,865	83,744
Other	32,371	33,749	23,726
Total	$ 5,308,164	$ 4,965,460	$ 4,595,798
Pre-tax income (loss) excluding noncontrolling interests:			
United States	$ 784,517	$ 706,366	$ 543,093
Canada	17,770	37,947	28,470
Europe	(6,852)	(1,546)	(8,032)
Other	2,739	5,278	656
Total	$ 798,174	$ 748,045	$ 564,187

Our total assets, classified by major geographic area in which they are held, are presented below:

	September 30,	
	2015	2014
	(in thousands)	
Total assets:		
United States [1]	$ 24,543,645	$ 21,469,999
Canada[2]	1,814,178	1,773,703
Europe	36,669	39,872
Other	85,192	42,078
Total	$ 26,479,684	$ 23,325,652

(1) Includes $274.6 million and $262.5 million of goodwill at September 30, 2015 and 2014, respectively.

(2) Includes $33 million of goodwill at September 30, 2015 and 2014.

NOTE 30 - CONDENSED FINANCIAL INFORMATION (PARENT COMPANY ONLY)

As more fully described in Note 1, RJF (or the "Parent"), is a financial holding company whose subsidiaries are engaged in various financial services businesses. The Parent's primary activities include investments in subsidiaries and corporate investments, including cash management, company-owned life insurance and private equity investments. The primary source of operating cash available to the Parent is provided by dividends from its subsidiaries.

Our principal domestic broker-dealer subsidiaries of the Parent, RJ&A and RJFS, are required by regulations to maintain a minimum amount of net capital (other non-bank subsidiaries of the Parent are also required by regulations to maintain a minimum amount of net capital, but the net capital requirements of those other subsidiaries are much less significant). RJ&A is further required by certain covenants in its borrowing agreements to maintain net capital equal to 10% of aggregate debit balances. At September 30, 2015, each of these brokerage subsidiaries far exceeded their minimum net capital requirements, see Note 26 for further information.

Subsidiary net assets of approximately $1.8 billion as of September 30, 2015 are restricted under regulatory or other restrictions from being transferred from certain subsidiaries to the Parent, without prior approval of the respective entities' regulator.

Liquidity available to the Parent from its other subsidiaries, other than broker-dealer subsidiaries and RJ Bank, is not limited by regulatory or other restrictions, but the available amounts are not as significant as those amounts described above. The Parent regularly receives a portion of the profits of subsidiaries, other than RJ Bank, as dividends.

See Notes 15, 17, 21 and 26 for more information regarding borrowings, commitments, contingencies and guarantees, and capital and regulatory requirements of the Parent and its subsidiaries.

The following table presents the Parent's statements of financial condition:

	September 30,	
	2015	2014
	(in thousands)	
Assets:		
Cash and cash equivalents [1]	$ 746,042	$ 778,855
Intercompany receivables from subsidiaries:		
Bank subsidiary	82	—
Non-bank subsidiaries [2]	853,222	710,318
Investments in consolidated subsidiaries:		
Bank subsidiary	1,519,263	1,310,097
Non-bank subsidiaries	2,378,129	2,302,128
Property and equipment, net	10,602	10,320
Goodwill and identifiable intangible assets, net	31,954	31,954
Other assets	628,178	619,616
Total assets	$ 6,167,472	$ 5,763,288
Liabilities and equity:		
Trade and other	$ 78,945	$ 78,993
Intercompany payables to subsidiaries:		
Bank subsidiary	—	45
Non-bank subsidiaries	129,779	109,396
Accrued compensation and benefits	287,495	284,584
Senior notes payable	1,149,222	1,149,034
Total liabilities	1,645,441	1,622,052
Equity	4,522,031	4,141,236
Total liabilities and equity	$ 6,167,472	$ 5,763,288

(1) Of the Parent's total cash and cash equivalents, $451 million and $500 million at September 30, 2015 and 2014, respectively, is held in a deposit account at RJ Bank.

(2) Of the total receivable from non-bank subsidiaries, $494 million and $458 million at September 30, 2015 and 2014, respectively, is invested in cash and cash equivalents by the subsidiary on behalf of the Parent.

The following table presents the Parent's statements of income:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Revenues:			
Dividends from non-bank subsidiaries	$ 230,853	$ 253,218	$ 822,996
Dividends from bank subsidiary	—	25,000	100,000
Interest from subsidiaries	6,886	5,779	1,966
Interest	843	2,050	2,510
Other	3,823	1,613	6,017
Total revenues	242,405	287,660	933,489
Interest expense	(76,233)	(76,662)	(78,244)
Net revenues	166,172	210,998	855,245
Non-interest expenses:			
Compensation and benefits	46,758	41,482	43,673
Communications and information processing	5,999	5,036	5,029
Occupancy and equipment costs	800	892	1,005
Business development	17,581	15,497	16,506
Other	10,365	8,252	9,608
Intercompany allocations and charges	(46,898)	(38,148)	(33,115)
Total non-interest expenses	34,605	33,011	42,706
Income before income tax benefit and equity in undistributed net income of subsidiaries	131,567	177,987	812,539
Income tax benefit	(42,688)	(37,170)	(54,047)
Income before equity in undistributed net income of subsidiaries	174,255	215,157	866,586
Equity in undistributed net income of subsidiaries	327,885	265,091	(499,432)
Net income	$ 502,140	$ 480,248	$ 367,154

The following table presents the Parent's statements of cash flows:

	Year ended September 30,		
	2015	2014	2013
		(in thousands)	
Cash flows from operating activities:			
Net income	$ 502,140	$ 480,248	$ 367,154
Adjustments to reconcile net income to net cash provided by operating activities:			
Gain on investments	(5,586)	(10,245)	(11,264)
Loss (gain) on company-owned life insurance	8,960	(17,989)	(24,907)
Equity in undistributed net income of subsidiaries	(327,885)	(265,091)	499,432
Other	60,634	75,725	(120,340)
Net change in:			
Intercompany receivables	(102,866)	45,656	(68,635)
Other	51,442	44,360	33,584
Intercompany payables	20,338	(108,056)	(214,415)
Trade and other	(49)	12,835	10,017
Accrued compensation and benefits	2,911	7,668	148,622
Net cash provided by operating activities	210,039	265,111	619,248
Cash flows from investing activities:			
(Investments in and advances to) distributions from subsidiaries, net	(49,613)	321,127	(384,622)
(Purchases) sales of investments, net	(4,601)	6,347	(171,677)
Purchase of investments in company-owned life insurance, net	(44,917)	(25,581)	(15,017)
Net cash (used in) provided by investing activities	(99,131)	301,893	(571,316)
Cash flows from financing activities:			
Exercise of stock options and employee stock purchases	47,964	33,633	55,997
Purchase of treasury stock	(88,542)	(8,427)	(11,718)
Dividends on common stock	(103,143)	(88,102)	(76,593)
Net cash used in financing activities	(143,721)	(62,896)	(32,314)
Net (decrease) increase in cash and cash equivalents	(32,813)	504,108	15,618
Cash and cash equivalents at beginning of year	778,855	274,747	259,129
Cash and cash equivalents at end of year	$ 746,042	$ 778,855	$ 274,747
Supplemental disclosures of cash flow information:			
Cash paid for interest	$ 76,297	$ 76,661	$ 78,439
Cash paid (received) for income taxes, net	$ 32,383	$ (59,552)	$ (100,179)
Supplemental disclosures of noncash investing activity:			
Investments in (distributions from) subsidiaries, net	$ 507	$ (132,117)	$ 457,048

SUPPLEMENTARY DATA:

SELECTED QUARTERLY FINANCIAL DATA
(unaudited)

Fiscal Year 2015	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
	(in thousands, except per share data)			
Revenues	$ 1,279,844	$ 1,312,624	$ 1,348,713	$ 1,366,983
Net revenues	$ 1,252,460	$ 1,285,778	$ 1,320,989	$ 1,340,983
Non-interest expenses	$ 1,053,811	$ 1,110,145	$ 1,119,694	$ 1,139,848
Income including noncontrolling interests and before provision for income taxes	$ 198,649	$ 175,633	$ 201,295	$ 201,135
Net income attributable to Raymond James Financial, Inc.	$ 126,296	$ 113,463	$ 133,195	$ 129,186
Net income per share - basic	$ 0.89	$ 0.79	$ 0.93	$ 0.90
Net income per share - diluted	$ 0.87	$ 0.77	$ 0.91	$ 0.88
Dividends declared per share	$ 0.18	$ 0.18	$ 0.18	$ 0.18

Fiscal Year 2014	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
	(in thousands, except per share data)			
Revenues	$ 1,208,774	$ 1,204,625	$ 1,241,283	$ 1,310,778
Net revenues	$ 1,183,402	$ 1,178,645	$ 1,214,231	$ 1,285,091
Non-interest expenses	$ 1,004,590	$ 1,025,646	$ 1,035,298	$ 1,079,887
Income including noncontrolling interests and before provision for income taxes	$ 178,812	$ 152,999	$ 178,933	$ 205,204
Net income attributable to Raymond James Financial, Inc.	$ 116,633	$ 104,560	$ 122,689	$ 136,366
Net income per share - basic	$ 0.83	$ 0.74	$ 0.87	$ 0.97
Net income per share - diluted	$ 0.81	$ 0.72	$ 0.85	$ 0.94
Dividends declared per share	$ 0.16	$ 0.16	$ 0.16	$ 0.16

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Disclosure controls are procedures designed to ensure that information required to be disclosed in our reports filed under the Exchange Act, such as this report, are recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls are also designed to ensure that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives, as ours are designed to do, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures pursuant to Exchange Act Rule 13a-15(b) as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that these disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the year ended September 30, 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. During our fiscal year 2015, we implemented the new "Internal Control - Integrated Framework," issued in May 2013 by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

REPORT OF MANAGEMENT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting. Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of our financial reporting for external purposes in accordance with accounting principles generally accepted in the United States. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of our financial statements; providing reasonable assurance that receipts and expenditures of our assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our financial statements would be prevented or detected.

Management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control - Integrated Framework (2013)* issued by COSO. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of September 30, 2015. KPMG LLP, who audited and reported on our consolidated financial statements included in this report, has issued an attestation report on our internal control over financial reporting as of September 30, 2015 (included as follows).

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders
Raymond James Financial, Inc.:

We have audited Raymond James Financial Inc.'s (the "Company" or "Raymond James") internal control over financial reporting as of September 30, 2015, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying report of management on internal control over financial reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Raymond James maintained, in all material respects, effective internal control over financial reporting as of September 30, 2015, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated statements of financial condition of Raymond James as of September 30, 2015 and 2014, and the related consolidated statements of income and comprehensive income, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended September 30, 2015, and our report dated November 25, 2015 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Tampa, Florida
November 25, 2015
Certified Public Accountants

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

A list of our executive officers appears in Part I, Item 1 of this report. The balance of the information required by Item 10 is incorporated herein by reference to the registrant's definitive proxy statement for the 2016 Annual Meeting of Shareholders which will be filed with the SEC no later than 120 days after the close of the fiscal year ended September 30, 2015.

Item 11, 12, 13 and 14.

The information required by Items 11, 12, 13 and 14 is incorporated herein by reference to the registrant's definitive proxy statement for the 2016 Annual Meeting of Shareholders which will be filed with the SEC no later than 120 days after the close of the fiscal year ended September 30, 2015.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Financial Statements and Schedules

The financial statements are set forth under Item 8 of this Annual Report on Form 10-K. Financial statement schedules have been omitted since they are either not required, not applicable, or the information is otherwise included.

(b) Exhibit listing

See the following pages.

Exhibit Number		Description
3.1		Restated Articles of Incorporation of Raymond James Financial, Inc. as filed with the Secretary of State of Florida on November 25, 2008, incorporated by reference to Exhibit 3(i).1 to the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on November 28, 2008.
3.2		Amended and Restated By-Laws of Raymond James Financial, Inc., reflecting amendments adopted by the Board of Directors on February 20, 2015, incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on February 24, 2015.
4.1		Description of Capital Stock, incorporated by reference to Exhibit 4.1 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on August 10, 2009.
4.2.1		Indenture, dated as of August 10, 2009 (for senior debt securities) between Raymond James Financial, Inc. and The Bank of New York Mellon Trust Company, N.A., incorporated by reference to Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on August 10, 2009.
4.2.2		First Supplemental Indenture, dated as of August 20, 2009 (for senior debt securities) between Raymond James Financial, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 20, 2009.
4.2.3		Second Supplemental Indenture, dated as of April 11, 2011 (for senior debt securities) between Raymond James Financial, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 11, 2011.
4.2.4		Third Supplemental Indenture, dated as of March 7, 2012 (for senior debt securities), between Raymond James Financial, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 7, 2012.
4.2.5		Fourth Supplemental Indenture, dated as of March 26, 2012 (for senior debt securities), between Raymond James Financial, Inc. and The Bank of New York Mellon Trust Company, N.A., as trustee, incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 26, 2012.
10.1	*	Raymond James Financial, Inc. 2002 Incentive Stock Option Plan effective February 14, 2002, incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8, No. 333-98537, filed with the Securities and Exchange Commission on August 22, 2002.
10.2		Mortgage Agreement for $75 million dated as of December 13, 2002 incorporated by reference to Exhibit No. 10 to the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on December 23, 2002.
10.3	*	Raymond James Financial, Inc. Stock Option Plan for Key Management Personnel effective November 21, 1996, incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8, No. 333-103277, filed with the Securities and Exchange Commission on February 18, 2003.
10.4		Form of Indemnification Agreement with Directors, incorporated by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on December 8, 2004.
10.5		The 2007 Raymond James Financial, Inc. Stock Option Plan for Independent Contractors effective February 15, 2007, incorporated by reference to Appendix C to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders held February 15, 2007, filed with the Securities and Exchange Commission on January 16, 2007.
10.6	*	Composite Version of 2003 Raymond James Financial, Inc. Employee Stock Purchase Plan, as amended and restated, incorporated by reference to Appendix B to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders held February 19, 2009, filed with the Securities and Exchange Commission on January 12, 2009.
10.7	*	Letter agreement dated February 25, 2009 between Raymond James Financial, Inc. and Paul Reilly, incorporated by reference to Exhibit No. 10.14 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 3, 2009.
10.8	*	Agreement dated December 23, 2009, between Raymond James Financial, Inc. and Thomas A. James regarding service as Chairman of the Board after his retirement as Chief Executive Officer, incorporated by reference to Exhibit 10.15 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on February 9, 2010.
10.9.1	*	Composite Version of 2005 Raymond James Financial, Inc. Restricted Stock Plan (as amended on December 10, 2010), incorporated by reference to Appendix A to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders held February 24, 2011, filed with the Securities and Exchange Commission on January 18, 2011.
10.9.2	*	Form of Notice of Restricted Stock Unit Award and associated Restricted Stock Unit Agreement (employee/independent contractor) under 2005 Raymond James Financial, Inc. Restricted Stock Plan, as amended, incorporated by reference to Exhibit 10.17.2 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on November 30, 2010.
10.9.3	*	Form of Amendment to Restricted Stock Grant Agreements outstanding under 2005 Raymond James Financial, Inc. Restricted Stock Plan, incorporated by reference to Exhibit 10.17.3 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on November 30, 2010.
10.10	*	Amended and Restated Raymond James Financial Long-Term Incentive Plan, as further amended and restated effective August 22, 2013, incorporated by reference to Exhibit 10.14 to the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on November 26, 2013.
10.11		Stock Purchase Agreement, dated January 11, 2012, between Raymond James Financial, Inc. and Regions Financial Corporation (excluding certain exhibits and schedules), incorporated by reference to Exhibit 10.19 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 12, 2012.

Exhibit Number		Description
10.12.1	*	Raymond James Financial, Inc. 2012 Stock Incentive Plan, incorporated by reference to Appendix A to the Company's Definitive Proxy Statement for the Annual Meeting of Shareholders held February 23, 2012, filed with the Securities and Exchange Commission January 25, 2012.
10.12.2	*	Form of Contingent Stock Option Agreement under 2012 Stock Incentive Plan, incorporated by reference to Exhibit 10.22 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 9, 2012.
10.12.3	*	Form of Stock Option Agreement under 2012 Stock Incentive Plan, as revised and approved on August 21, 2013, incorporated by reference to Exhibit 10.16.3 to the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on November 26, 2013.
10.12.4	*	Form of Restricted Stock Unit Agreement for Non-Bonus Award (Employee/Independent Contractor) under 2012 Stock Incentive Plan, as revised and approved on August 21, 2013, incorporated by reference to Exhibit 10.16.4 to the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on November 26, 2013.
10.12.5	*	Form of Restricted Stock Unit Agreement for Non-Employee Director under 2012 Stock Incentive Plan, incorporated by reference to Exhibit 10.25 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 9, 2012.
10.12.6	*	Form of Restricted Stock Unit Agreement for Stock Bonus Award under 2012 Stock Incentive Plan, as revised and approved on August 21, 2013, incorporated by reference to Exhibit 10.16.6 to the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission on November 26, 2013.
10.12.7	*	Form of Restricted Stock Unit Agreement for John C. Carson, Jr. (Performance-based Retention Award) under 2012 Stock Incentive Plan, incorporated by reference to Exhibit 10.27 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 9, 2012.
10.12.8	*	Form of Restricted Stock Unit Agreement for Performance Based Restricted Stock Unit Award under 2012 Stock Incentive Plan, incorporated by reference to Exhibit 10.20.8 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on February 8, 2013.
10.12.9		Raymond James Financial, Inc. 2012 Stock Incentive Plan Sub-Plan for French Employees with Form of Restricted Stock Unit Agreement, adopted and approved on February 20, 2014, incorporated by reference to Exhibit 10.16.9 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 9, 2014.
10.12.10	*	Form of Restricted Stock Unit Award Notice and Agreement (time-based vesting) which amends and restates Mr. Reilly's award agreement issued in 2012 and will also be used for his subsequent award agreements, incorporated by reference to Exhibit 10.21.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on December 20, 2013.
10.12.11	*	Form of Restricted Stock Unit Award Notice and Agreement (performance-based vesting) which amends and restates Mr. Reilly's award agreement issued in 2012 and will also be used for his subsequent award agreements, incorporated by reference to Exhibit 10.21.2 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on December 20, 2013.
10.12.12	*	Form of Restricted Stock Unit Award Notice and Agreement (time-based vesting), incorporated by reference to Exhibit 10.22.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on December 20, 2013.
10.12.13	*	Form of Restricted Stock Unit Award Notice and Agreement (performance-based vesting), incorporated by reference to Exhibit 10.22.2 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on December 20, 2013.
10.12.14	*	Form of Stock Option Agreement under 2012 Stock Incentive Plan, as revised and approved on November 20, 2013, incorporated by reference to Exhibit 10.23 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on February 7, 2014.
10.12.15	*	Form of Restricted Stock Unit Agreement for Non-Bonus Award under 2012 Stock Incentive Plan, as revised and approved on November 20, 2013, incorporated by reference to Exhibit 10.24 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on February 7, 2014.
10.13.1	*	Employment Agreement, dated January 11, 2012, as amended and restated as of April 20, 2012, by and between Raymond James Financial, Inc. and John C. Carson, Jr., incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on April 25, 2012.
10.13.2	*	Amendment to Employment Agreement, dated as of December 2, 2013, by and between Raymond James Financial, Inc. and John C. Carson, Jr., incorporated by reference to Exhibit 10.17.2 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on December 4, 2013.
10.14	*	Raymond James Financial, Inc. Voluntary Deferred Compensation Plan effective January 1, 2013, including the related Non-Qualified Deferred Compensation Plan Summary, incorporated by reference to Exhibit 10.24 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on February 8, 2013.
10.15	*	Form of Raymond James Financial, Inc. Restricted Cash Agreement dated as of March 31, 2013, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on March 20, 2013.
10.16	*	Letter Agreement, dated January 9, 2014, between Raymond James Financial, Inc. and Chester B. Helck regarding his retirement and transition of service and employment matters, incorporated by reference to Exhibit 10.25 to the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 9, 2014.
10.17		Revolving Credit Agreement, dated as of August 6, 2015, among Raymond James Financial, Inc. and a syndicate of lenders led by Bank of America, N.A. and Regions Bank, incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 10, 2015.
11		Statement re Computation of per Share Earnings (the calculation of per share earnings is included in Part II, Item 8, Note 28 in the Notes to Consolidated Financial Statements (Earnings Per Share) and is omitted here in accordance with Section (b) (11) of Item 601 of Regulation S-K).

Exhibit Number	Description
12	Statement of Computation of Ratio of Earnings to Fixed Charges and Preferred Stock Dividends.
21	List of Subsidiaries.
23	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Paul C. Reilly pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Jeffrey P. Julien pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification of Paul C. Reilly and Jeffrey P. Julien pursuant to Rule 13a-14(b) and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

* Indicates a management contract or compensatory plan or arrangement in which a director or named executive officer participates.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of St. Petersburg, State of Florida, on the 25th day of November, 2015.

RAYMOND JAMES FINANCIAL, INC.

By /s/ PAUL C. REILLY
Paul C. Reilly, Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ PAUL C. REILLY Paul C. Reilly	Chief Executive Officer and Director	November 25, 2015
/s/ THOMAS A. JAMES Thomas A. James	Executive Chairman and Director	November 25, 2015
/s/ CHARLES G. VON ARENTSCHILDT Charles G. von Arentschildt	Director	November 25, 2015
/s/ SHELLEY G. BROADER Shelley G. Broader	Director	November 25, 2015
/s/ JEFFREY N. EDWARDS Jeffrey N. Edwards	Director	November 25, 2015
/s/ BENJAMIN C. ESTY Benjamin C. Esty	Director	November 25, 2015
/s/ FRANCIS S. GODBOLD Francis S. Godbold	Vice Chairman and Director	November 25, 2015
/s/ GORDON L. JOHNSON Gordon L. Johnson	Director	November 25, 2015
/s/ ROBERT P. SALTZMAN Robert P. Saltzman	Director	November 25, 2015
/s/ HARDWICK SIMMONS Hardwick Simmons	Director	November 25, 2015
/s/ SUSAN N. STORY Susan N. Story	Director	November 25, 2015
/s/ JEFFREY P. JULIEN Jeffrey P. Julien	Executive Vice President - Finance, Chief Financial Officer and Treasurer	November 25, 2015
/s/ JENNIFER C. ACKART Jennifer C. Ackart	Senior Vice President and Controller (Principal Accounting Officer)	November 25, 2015

EXHIBIT 12

STATEMENT OF COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES AND PREFERRED STOCK DIVIDENDS
(in thousands, except ratio of earnings to fixed charges and preferred stock dividends)

	Year ended September 30,				
	2015	**2014**	**2013**	**2012**	**2011**
Earnings:					
Pre-tax income excluding noncontrolling interests	$ 798,174	$ 748,045	$ 564,187	$ 471,525	$ 461,247
Fixed charges	137,753	134,366	140,708	115,992	84,557
Less: preferred stock dividends	—	—	—	—	—
Earnings	$ 935,927	$ 882,411	$ 704,895	$ 587,517	$ 545,804
Fixed charges:					
Interest expense	$ 106,741	$ 102,878	$ 109,159	$ 90,389	$ 65,351
Estimated interest portion within rental expense	29,799	30,275	30,337	24,623	18,727
Amortization of debt issuance cost	1,213	1,213	1,212	980	479
Preferred stock dividends	—	—	—	—	—
Total fixed charges	$ 137,753	$ 134,366	$ 140,708	$ 115,992	$ 84,557
Ratio of earnings to fixed charges and preferred stock dividends	6.79	6.57	5.01	5.07	6.45

We calculated our ratio of earnings to fixed charges and preferred stock dividends by adding pre-tax income excluding noncontrolling interests, plus fixed charges minus preferred stock dividends and dividing that sum by our fixed charges. Our fixed charges for this ratio consist of interest expense, the portion of our rental expense deemed to represent interest (calculated as one third of rental expense), amortization of debt issuance costs and preferred stock dividends.

EXHIBIT 21

RAYMOND JAMES FINANCIAL, INC.
LIST OF SUBSIDIARIES

The following listing includes all of the registrant's subsidiaries as of September 30, 2015, which are included in the consolidated financial statements:

Entity Name	State/Country of Incorporation	Subsidiary or Joint Venture of
Carillon Tower Advisers, Inc.	Florida	Raymond James Financial, Inc.
ClariVest Asset Management, LLC	Delaware	Eagle Asset Management, Inc.
Cougar Global ETF Portfolio Management Inc.	Delaware	Cougar Global Investments Limited
Cougar Global Investments Limited	Canada	Raymond James International Canada, Inc.
Eagle Asset Management, Inc.	Florida	Raymond James Financial, Inc.
Eagle Boston Investment Management, Inc.	Florida	Eagle Asset Management, Inc.
Eagle Fund Distributors, Inc.	Florida	Eagle Asset Management, Inc.
Eagle Fund Services, Inc.	Florida	Eagle Asset Management, Inc.
EB Management I, LLC	Florida	Eagle Asset Management, Inc.
Former WT, Inc.	Tennessee	MK Holding, Inc.
Gateway Institutional Tax Credit Fund II, Ltd	Florida	Raymond James Tax Credit Funds, Inc.
HBI Investment Funds, LLC	Illinois	Howe Barnes Hoefer & Arnett, Inc.
Heritage International Limited	Mauritius	Raymond James International Holdings, Inc.
Howe Barnes Hoefer & Arnett, Inc.	Delaware	Raymond James Financial, Inc.
Merchant Bankers, Inc.	Tennessee	MK Holding, Inc.
MK Holding, Inc.	Alabama	Raymond James Financial, Inc.
MK Investment Management, Inc.	Delaware	MK Holding, Inc.
MK Mezzanine Management, LLC	Delaware	Morgan Properties, LLC
MOR Associates, LP	Tennessee	Merchant Bankers, Inc.
Morgan Keegan & Associates, LLC	Delaware	MK Holding, Inc.
Morgan Keegan & Company, LLC	Tennessee	Raymond James Financial, Inc.
Morgan Keegan Employee Investment Fund, LP	Delaware	Merchant Bankers, Inc.
Morgan Keegan Financial Services, LLC	Delaware	MK Holding, Inc.
Morgan Keegan Fund Management, Inc.	Tennessee	MK Holding, Inc.
Morgan Keegan Investment Partners Fund, LP	Delaware	MK Investment Management, Inc.
Morgan Keegan Mezzanine Fund, LP	Delaware	MK Mezzanine Management, LLC
Morgan Keegan Private Equity Employee Fund of Funds II, LP	Delaware	MK Investment Management, Inc.
Morgan Keegan Private Equity Fund of Funds II, LP	Delaware	MK Investment Management, Inc.
Morgan Keegan Private Equity Fund of Funds II Blocker, LLC	Delaware	Morgan Keegan Private Equity QP Fund of Funds II, LP; Morgan Keegan Private Equity Fund of Funds II, LP; Morgan Keegan Private Equity Employee Fund of Funds II, LP
Morgan Keegan Private Equity Fund of Funds II Holdings, LP	Delaware	Morgan Keegan Private Equity QP Fund of Funds II, LP; Morgan Keegan Private Equity Fund of Funds II, LP; Morgan Keegan Private Equity Employee Fund of Funds II, LP; Morgan Keegan Private Equity Fund of Funds II Blocker, LLC
Morgan Keegan Private Equity QP Fund of Funds II, LP	Delaware	MK Investment Management, Inc.
Morgan Properties, LLC	Tennessee	Raymond James Investments, LLC
Preferred Fund of Funds, LLC	Delaware	Morgan Keegan Fund Management, Inc.
Raymond James & Associates, Inc.	Florida	Raymond James Financial, Inc.
Raymond James (USA) Ltd.	Canada	Raymond James Ltd.
Raymond James Affordable Housing Fund 1, LP	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Affordable Housing Fund 2, LP	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Argentina Sociedad De Bolsa, S.A.	Argentina	Raymond James South American Holdings, Inc.
Raymond James Asset Management International, S.A.	France	Raymond James International Holdings, Inc.
Raymond James Bank, National Association	U.S.A.	Raymond James Financial, Inc.

Entity Name	State/Country of Incorporation	Subsidiary or Joint Venture of
Raymond James Canada, LLC	Florida	Raymond James Financial, Inc.
Raymond James Canadian Acquisition, Inc.	Florida	Raymond James Bank, National Association
Raymond James Canadian Holdings, LLC	Florida	Raymond James Canadian Acquisition, Inc.
Raymond James Capital Inc.	Delaware	Raymond James Financial, Inc.
Raymond James Capital Funding, Inc.	Florida	Raymond James Bank, National Association
Raymond James Capital Partners, LP	Delaware	RJC Partners, LP
Raymond James Capital Services, LLC	Delaware	MK Holding, Inc.
Raymond James Community Reinvestment Fund 1, LLC	Florida	Raymond James Bank, National Association
Raymond James Development Tax Credit Fund, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Employee Investment Fund I, L.P.	Delaware	RJEIF, Inc.
Raymond James Employee Investment Fund II, L.P.	Delaware	RJEIF, Inc.
Raymond James Euro Equities SAS	France	Raymond James European Securities S.A.S.
Raymond James European Holdings, Inc.	Florida	Raymond James International Holdings, Inc.
Raymond James European Securities S.A.S.	France	Raymond James International Holdings, Inc.
Raymond James Finance Company of Canada, Ltd.	Canada	Raymond James Canadian Holdings, LLC
Raymond James Financial International Limited	U.K.	Raymond James International Holdings, Inc.
Raymond James Financial Management Ltd.	Canada	Raymond James Ltd.
Raymond James Financial Planning Ltd.	Canada	Raymond James Ltd.
Raymond James Financial Products, Inc.	Tennessee	MK Holding, Inc.
Raymond James Financial Services Advisors, Inc.	Florida	Raymond James Financial, Inc.
Raymond James Financial Services, Inc.	Florida	Raymond James Financial, Inc.
Raymond James Global Securities, Limited	British Virgin Islands	Raymond James International Holdings, Inc.; Raymond James South American Holdings, Inc.
Raymond James Holdings, Ltd.	Florida	Residual Partners
Raymond James Indian Country Tax Credit Fund I, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Insurance Group, Inc.	Florida	Raymond James Financial, Inc.
Raymond James International Canada, Inc.	Florida	Raymond James International Holdings, Inc.
Raymond James International Holdings, Inc.	Florida	Raymond James Financial, Inc.
Raymond James Investments, LLC	Florida	Raymond James Financial, Inc.
Raymond James Investment Services Limited	U.K.	Raymond James Financial, Inc.
Raymond James Latin Advisors Limited	British Virgin Islands	Raymond James Global Securities, Limited
Raymond James Latin America S.A.	Uruguay	Raymond James South American Holdings, Inc.
Raymond James Latin Fund Advisors S.A.	Uruguay	Raymond James South American Holdings, Inc.
Raymond James Ltd.	Canada	Raymond James Canada, LLC
Raymond James Management, LLC	Delaware	Raymond James Investments, LLC
Raymond James Management-EPG, LLC	Delaware	Raymond James Investments, LLC
Raymond James Management-Forensics, LLC	Delaware	Raymond James Investments, LLC
Raymond James Mortgage Company, Inc.	Tennessee	MK Holding, Inc.
Raymond James Multifamily Finance, Inc.	Florida	Raymond James Tax Credit Funds, Inc.
Raymond James Municipal Products, Inc.	Delaware	MK Holding, Inc.
Raymond James Partners, Inc.	Florida	Raymond James Financial, Inc.
Raymond James Research Services, LLC	Florida	Raymond James Financial, Inc.
Raymond James South American Holdings, Inc.	Florida	Raymond James International Holdings, Inc.
Raymond James Structured Products, Inc.	Delaware	MK Holding, Inc.
Raymond James Tax Credit Fund 32 - A, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Tax Credit Fund 32 - B, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Tax Credit Fund 33, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Tax Credit Fund 34, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Tax Credit Fund XXII, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Tax Credit Fund XXV - A, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Tax Credit Fund XXV - B, LLC	Delaware	Raymond James Tax Credit Funds, Inc.
Raymond James Tax Credit Funds, Inc.	Florida	Raymond James Financial, Inc.

Entity Name	State/Country of Incorporation	Subsidiary or Joint Venture of
Raymond James Trust, National Association	U.S.A.	Raymond James Financial, Inc.
Raymond James Uruguay, S.A.	Uruguay	Raymond James Global Securities, Limited
Residual Partners	Florida	Raymond James Financial, Inc.
RJ Capital Services, Inc.	Delaware	Raymond James Financial, Inc.
RJ Delta Asset Management S.A.	Argentina	Raymond James South American Holdings, Inc.
RJ Delta Capital S.A.	Argentina	Raymond James South American Holdings, Inc.
RJ Equities, Inc.	Florida	Raymond James Financial, Inc.
RJ Government Securities, Inc.	Florida	Raymond James Financial, Inc.
RJ Partners, Inc.	Florida	Raymond James Financial, Inc.
RJ Securities, Inc.	Florida	Raymond James Investments, LLC
RJ Specialist Corp.	Florida	Raymond James Financial, Inc.
RJA Structured Finance, Inc.	Delaware	Raymond James Financial, Inc.
RJ-Contrarian, LLC	Delaware	RJ Specialist Corp.
RJC Event Photos, LLC	Delaware	Raymond James Investments, LLC
RJC Forensics, LLC	Delaware	Raymond James Investments, LLC
RJC Partners, Inc.	Delaware	Raymond James Financial, Inc.
RJC Partners LP	Delaware	RJC Partners, Inc.
RJEIF, Inc.	Delaware	Raymond James Financial, Inc.
RJF Capital Trust I	Delaware	Raymond James Financial, Inc.
RJF Capital Trust II	Delaware	Raymond James Financial, Inc.
RJF Capital Trust III	Delaware	Raymond James Financial, Inc.
RJTCF Disposition Corporation	Florida	Raymond James Tax Credit Funds, Inc.
RJTCF Disposition Fund, L.L.C.	Florida	Raymond James Tax Credit Funds, Inc.
Strategic Investment Management Services, Inc.	Florida	Raymond James Financial, Inc.
SLG Partners GP, LLC	Delaware	Raymond James Investments, LLC; Raymond James Management, LLC
SLG Partners, LP	Delaware	SLG Partners GP, LLC
SLG Partners, LP II	Delaware	SLG Partners GP, LLC
The Producers Choice LLC	Michigan	TPC Acquisition Co.
TPC Acquisition Co.	Florida	Raymond James Financial, Inc.
Value Partners, Inc.	Florida	Raymond James Tax Credit Funds, Inc.

EXHIBIT 23

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Raymond James Financial, Inc.:

We consent to the incorporation by reference in the registration statements (Nos. 333-103280, 333-103277, 333-98537, 333-125214, 333-141998, 333-142000, 333-157516, 333-157519, 333-179683) on Form S-8 and (Nos. 333-159583, 333-181663, 333-204400) on Form S-3ASR of Raymond James Financial, Inc. and subsidiaries of our reports dated November 25, 2015, with respect to the consolidated statements of financial condition of Raymond James Financial, Inc. and subsidiaries as of September 30, 2015 and 2014, and the related consolidated statements of income and comprehensive income, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended September 30, 2015 and the effectiveness of internal control over financial reporting as of September 30, 2015, which reports appear in the September 30, 2015 annual report on Form 10-K of Raymond James Financial, Inc.

/s/ KPMG LLP

Tampa, Florida
November 25, 2015
Certified Public Accountants

EXHIBIT 31.1

CERTIFICATIONS

I, Paul C. Reilly, certify that:

1. I have reviewed this annual report on Form 10-K of Raymond James Financial, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's Board of Directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 25, 2015

/s/ PAUL C. REILLY
Paul C. Reilly
Chief Executive Officer

EXHIBIT 31.2

CERTIFICATIONS

I, Jeffrey P. Julien, certify that:

1. I have reviewed this annual report on Form 10-K of Raymond James Financial, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's Board of Directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 25, 2015

/s/ JEFFREY P. JULIEN
Jeffrey P. Julien
Executive Vice President - Finance,
Chief Financial Officer and Treasurer

Exhibit 32

CERTIFICATION BY CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Raymond James Financial, Inc. (the "Company") on Form 10-K for the year ended September 30, 2015 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to our knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ PAUL C. REILLY
Paul C. Reilly
Chief Executive Officer

November 25, 2015

/s/ JEFFREY P. JULIEN
Jeffrey P. Julien
Executive Vice President - Finance,
Chief Financial Officer and Treasurer

November 25, 2015

Status: Accepted

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

FORM X-17A-5

FOCUS REPORT
(FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT)
PART II 11

(Please read instructions before preparing Form)

This report is being filed pursuant to (Check Applicable Block(s)):

1) Rule 17a-5(a) X 16 2) Rule 17a-5(b) 17 3) Rule 17a-11 18

4) Special request by designated examining authority 19 5) Other 26

NAME OF BROKER-DEALER

RAYMOND JAMES & ASSOCIATES, INC. 13

ADDRESS OF PRINCIPAL PLACE OF BUSINESS (Do not use P.O. Box No.)

880 CARILLON PARKWAY 20
(No. and Street)

ST. PETERSBURG 21 (City) FL 22 (State) 33716 23 (Zip Code)

SEC. FILE NO.
8-10999 14

FIRM ID NO.
705 15

FOR PERIOD BEGINNING (MM/DD/YY)
10/01/15 24

AND ENDING (MM/DD/YY)
12/31/15 25

NAME AND TELEPHONE NUMBER OF PERSON TO CONTACT IN REGARD TO THIS REPORT

Terry Flass 30

(Area code) - Telephone No.
(727)567-4170 31

NAME(S) OF SUBSIDIARIES OR AFFILIATES CONSOLIDATED IN THIS REPORT

32 33
34 35
36 37
38 39

OFFICIAL USE

DOES RESPONDENT CARRY ITS OWN CUSTOMER ACCOUNTS ? YES X 40 NO 41

CHECK HERE IF RESPONDENT IS FILING AN AUDITED REPORT 42

EXECUTION:

The registrant/broker or dealer submitting this Form and its attachments and the person(s) by whom it is executed represent hereby that all information contained therein is true, correct and complete. It is understood that all required items, statements, and schedules are considered integral parts of this Form and that the submisson of any amendment represents that all unamended items, statements and schedules remain true, correct and complete as previously submitted.

Dated the _____ day of _____ 20 _____

Manual Signatures of:

1) _____
Principal Executive Officer or Managing Partner

2) _____
Principal Financial Officer or Partner

3) _____
Principal Operations Officer or Partner

ATTENTION - Intentional misstatements or omissions of facts constitute Federal Criminal Violations. (See 18 U.S.C. 1001 and 15 U.S.C. 78:f (a))

FINRA

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

Status: Accepted

BROKER OR DEALER				
RAYMOND JAMES & ASSOCIATES, INC.	N	2		100

STATEMENT OF FINANCIAL CONDITION

as of (MM/DD/YY) 12/31/15 [99]

SEC FILE NO. 8-10999 [98]

Consolidated [ ] [198]

Unconsolidated [X] [199]

ASSETS	Allowable		Nonallowable		Total	
1. Cash	$ 318,511,127	200			$ 318,511,127	750
2. Cash segregated in compliance with federal and other regulations	2,739,858,871	210			2,739,858,871	760
3. Receivable from brokers or dealers and clearing organizations:						
A. Failed to deliver:						
1. Includable in "Formula for Reserve Requirements"	5,135,355	220				
2. Other	39,147,744	230			44,283,099	770
B. Securities borrowed:						
1. Includable in "Formula for Reserve Requirements"	10,688,176	240				
2. Other	97,851,990	250			108,540,166	780
C. Omnibus accounts:						
1. Includable in "Formula for Reserve Requirements"	0	260				
2. Other	0	270			0	790
D. Clearing Organizations:						
1.Includable in "Formula for Reserve Requirements"	0	280				
2. Other	1,944,449	290			1,944,449	800
E. Other	115,679,482	300	$ 289,120	550	115,968,602	810
4. Receivables from customers:						
A. Securities accounts:						
1. Cash and fully secured accounts	1,751,282,719	310				
2. Partly secured accounts	14,421,671	320	3,473,883	560		
3. Unsecured Accounts			2,960,138	570		
B. Commodity accounts	0	330	0	580		
C. Allowance for doubtful accounts	(0)	335	(134,252)	590	1,772,004,159	820
5. Receivables from non-customers:						
A. Cash and fully secured accounts	1,201,581	340				
B. Partly secured and unsecured accounts	0	350	67,308	600	1,268,889	830
6. Securities purchased under agreements to resell	335,488,325	360	0	605	335,488,325	840
7. Securities and spot commodities owned, at market value:						
A. Banker's acceptances, certificates of deposit and commercial paper	8,524,469	370				
B. U.S. and Canadian government obligations	241,476,365	380				
C. State and municipal government obligations	89,034,089	390				
D. Corporate obligations	94,738,053	400				

OMIT PENNIES

Status: Accepted

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
RAYMOND JAMES & ASSOCIATES, INC.
as of 12/31/15

STATEMENT OF FINANCIAL CONDITION

ASSETS (continued)

	Allowable		Nonallowable		Total	
E. Stocks and warrants	$ 11,313,848	410				
F. Options	4,134	420				
G. Arbitrage	0	422				
H. Other securities	22,472	424				
I. Spot Commodities	0	430				
J. Total inventory - includes encumbered securities of $ 123,241,134		120			$ 445,113,430	850
8. Securities owned not readily marketable:						
A. At Cost $ 7,807,465	0	130 440	$ 7,782,235	610	7,782,235	860
9. Other investments not readily marketable: $ 6,465,418		140				
B. At estimated fair value	0	450	6,465,418	620	6,465,418	870
10. Securities borrowed under subordination agreements and partners' individual and capital securities accounts, at market value:						
A. Exempted securities $ 0		150				
B. Other $ 0	0	160 460	0	630	0	880
11. Secured demand notes- market value of collateral:						
A. Exempted securities $ 0		170				
B. Other $ 0	0	180 470	0	640	0	890
12. Memberships in exchanges:						
A. Owned, at market value $ 0		190				
B. Owned at cost			0	650		
C. Contributed for use of company, at market value			0	660	0	900
13. Investment in and receivables from affiliates, subsidiaries and associated partnerships	0	480	26,944,452	670	26,944,452	910
14. Property, furniture, equipment, leasehold improvements and rights under lease agreements: At cost (net of accumulated depreciation and amortization)	32,271,472	490	197,466,022	680	229,737,494	920
15. Other Assets:						
A. Dividends and interest receivable	5,401,171	500	2,671,124	690		
B. Free shipments	0	510	0	700		
C. Loans and advances	0	520	385,602,460	710		
D. Miscellaneous	46,162,436	530	558,903,168	720		
E. Collateral accepted under SFAS 140		536				
F. SPE Assets		537			998,740,359	930
16. TOTAL ASSETS	$ 5,960,159,999	540	$ 1,192,491,076	740	$ 7,152,651,075	940

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

Status: Accepted

BROKER OR DEALER
RAYMOND JAMES & ASSOCIATES, INC.

as of 12/31/15

STATEMENT OF FINANCIAL CONDITION
LIABILITIES AND OWNERSHIP EQUITY

Liabilities	A.I. Liabilities *		Non-A.I. Liabilities *		Total	
17. Bank loans payable:						
A. Includable in "Formula for Reserve Requirements"	$	1030	$	1240	$ 173,556,569	1460
B. Other		1040		1250	0	1470
18. Securities sold under repurchase agreements.				1260	245,554,378	1480
19. Payable to brokers or dealers and clearing organizations:						
A. Failed to receive:						
1. Includable in "Formula for Reserve Requirements"		1050		1270	30,984,665	1490
2. Other		1060		1280	31,043,106	1500
B. Securities loaned:						
1. Includable in "Formula for Reserve Requirements"		1070			467,229,125	1510
2. Other		1080		1290	53,608,005	1520
C. Omnibus accounts:						
1. Includable in "Formula for Reserve Requirements"		1090			0	1530
2. Other		1095		1300	0	1540
D. Clearing organizations:						
1. Includable in "Formula for Reserve Requirements"		1100			14,950,827	1550
2. Other		1105		1310	0	1560
E. Other		1110		1320	5,610,374	1570
20. Payable to customers:						
A. Securities accounts - including free credits of $ 3,785,190,710 950		1120			3,849,665,265	1580
B. Commodities accounts		1130		1330	0	1590
21. Payable to non customers:						
A. Securities accounts		1140		1340	3,918,484	1600
B. Commodities accounts		1150		1350	0	1610
22. Securities sold not yet purchased at market value - including arbitrage of $ 960				1360	201,458,756	1620
23. Accounts payable and accrued liabilities and expenses:						
A. Drafts payable		1160			0	1630
B. Accounts payable		1170			156,316,987	1640
C. Income taxes payable		1180			0	1650
D. Deferred income taxes				1370	0	1660
E. Accrued expenses and other liabilities		1190			160,233,651	1670
F. Other		1200		1380	5,670,313	1680
G. Obligation to return securities				1386		1686
H. SPE Liabilities				1387		1687

OMIT PENNIES

*Brokers or Dealers electing the alternative net capital requirement method need not complete these columns.

Status: Accepted

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT

PART II

BROKER OR DEALER

RAYMOND JAMES & ASSOCIATES, INC.

as of 12/31/15

STATEMENT OF FINANCIAL CONDITION
LIABILITIES AND OWNERSHIP EQUITY (continued)

Liabilities	A.I. Liabilities *		Non-A.I. Liabilities *		Total	
24. Notes and mortgages payable:						
A. Unsecured	$	1210			$ 0	1690
B. Secured		1211	$	1390	36,658,594	1700
25. Liabilities subordinated to claims of general creditors:						
A. Cash borrowings:				1400	0	1710
1. from outsiders $ 0970						
2. Includes equity subordination(15c3-1(d)) of $ 0980						
B. Securities borrowings, at market value: from outsiders $ 0990				1410	0	1720
C. Pursuant to secured demand note collateral agreements:				1420	0	1730
1. from outsiders $ 1000						
2. Includes equity subordination(15c3-1(d)) of $ 1010						
D. Exchange memberships contributed for use of company, at market value				1430	0	1740
E. Accounts and other borrowings not qualified for net capital purposes		1220		1440	0	1750
26. TOTAL LIABILITIES	$	1230	$	1450	$ 5,436,459,099	1760

Ownership Equity

27. Sole proprietorship	$ 0	1770
28. Partnership - limited partners $ 1020	0	1780
29. Corporation:		
A. Preferred stock	0	1791
B. Common stock	108,350	1792
C. Additional paid- in capital	886,937,317	1793
D. Retained Earnings	829,146,309	1794
E. Total	1,716,191,976	1795
F. Less capital stock in treasury	(0)	1796
30. TOTAL OWNERSHIP EQUITY	$ 1,716,191,976	1800
31. TOTAL LIABILITIES AND OWNERSHIP EQUITY	$ 7,152,651,075	1810

OMIT PENNIES

* Brokers or Dealers electing the alternative net capital requirement method need not complete these columns.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT

Status: Accepted

PART II

BROKER OR DEALER

RAYMOND JAMES & ASSOCIATES, INC.

as of 12/31/15

COMPUTATION OF NET CAPITAL

1. Total ownership equity (from Statement of Financial Condition - Item 1800)			$ 1,716,191,976	3480
2. Deduct: Ownership equity not allowable for Net Capital			( )	3490
3. Total ownership equity qualified for Net Capital			1,716,191,976	3500
4. Add:				
A. Liabilities subordinated to claims of general creditors allowable in computation of net capital			0	3520
B. Other (deductions) or allowable credits (List)				3525
5. Total capital and allowable subordinated liabilities			$ 1,716,191,976	3530
6. Deductions and/or charges:				
A. Total non-allowable assets from Statement of Financial Condition (Notes B and C)	$ 1,192,491,076	3540		
1. Additional charges for customers' and non-customers' security accounts	34,317,194	3550		
2. Additional charges for customers' and non-customers' commodity accounts		3560		
B. Aged fail-to-deliver:	1,093,023	3570		
1. number of items	116 3450			
C. Aged short security differences-less reserve of $ 3460	7,249,502	3580		
number of items	272 3470			
D. Secured demand note deficiency		3590		
E. Commodity futures contracts and spot commodities - proprietary capital charges	60,750	3600		
F. Other deductions and/or charges	1,752,946	3610		
G. Deductions for accounts carried under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x)		3615		
H. Total deductions and/or charges			(1,236,964,491)	3620
7. Other additions and/or allowable credits (List)				3630
8. Net Capital before haircuts on securities positions			$ 479,227,485	3640
9. Haircuts on securities: (computed, where applicable, pursuant to 15c3-1(f)):				
A. Contractual securities commitments	$ 149,210	3660		
B. Subordinated securities borrowings		3670		
C. Trading and investment securities:				
1. Bankers' acceptances, certificates of deposit and commercial paper	149,578	3680		
2. U.S. and Canadian government obligations	8,876,286	3690		
3. State and municipal government obligations	5,473,445	3700		
4. Corporate obligations	31,653,604	3710		
5. Stocks and warrants	1,534,409	3720		
6. Options	2,067	3730		
7. Arbitrage		3732		
8. Other securities	153	3734		
D. Undue concentration	0	3650		
E. Other (List)	3,699,788	3736	(51,538,540)	3740
10. Net Capital			$ 427,688,945	3750

OMIT PENNIES

Status: Accepted

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
RAYMOND JAMES & ASSOCIATES, INC.
as of 12/31/15

COMPUTATION OF BASIC NET CAPITAL REQUIREMENT

Part A

11. Minimal net capital required (6-2/3% of line 19)		$	3756
12. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)		$	3758
13. Net capital requirement (greater of line 11 or 12)		$	3760
14. Excess net capital (line 10 less 13)		$	3770
15. Net capital less greater of 10% of line 19 or 120% of line 12		$	3780

COMPUTATION OF AGGREGATE INDEBTEDNESS

16. Total A.I. liabilities from Statement of Financial Condition				$	3790
17. Add:					
A. Drafts for immediate credit	$		3800		
B. Market value of securities borrowed for which no equivalent value is paid or credited	$		3810		
C. Other unrecorded amounts (List)	$		3820	$	3830
18. Deduct: Adjustment based on deposits in Special Reserve Bank Accounts(15c3-1(c)(1)(vii))				$	3838
19. Total aggregate indebtedness				$	3840
20. Percentage of aggregate indebtedness to net capital (line 19 divided by line 10)				%	3850
21. Percentage of aggregate indebtedness to net capital after anticipated capital withdrawals (line 19 divided by line 10 less item 4880 page 12)				%	3853

COMPUTATION OF ALTERNATE NET CAPITAL REQUIREMENT

Part B

22. 2% of combined aggregate debit items as shown in Formula for Reserve Requirements pursuant to Rule 15c3-3 prepared as of the date of net capital computation including both brokers or dealers and consolidated subsidiaries' debits	$	36,947,674	3870
23. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note(A)	$	1,000,000	3880
24. Net capital requirement (greater of line 22 or 23)	$	36,947,674	3760
25. Excess net capital (line 10 less 24)	$	390,741,271	3910
26. Percentage of Net Capital to Aggregate Debits (line 10 divided by line 18 page 8)	%	23.15	3851
27. Percentage of Net Capital, after anticipated capital withdrawals, to Aggregate Debits item 10 less Item 4880 page 12 divided by line 17 page 8)	%	20.66	3854
28. Net capital in excess of the greater of: 5% of combined aggregate debit items or 120% of minimum net capital requirement	$	335,319,760	3920

OTHER RATIOS

Part C

29. Percentage of debt to debt-equity total computed in accordance with Rule 15c3-1 (d)	%	0.00	3860
30. Options deductions/Net Capital ratio (1000% test) total deductions exclusive of liquidating equity under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x) divided by Net Capital	%	0.00	3852

NOTES:

(A) The minimum net capital requirement should be computed by adding the minimum dollar net capital requirement of the reporting broker dealer and, for each subsidiary to be consolidated, the greater of:

1. Minimum dollar net capital requirement, or
2. 6-2/3% of aggregate indebtedness or 2% of aggregate debits if alternate method is used.

(B) Do not deduct the value of securities borrowed under subordination agreements or secured demand notes covered by subordination agreements not in satisfactory form and the market values of memberships in exchanges contributed for use of company (contra to item 1740) and partners' securities which were included in non-allowable assets.

(C) For reports filed pursuant to paragraph (d) of Rule 17a-5, respondent should provide a list of material non-allowable assets.

Disclaimer

The information contained herein is solely intended to facilitate discussion of potentially applicable financing applications and is not intended to be a specific buy/sell recommendation, nor is it an official confirmation of terms. Any terms discussed herein are preliminary until confirmed in a definitive written agreement. While we believe that the outlined financial structure or marketing strategy is the best approach under the current market conditions, the market conditions at the time any proposed transaction is structured or sold may be different, which may require a different approach.

The analysis or information presented herein is based upon hypothetical projections and/or past performance that have certain limitations. No representation is made that it is accurate or complete or that any results indicated will be achieved. In no way is past performance indicative of future results. Changes to any prices, levels, or assumptions contained herein may have a material impact on results. Any estimates or assumptions contained herein represent our best judgment as of the date indicated and are subject to change without notice. Examples are merely representative and are not meant to be all-inclusive.

Raymond James shall have no liability, contingent or otherwise, to the recipient hereof or to any third party, or any responsibility whatsoever, for the accuracy, correctness, timeliness, reliability or completeness of the data or formulae provided herein or for the performance of or any other aspect of the materials, structures and strategies presented herein.

This presentation is provided to you for the purpose of your consideration of the engagement of Raymond James as an underwriter and not as your financial advisor or Municipal Advisor (as defined in Section 15B of the Exchange Act of 1934, as amended), and we expressly disclaim any intention to act as your fiduciary in connection with the subject matter of this presentation. The information provided is not intended to be and should not be construed as a recommendation or "advice" within the meaning of Section 15B of the above-referenced Act. Any portion of this presentation which provides information on municipal financial products or the issuance of municipal securities is only given to provide you with factual information or to demonstrate our experience with respect to municipal markets and products.

Municipal Securities Rulemaking Board ("MSRB") Rule G-17 requires that we make the following disclosure to you at the earliest stages of our relationship, as underwriter, with respect to an issue of municipal securities: the underwriter's primary role is to purchase securities with a view to distribution in an arm's-length commercial transaction with the issuer and it has financial and other interests that differ from those of the issuer.

Raymond James does not provide accounting, tax or legal advice; however, you should be aware that any proposed transaction could have accounting, tax, legal or other implications that should be discussed with your advisors and/or legal counsel.

Raymond James and affiliates, and officers, directors and employees thereof, including individuals who may be involved in the preparation or presentation of this material, may from time to time have positions in, and buy or sell, the securities, derivatives (including options) or other financial products of entities mentioned herein. In addition, Raymond James or affiliates thereof may have served as an underwriter or placement agent with respect to a public or private offering of securities by one or more of the entities referenced herein.

This Proposal is not a binding commitment, obligation, or undertaking of Raymond James. No obligation or liability with respect to any issuance or purchase of any Bonds or other securities described herein shall exist, nor shall any representations be deemed made, nor any reliance on any communications regarding the subject matter hereof be reasonable or justified unless and until (1) all necessary Raymond James, rating agency or other third party approvals, as applicable, shall have been obtained, including, without limitation, any required Raymond James senior management and credit committee approvals, (2) all of the terms and conditions of the documents pertaining to the subject transaction are agreed to by the parties thereto as evidenced by the execution and delivery of all such documents by all such parties, and (3) all conditions hereafter established by Raymond James for closing of the transaction have been satisfied in our sole discretion. Until execution and delivery of all such definitive agreements, all parties shall have the absolute right to amend this Proposal and/or terminate all negotiations for any reason without liability therefor.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2017-195753

Date Filed:
04/20/2017

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Raymond James & Associates, Inc.(wholly owned subsidiary of Raymond James Financial,Inc.)
Houston, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Underwriting/Investment Banking Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Raymond James Financial, Inc.	St. Petersburg, FL United States	X	
James, Thomas	St. Petersburg, FL United States	X	
Elwyn, Tashtego	St. Petersburg, FL United States	X	
Julien, Jeffrey	St. Petersburg, FL United States	X	
Tremaine, Thomas	St. Petersburg, FL United States	X	
Zank, Dennis	St. Petersburg, FL United States	X	
Reilly, Paul	St. Petersburg, FL United States	X	
Carson, John	St. Petersburg, FL United States	X	
Giddis, Kevin	Memphis, TN United States	X	
Jones, Debi (employee)	Houston, TX United States		X
Oppenheim, Tom (employee)	Dallas, TX United States		X
Jones, Ashley (employee)	Houston, TX United States		X
Olivares, Kristin (employee)	Houston, TX United States		X
Kempf, Buddy (employee)	Dallas, TX United States		X
Runnels, Chad (employee)	Dallas, TX United States		X
Mattson, Luke (employee)	Dallas, TX United States		X

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2017-195753

Date Filed:
04/20/2017

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Raymond James & Associates, Inc.(wholly owned subsidiary of Raymond James Financial,Inc.)
Houston, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Underwriting/Investment Banking Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

KRISTIN OLIVARES
Notary Public, State of Texas
Comm Expires 01-06-2020
Notary ID 130486856

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Deborah S. Jones, this the 20th day of April, 20 17, to certify which, witness my hand and seal of office.

Kristin Olivares — Kristin Olivares — FI Banking Analyst / Notary

Signature of officer administering oath — Printed name of officer administering oath — Title of officer administering oath

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Robert W. Baird & Co. Incorporated ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Robert W. Baird & Co. Incorporated having offices at 210 University Blvd., Suite 460, Denver, CO 80206 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Robert W. Baird & Co. Incorporated Offer, dated 3/8/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

ROBERT W. BAIRD & CO. INCORPORATED

Brian Kelso
Printed Name of Authorized Person

Signature

Managing Director
Title:

6/29/16
Date:

CITY OF AUSTIN

Terry V. Nicholson
Printed Name of Authorized Person

Signature

Senior Buyer Supervisor
Title:

6/30/16
Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name:	Robert W. Baird & Co. Incorporated ("Baird")
Company Address:	210 University Blvd., Suite 460
City, State, Zip:	Denver, CO 80206
Federal Tax ID No.	[redacted]
Printed Name of Officer or Authorized Representative:	Brian Kelso
Title:	Managing Director
Signature of Officer or Authorized Representative:	Brian M. Kelso
Date:	March 8, 2016
Email Address:	bkelso@rwbaird.com
Phone Number:	303-270-6337

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. Questions:

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16

Terry V. Nicholson, Sr. Buyer Specialist
Purchasing Office, 512-974-2995

Date

ACKNOWLEDGED BY:

Brian Kelso		3/8/2016
Name	Authorized Signature	Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

Response to Request for Qualifications for Underwriter/Investment Banking Services to:

City of Austin, Texas

Solicitation No. RFQS 7400 TVN0103REBID

March 8, 2016

Brian Kelso
Managing Director
Public Finance
210 University Blvd., Suite 460
Denver, CO 80206
Direct: 303-270-6337
Email: bkelso@rwbaird.com

David Smalling
Senior Vice President
Public Finance
700 Milam Street, Suite 1300
Houston, TX 77002
Direct: 832-871-5292
Email: dsmalling@rwbaird.com

Robert W. Baird & Co. Incorporated is providing this information in response to a request for proposal or qualifications from a municipal entity, in seeking to serve as underwriter for a possible issuance of municipal securities, and not as a financial advisor or municipal advisor. Any advice or recommendations contained in this information have been made by Baird pursuant to Rule 15Ba1-1 under the Securities Exchange Act of 1934, which permits firms to provide advice in response to a request for proposal or qualifications for services in connection with an issuance of municipal securities without such firms to be regarded as municipal advisors. See "Important Disclosures" contained herein.

Robert W. Baird & Co
210 University Blvd., #460
Denver, CO 80206
(877) 792-9096
(303) 270-6339 fax

BAIRD

EXECUTIVE SUMMARY

March 8, 2016

Mr. Jeffery Dilbert
City of Austin Purchasing Office
Municipal Building
124 West 8th Street
Austin, Texas 78701

Dear Mr. Dilbert:

Robert W. Baird & Co. ("Baird") appreciates the opportunity to present our qualifications for inclusion in an underwriting team to the City of Austin (the "City") in connection with its negotiated bond sales. Baird focuses on middle markets and mid-range financings and for purposes of this RFQ should be considered as a regional firm. Baird is headquartered in Milwaukee, Wisconsin and operates as a corporation. Baird is uniquely qualified to assist the City with its bond issuance needs for these important reasons:

- **Texas Banking and Underwriting Experience** – Baird's banking team has a long history serving Texas issuers on a wide variety of financings. Our experience includes bond financings for numerous issuers throughout the state. **Since 2010, Baird has lead managed 294 Texas financings for an aggregate par amount over $5.9 billion.**
- **Commitment to the City of Austin.** Baird has been an active participant in bidding on the City of Austin's competitively bid bond issues. Since 2008, Baird has submitted bids on 20 out of 22 competitive sales offered by the City. Baird senior managed 6 and served as co-manager on 2 competitive sales for the City since 2008. Baird's experience with the City also includes serving as senior managing underwriter on the $139.5 million Series 2014 Public Improvement, Contractual Obligations and Certificates of Obligation. No other firm has more experience than Baird in underwriting competitive sales for the City over the past eight years. Additionally, Baird's banking team has actively called on the City for several years to present ideas relevant to the City and to introduce the head of Baird's underwriting desk, Drew Kanyer. Mr. Kanyer will be the underwriter for any negotiated bond issues where Baird is selected to serve the City. Additionally, a member of Baird's banking team serving the City, Mr. David Smalling, was a part of the financial advisor team working with the City of Austin from 2005 to 2008 (while at a previous firm).
- **Texas Presence.** Baird employs 144 people in five offices located in Dallas, Fort Worth and three locations in Houston. These offices include 10 institutional sales and trading professionals, 10 public finance bankers, and 51 Private Wealth Management (retail brokerage) Advisors who service 19,625 Texas-based accounts with $7.3 billion in assets under management.
- **Underwriting and Pricing Expertise.** Baird has built a municipal underwriting department that senior managed more bond issues (negotiated and competitive) every year since 2009 than any other firm in the country. The firm also ranks as the #1 competitive sales underwriter based on number of issues and #6 based on par amount.
- **Retail and Institutional Distribution Ability.** Baird is proud of its reputation to sell both tax-exempt and taxable fixed income securities. In 2015, the firm sold over $3 billion of tax-exempt securities and $4.8 billion of taxable securities to retail investors, and over $19.6 billion of tax-exempt securities and $168 billion of taxable securities to Tier 1, 2 and 3 institutional investors through its network of over 870

Robert W. Baird & Co
210 University Blvd., #460
Denver, CO 80206
(877) 792-9096
(303) 270-6339 fax

BAIRD

retail brokers and 160 institutional sales and trading officers. Our Private Wealth Management professionals (that service retail investors) average 20 years of industry experience and manage over 350,000 accounts holding more than $110 billion in assets.

- **Strong Capital Position.** Baird's capital is strong and secure with regulatory total capital of over $795.6 million and net capital of $171.7 million, more than 37 times the net capital requirement. Baird consistently maintains one of the most conservative net capital ratios in the securities industry. Baird is committed to utilizing its capital for municipal clients by underwriting unsold balances during bond sales.

We look forward to the opportunity to serve the City of Austin on future bond issuances and pledge to commit the necessary resources to meet any of the City's timeframes and objectives. Both Brian Kelso and David Smalling are legally authorized to commit the firm to all terms and conditions contained in the proposal.

Sincerely,

Brian M. Kelso
Managing Director

David Smalling
Senior Vice President

No.1 municipal underwriter in the nation

Based on number of issues – sourced by Ipreo MuniAnalytics as of December 31, 2015.

Baird – Underwriter or Financial Advisor to *The Bond Buyer's* "Deal of the Year" six times since 2005
Baird – Twelve consecutive years as one of FORTUNE® magazine's 100 Best Companies to Work For, 2004-2015

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Appendix A Addendum No. 1
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MBE/WBE Procurement Program Package or No Goals Form

Appendix B Baird's Consolidated Financial Statements as of December 31, 2014 and 2013
Baird's FOCUS Report as of January 31, 2016

A. Part I - Business Organization

BUSINESS ORGANIZATION

Robert W. Baird & Co. Incorporated ("Baird") is a financial services firm headquartered in Milwaukee, Wisconsin (state of incorporation). The firm operates as a corporation. Baird focuses on middle markets and mid-range financings and for purposes of this RFQ should be considered as a regional firm.

The team providing service to the City will be led by Brian Kelso, located in Denver, Colorado, and David Smalling, located in Houston, Texas. Baird's underwriting desk is located at the corporate headquarters in Milwaukee, Wisconsin.

Public Finance (Primary Contact - Banking):	**Public Finance (Secondary Contact - Banking):**	**Corporate Headquarters (Underwriting):**
210 University Blvd., #460	700 Milam Street, Suite 1300	777 East Wisconsin Avenue
Denver, CO 80206	Houston, TX 77002	Milwaukee, WI 53202
(303) 270-6337 *phone*	(832) 871-5292 *phone*	(414) 765-7331 *phone*

Recent Management Changes: Baird's recent management change occurred at the beginning of 2016, with Steve Booth transitioning from President and Chief Operating Officer to Chief Executive Officer. Paul Purcell transitioned from Chief Executive Officer and will continue to serve as Chairman for a few more years.

Growth: Baird currently does not expect to undertake any significant changes to the organization other than growth. Most recently, Baird solidified this commitment in 2014 with the acquisition of McAdams Wright Ragen, an investment firm headquartered in Seattle, Washington. Since 2008, employment in the U.S. securities industry has grown by 3.7%; during the same period, Baird has experienced a 29% growth in employment. (Source: SIFMA, Baird and Bureau of Labor Statistics.)

Public Finance has grown similarly, with emphasis on geographic expansion. Since 2009, Baird has opened six public finance offices in Denver, Colorado; Lansing, Michigan; Winston-Salem, North Carolina; Exton, Pennsylvania, Minneapolis, Minnesota, and Houston, Texas. Baird has no plans for any significant changes in the Public Finance Department in the next year other than selectively continuing to grow the Department in markets not currently covered by the firm.

NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING

Baird has read and understands the information included in this RFQ and attests that the firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council. A completed Conflict of Interest Questionnaire is located in Appendix A.

DISTRIBUTION NETWORK

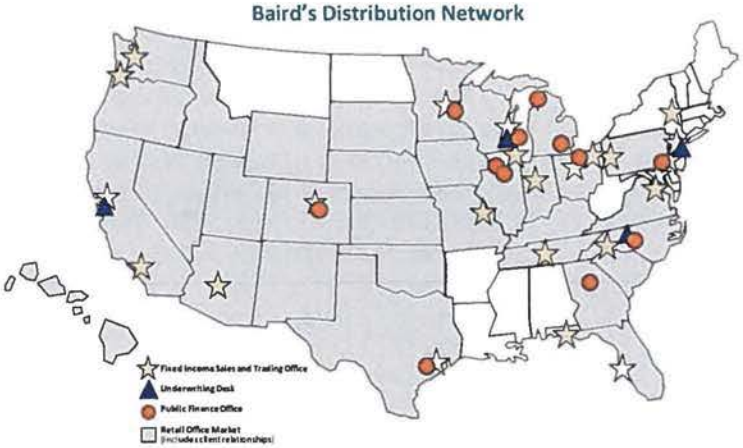
In 2015, the firm sold over $19.6 billion of tax-exempt securities and $168 billion of taxable securities to Tier 1, 2 and 3 institutional investors, and over $3 billion of tax-exempt securities and $4.8 billion of taxable securities to retail investors. We will utilize our extensive distribution channels to market the City's proposed bond issues as discussed below.

Baird's success in distributing tax-exempt and taxable debt instruments is a result of our careful build-up of an excellent retail sales force, complementing our productive institutional sales force. Baird's in-state and national

marketing efforts are designed to produce the greatest possible demand for the City's bonds that results in the lowest possible borrowing cost.

Shown on the map to the right are Baird's national and institutional sales office locations, retail sales coverage and public finance regional offices.

Baird's Distribution Network



Retail Sales: Baird currently maintains 85 Private Wealth Management ("retail") offices across the country in 24 states staffed by 870 retail financial advisors. These financial advisors are seasoned professionals who have established and cultivated long-term relationships with their high net worth clients They service more than 350,000 client accounts nationally holding more than $110 billion of assets under management. As the underwriter of more primary market municipal bond issues than any other firm for the past seven calendar years, Baird's retail salesforce is accustomed to marketing and selling tax exempt and taxable bonds to their clients.

Institutional Distribution: Baird employs 104 sales professionals who cover fixed income institutional investors. Of these, 13 are focused exclusively on municipal bonds, and an additional 24 split their efforts between municipal bonds and taxable securities. The true strength of our institutional sales team is its focus on the numerous Tier 2 and Tier 3 institutions often overlooked by major Wall Street investment banks.

The graphic that follows shows the types of Tier 2 and Tier 3 accounts that are covered by Baird in addition to the typical Tier 1 institutions covered by Wall Street firms. Baird uses its relationship with the "middle market" firms to help generate additional orders and interest in our bond sales. Baird's focus on Tier 2 and Tier 3 investors will directly benefit the City by allowing us to bring Baird's large pool of investors.

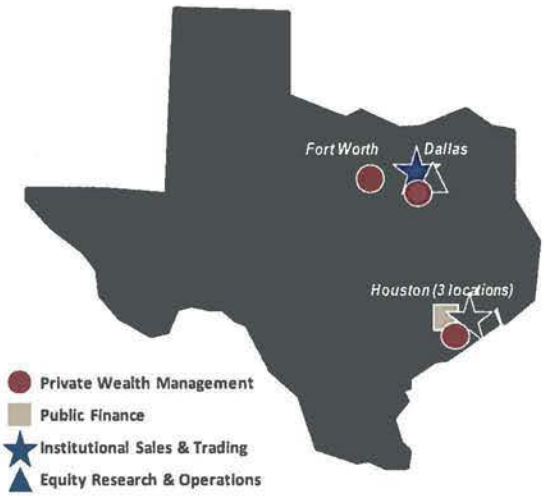
All Firms Including Baird | **Baird Value Added Market and Distribution Network**

Institutional Account Coverage
Nearly 160 Sales and Trading Professionals in 27 offices across 22 States

Retail Account Coverage
870 Advisors managing over $110 billion for 356,000 Accounts in 26 States

Tier 1 Institutions (covered by every Wall Street Firm and Baird)	Tier 2 Institutions (covered by selected firms)	Tier 3 Institutions (coverage omitted by many firms)	High Net Worth Sales (major brokerage and some regional firms)	Individual Retail Investors (major brokerage and some regional firms)
•Assets for over $1 billion •Buy large blocks •Very price sensitive	•Assets for over $500-$900 million •Buy large blocks •Price sensitive	•Assets for over $100-$500 million •Buy and hold accounts	•Relatively small trades (under $5 million) •Sophisticated investors	•Small trades •Price insensitive

Texas Office Locations: Shown at the right is a map of Baird's Texas-based retail and institutional office locations. Baird's financial advisors are located in 5 locations in the state and maintain 19,625, Texas-based accounts, managing over $7.3 billion in assets under management. The **Houston offices** are comprised of 9 institutional sales professionals who cover numerous in-state and small to mid-sized institutions often overlooked by other bond underwriting firms, 21 retail financial advisors and 10 public finance professionals. The **Fort Worth** office has 18 retail financial advisors. The **Dallas office** is comprised of 12 retail financial advisors and one institutional sales professional.



Baird's presence in Texas has grown by 380% since 2009.

	Jan-09				Dec-15				
	Dallas	F.W.	Houston	Total	Dallas	F.W.	Houston	Total	
Public Finance							10	10	1
PWM (Retail)	14		6	20	31	30	56	117	2
Institutional Sales & Trading			8	8	1		9	10	
Operations					1	2		3	
Equity Research & Trading	2			2	4			4	
Total	16	0	14	30	37	32	75	144	

[1] Includes 1 banker located in Denver, Colorado
[2] Total employees, includes 51 Total Financial Advisors (12 Dallas, 18 Ft. Worth, 21 Houston)

B. Part II – Authorized Negotiator

Brian Kelso is the primary banker assigned to the City to negotiate all contracts terms. Brian's contact information follows:

Brian Kelso
Managing Director
210 University Blvd., #460
Denver, CO 80206
bkelso@rwbaird.com
(303) 270-6337 *phone*

C. Part III – Background and Prior Experience

OVERVIEW OF THE FIRM

Founded in 1919, Baird is an employee owned financial services company and one of the oldest regional financial services firms in the United States. Baird is headquartered in Milwaukee, Wisconsin (state of incorporation), and has been a member of the New York Stock Exchange since 1948. The Firm has more than 100 locations in the United States, Europe and Asia, with more than 3,200 full time associates. Baird's has four municipal trading

desks located in Milwaukee, Wisconsin, Red Bank, New Jersey; San Francisco, California; and Winston-Salem, North Carolina.

RELEVANT EXPERIENCE

Brian Kelso has worked with numerous issuers throughout his career. Since joining Baird in 2009, Mr. Kelso has sole- or senior-managed over 60 financings for a total par amount exceeding $1 billion. A representative list of Baird's experience where Mr. Kelso was the lead banker and served as sole or senior manager include.

For Brian Kelso:

City of Albuquerque **Lou Hoffman**, *Chief Financial Officer* 1 Civic Plaza NW, 11th Floor Albuquerque, NM 87102 lhoffman@cabq.gov (505) 768-3365 *phone* **Cilia Aglialoro**, *Treasurer* caglialoro@cabq.gov (505) 768-3309 *phone*	2015 2014 2013	$49,195,000 Gross Receipts Tax Improvement Revenue Bonds $36,960,000 Gross Receipts Tax/Lodgers Tax Refunding and Improvement Revenue Bonds $42,030,000 Gross Receipts tax Improvement Revenue Bonds
Belton Independent School District **Phil Haggerty**, *CPA* 400 North Wall Street Belton, TX 76513 Phil.haggerty@bisd.net (254) 215-2000 *phone*	2013 2012 2012	$8,205,000 G.O. Refunding Bonds $54,900,000 School Building Bonds $18,950,000 Refunding Bonds
City of Grand Prairie **Diana Ortiz**, *Chief Financial Officer* 317 College Street Grand Prairie, TX 75050 dortiz@gptx.org (972) 237-8090 *phone* **Tannie Camarata**, *Cash & Debt Manager* tcamarata@gptx.org (972) 237-8089 *phone*	2015 2015	$11,165,000 G.O. Refunding Bonds $28,020,000 Combination Tax and Revenue Certificates of Obligation
Lockhart Independent School District **Tina Knudsen**, *Chief Financial Officer* 105 South Colorado Street Lockhart, TX 78644 Tina.knudsen@lockhart.txed.net (512) 398-0045 *phone*	2014	$58,500,000 School Building Bonds

For Brian Kelso *(continued):*

City of Plano **Denise Tacke**, *Director of Finance* 1520 K Avenue Plano, TX 75074 deniset@plano.gov (972) 941-5233 *phone* **Myra Conklin**, *Treasurer* myrac@plano.gov (972) 941-7312 *phone*	2013 2011 2010 2010 2010	$61,925,000 G.O. Refunding & Improvement Bonds $46,400,000 G.O. Refunding & Improvement Bonds $9,660,000 Combination Tax & Revenue Certificates of Obligation $28,520,000 G.O. Refunding & Improvement Bonds $6,790,000 Municipal Drainage Utility System Revenue Refunding & Improvement Bonds

David Smalling has worked in Public Finance since 2005. His experience includes serving as financial advisor to numerous Texas municipalities as well as in the capacity as underwriter for various cities and school districts throughout Texas.

For David Smalling:

Aldine ISD **Anne-Marie Hazzan**, *Asst. Superintendent of Finance* 14910 Aldine Westfield Road Houston, TX 77032 ajhazzan@aldineisd.org (281) 985-6222 *phone*	2016	±$22,000,000 (in process) G.O. Refunding Bonds
City of Sugar Land **Jennifer Brown**, *Director of Finance* 2700 Town Center Blvd. North Sugar Land, TX 77479 jbrown@sugarlandtx.gov (281) 275-2744 *phone*	2016 2015	Presently working with the City on a financing in process $12,195,000 G.O. Refunding Bonds, Series 2015

D. Part IV – Personnel

BANKING AND UNDERWRITING EXPERTISE

The team providing service to the City will be led by Brian Kelso, the primary contact who will coordinate and be involved in every phase of the City's financings in which Baird would be involved. David Smalling and Marcy Finley will provide banking and analytical support and assist in the implementation of strategies. Marcy Finley heads up Baird's quantitative analysis department and will provide analytical support on all assigned City financings. Drew Kanyer, the manager for Baird's municipal bond underwriting department, will be the underwriter for the City's proposed bonds. Mr. Kanyer will coordinate all pricing and sale activities relating to the issuance of the bonds.

PRIMARY BANKING CONTACT:
Brian Kelso
Managing Director
210 University Blvd., #460
Denver, CO 80206
bkelso@rwbaird.com
(303) 270-6337 *phone*

% of Time Devoted to the City: 20%

SECONDARY BANKING CONTACT:
David Smalling
Senior Vice President
700 Milam Street, Suite 1300
Houston, TX 77002
dsmalling@rwbaird.com
(832) 871-5292 *phone*

% of Time Devoted to the City: 15%

UNDERWRITING:
Drew Kanyer
Manager, Institutional Sales & Trading
777 East Wisconsin Avenue
Milwaukee, WI 53202
dkanyer@rwbaird.com
(414) 765-7331 *phone*

% of Time Devoted to the City: 10%

QUANTITATIVE ANALYSIS
Marcy Finley
Senior Vice President
210 University Blvd., #460
Denver, CO 80206
mfinley@rwbaird.com
(303) 270-6333 *phone*

% of Time Devoted to the City: 20%

At the time of an engagement for a transaction for the City, Baird's banking team will provide all necessary time and resources to meet the City's objectives. Above we have provided estimates for each individual's time that will be spent on the City on an ongoing basis (including times when the City is not actively involved in a bond financing).

BANKING TEAM RESUMES

Primary Banker

Brian Kelso, *Director*, Denver, Colorado — 303-270-6337 *phone*
bkelso@rwbaird.com — 303-270-6339 *fax*

Brian Kelso joined Baird's Denver Public Finance office in 2009 and has been in the public finance investment banking industry for fourteen years. He has served as investment banker for various Western and Southwestern issuers, giving him extensive knowledge of numerous financing methodologies. His experience in Texas includes a variety of cities, counties, school districts, and water districts. **Since joining Baird in 2009, Mr. Kelso has been involved in 131 Texas financings with an aggregate par of nearly $5 billion.** Mr. Kelso has a BS degree in business administration from Colorado State University.

Support Banker

S. David Smalling, Senior Vice President, Houston, Texas — 832-871-5292 phone
dsmalling@rwbaird.com

David Smalling joined Baird in 2015 after previously working as a support banker for RBC Capital Markets, a consultant for Public Financial Management and an analyst for the Municipal Advisory Council of Texas. He has assisted in the financings for several types of issuers, including school districts, special districts, authorities, cities and counties during his career. David holds a bachelor of business administration degree in finance from the University of Texas at Austin and lives in Houston.

Quantitative Analysis

Marcy Finley, *Senior Vice President,* Denver, Colorado — 303-270-6333 *phone*
mfinley@rwbaird.com — 303-270-6339 *fax*

Marcy Finley has more than 25 years of experience in the municipal bond industry. Ms. Finley has provided quantitative analytical support to Mr. Kelso on Baird's lead managed Texas bond issues. Her in-depth experience in the public finance industry includes financing plan structures utilizing fixed and variable interest rates, long-term capital improvement plans, various refinancing structures and tax increment district cash flows. Her experience in public finance also includes the creation of rating comparison models and municipal budget models. Prior to joining Baird, Ms. Finley worked as a Quantitative Analyst at a leading investment banking firm for 18 years. Ms. Finley holds a BS degree from Metropolitan State College.

Underwriting, Sales and Trading

Drew A. Kanyer, *Manager, Institutional Sales & Trading,* Milwaukee, Wisconsin 414-765-7331 *phone*
dkanyer@rwbaird.com 414-298-7478 *fax*

Drew A. Kanyer has over 30 years of experience as a municipal bond trader and underwriter, joined Baird in 1990 to manage the firm's Municipal Underwriting Department. He currently manages the sales, trading and underwriting efforts, handling over 1,000 issues per year with total annual par value in excess of $15 billion. Mr. Kanyer has served as lead underwriter for all Texas bond issues where Baird has been a participant. **Since 2009, Mr. Kanyer has overseen 267 Texas negotiated underwritings with an aggregate par in excess of $11.38 billion.** Mr. Kanyer received his BS degree from Indiana University and his MBA from the University of Wisconsin-Milwaukee.

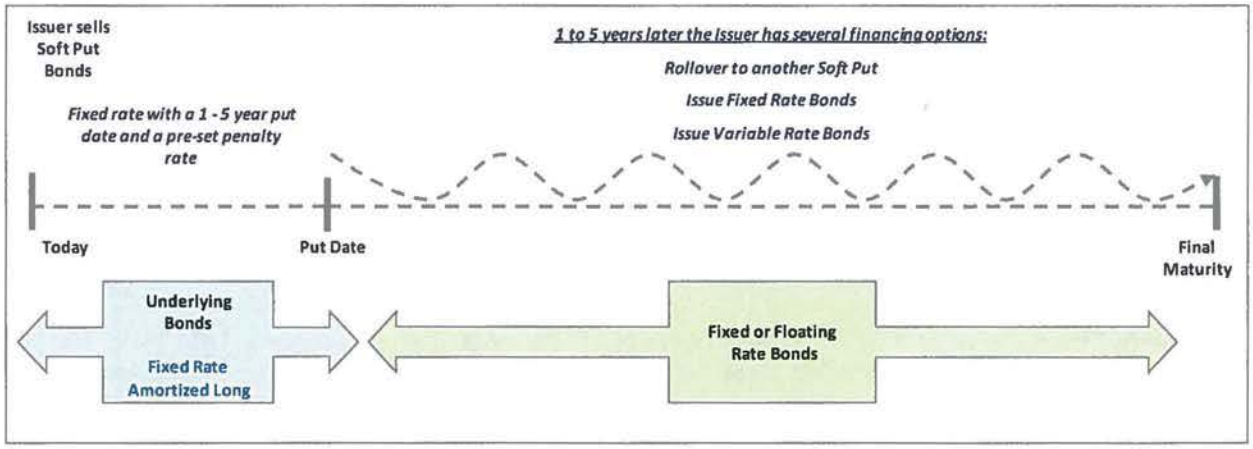
E. Part V – Innovative Financing Techniques

"SOFT PUT" BONDS

Baird has the capabilities and experience with soft put bonds to assist in evaluating the benefits and considerations of this product for the City's debt profile. Baird has served as senior managing underwriter on soft puts for several Texas issuers. The following is a short summary of the mechanics of soft put bonds. Soft puts would allow the City to utilize the short end of the yield curve which has lower rates than long-term debt. Soft puts could be used as an alternative or to compliment the City's commercial paper programs. A soft put with a put date of 5 years or shorter locks in a rate on the short-end of the yield curve without interest rate risk until the put date.

Unlike traditional "Put Bonds," the "Soft Put" does not require a liquidity provider. The bonds are sold with a mandatory "put" date (e.g. 1, 2, 3 or 5 years). At the tender date, the bonds can be remarketed into any mode available under multi-modal documents. If the put is not funded by the issuer on the tender date, the interest rate on the bonds goes to a (fixed) pre-set penalty rate. This structure provides an issuer with a fixed short term interest rate and a known "worse case" long term fixed interest rate (the penalty rate).

"Soft" Put Bonds



Soft put bonds can also be structured with flexible redemption provisions. Specifically, an annual par call option during the initial rate period. The cost of the call option in the current market is approximately 10 to 15 basis points. Put bonds are an excellent tool to assist a borrower with managing front end debt service costs for initial

construction periods and to take advantage of lower rates on the short end of the yield curve. The following is a brief summary of the benefits and considerations of the soft put bond structure:

BENEFITS OF SOFT PUT BONDS:	CONSIDERATIONS OF SOFT PUT BONDS:
⇨ Benefit from the features of both long-term bonds and short-term bonds ⇨ In the event of a failed remarketing, no event of default - stepped rate applies ⇨ Short-term rates are at very attractive levels; aggressive investor demand ⇨ Multi-modal document allows the issuer to change into another mode at the end of the put period ⇨ Issuers can "blend down" debt service costs of projects and manage cost exposure during initial construction period	⇨ Put Risk ⇨ Remarketing Risk ⇨ Future interest rate risk ⇨ Amount of soft put exposure relative to overall debt portfolio ⇨ Duration of put bond maturity dates (staggering duration is better methodology) ⇨ Rate environment (long-term fixed-rate versus put rate)

As head of Baird's underwriting desk and the underwriter that covers the State of Texas, Drew Kanyer was involved in the $18.365 million Georgetown ISD Variable Rate School Building Bonds, Series 2013C financing that utilized the soft put structure. Baird served as sole manager to District. For more information contact:

Steve West, *Chief Financial Officer*
Georgetown Independent School District
(512) 943-5009 – Phone
wests@georgetownisd.org

GREEN BONDS

The City may wish to consider designating one or more bond offerings as "green." The proceeds of green bonds are used to finance environmentally beneficial projects such as solar energy, low carbon buildings, sustainable waste management, and mass transit. Green bonds may be well received within the community and provides an issuer the opportunity to communicate its green initiatives to constituents.

Green bonds were originally pioneered by the World Bank and were initially used by the corporate bond market. More recently, municipal entities began using the green designation. Issuers of green bonds include the Metropolitan Transport Authority (NYC), State of Connecticut, Massachusetts Clean Water Trust, the City of Asheville, and the State of California (among others). An issuer may designate green bonds itself by utilizing a framework such as the Green Bond Principles, a set of voluntary process guidelines developed by a consortium of investment banks, issues and investors. An issuer may also elect to have an outside party certify the green bonds, such as the Climate Bonds Initiative. This certification provides investors assurance that the projects being financed meet a defined set of green standards. Issuers will typically agree to provide periodic (e.g. once a year) project and spending updates to investors until projects are complete and proceeds have been spent.

Designating a bond offer as green brings an awareness that allows Socially Responsible Investors ("SRI's") to participate in a financing. Bringing SRI's into a financing has the potential to increase the number of investors during a pricing and allow an underwriter to price the bonds more aggressively (although quantifying this benefit is difficult). According to the Global Sustainable Investment Alliance, SRI's have $21.4 trillion in global assets. SRI investors include large household names including BlackRock, BMO, TIAA-CREF and the California State Teacher's Retirement System.

Baird has served as a syndicate members in several green bond transactions for issuers such as the Commonwealth of Massachusetts, New York State Environmental Facilities Corporation, and the State of California. Mr. Drew Kanyer, Baird's lead underwriter, was involved in all of the green bonds where Baird acted as underwriter. We look forward to sharing our experience on green bonds with the City of Austin.

For more information contact:

Sue Perez, *Assistant Treasurer*
Commonwealth of Massachusetts
sperez@tre.state.ma.us
(617) 367-9333 - Phone

F. Part VI – Financial Viability

CAPITAL POSITION

Baird has a regulatory capital base of over $795 million and net capital of over $171 million, more than 37 times the net capital requirement.

Robert W. Baird Capitalization

	2015 *
Total Firm (Regulatory) Capital	$795,690,000
Total Shareholders' Equity Capital	$565,423,000
Excess Net Capital	$167,119,000
Net Capital	$171,712,659

**As of January 31, 2016 FOCUS Report*

Baird's strong capital base and sound policy decisions have enabled the firm to continue to serve our clients effectively. Baird's legal underwriting capacity is over $2.3 billion. Baird's underwriting desk is empowered to make underwriting decisions and does not maintain a pre-approved policy of the amount of bonds that can be taken into inventory. **Drew Kanyer, Baird's head underwriter (and underwriter serving the City) has full discretion to underwrite unsold balances for the benefit of municipal borrowers**. During today's volatile and uncertain market conditions, a senior manager's willingness and ability to underwrite unsold balances can result in significant interest savings for the City, and Baird is willing and able to put its capital at risk for its clients.

FINANCIALS

Provided in Appendix B is a copy of Baird's Consolidated Financial Statements for years ended December 31, 2014 and 2013; and the January 31, 2016 FOCUS Report.

G. Part VII – Austin Bond Experience

Provided by the City.

H. Part VIII – References

The references listed below have previously worked with Brian Kelso on the transactions listed. As head of Baird's underwriting desk and the underwriter that covers the State of Texas, Drew Kanyer was involved in each of the financings listed below:

Reference Contact:	Sole/Senior Managing Financing Experience:
City of Cedar Park **Aaron Rector**, *Asst. Director of Finance* 450 Cypress Creek Road, Building #1 Cedar Park, TX 78613 Aaron.rector@cedarparktexas.gov (512) 401-5164 *phone*	2015 $37,410,000 G.O. Refunding Bonds (Taxable) 2015 $36,260,000 G.O. Refunding & Improvement Bonds 2014 $12,225,000 Pass-Through Toll Revenue and Ltd Tax Bonds

City of Rockwall **Mary Smith,** *Director of Finance* 385 S. Goliad St. Rockwall, TX 75087 msmith@rockwall.com (972) 771-7700 *phone*	2016 $5,570,000 Combination Tax & Surplus Revenue Certificates of Obligation 2016 $78,355,000 G.O. Refunding & Improvement Bonds 2013 $7,905,000 G.O. Refunding & Improvement Bonds 2013 $13,715,000 Combination Tax & Limited Surplus Revenue Certificates of Obligation 2011 $4,675,000 Combination Tax and Limited Surplus Revenue Certificates of Obligation 2011 $12,665,000 G.O. Refunding & Improvement Bonds 2009 $5,125,000 Combination Tax & Limited Surplus Revenue Certificates of Obligation 2009 $9,065,000 G.O. Refunding & Improvement Bonds
City of Temple **Traci Barnard**, *Director of Finance* 2 North Main, Suite 302 Temple, TX 76501 tbarnard@ci.temple.tx.us (254) 298-5631 *phone*	2015 $23,685,000 Utility System Revenue Bonds 2015 $36,780,000 G.O. Refunding & Improvement Bonds

I. Part X – Non-Collusion, Non-Conflict of Interest, and Anti-Lobbying

NON-COLLUSION, NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING

Baird has read and understands the information included in this RFQ and attests that the firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council. The signed certification is included in Appendix A.

J. Part XI – Proposal Acceptance Period

Baird understands this is a 36-month contract and can be extended for up to two 12-month periods.

K. Part XII – Proprietary Information

All material contained within is not proprietary and, therefore, has not been marked as such.

IMPORTANT DISCLOSURES

Robert W. Baird & Co. Incorporated ("Baird") is providing the information contained herein and/or accompanying materials (the "Materials") in response to a request for proposal or qualification ("RFP") from a municipal entity ("Potential Client" or "you") with respect to a possible issuance of municipal securities. In responding to the RFP, Baird seeks a role as underwriter and not as financial advisor or municipal advisor to the Potential Client in connection with the issuance consistent with MSRB Rule G-23 interpretive guidance. Baird understands that the RFP has identified a particular objective, has remained open for a reasonable period of time and involves a competitive process (e.g., it has been sent to at least three reasonably competitive market participants or has been publicly disseminated by posting it on the Potential Client's official website). Pursuant to Rule 15ba1-1 under the Securities Exchange Act of 1934, Baird, in responding to the RFP, may provide advice and recommendations to the Potential Client regarding a possible issuance of municipal securities without being regarded as a municipal advisor. The RFP has been distributed by the Potential Client to Baird and Baird is providing the information contained herein and/or accompanying materials (the "Materials") for discussion or general informational purposes only, in anticipation of being engaged to serve as underwriter (or placement agent) for a possible issuance of municipal securities you may be considering. Baird is not recommending that you take or not take any action. Baird is not acting as financial advisor or municipal advisor to you and does not owe a fiduciary duty pursuant to Section 15B of the Securities Exchange Act of 1934 to you with respect to the Materials. Baird is acting for its own interests. You should discuss the Materials with any and all internal or external advisors and experts that you deem appropriate before acting on the Materials.

The role of an underwriter includes the following: Municipal Securities Rulemaking Board Rule G-17 requires an underwriter (or placement agent) to deal fairly at all times with both municipal issuers and investors. As underwriter, Baird's primary role is to purchase the proposed securities to be issued with a view to distribution in an arm's length commercial transaction between you and Baird. In its role as underwriter (or placement agent), Baird has financial and other interests that differ from your interests. As part of our services as underwriter (or placement agent), Baird may provide advice concerning the structure, timing, terms, and other similar matters concerning an issuance of municipal securities you are considering. Any such advice, however, would be provided by Baird in the context of serving as an underwriter (or placement agent) and not as municipal advisor, financial advisor or fiduciary. Unlike a municipal advisor, Baird as an underwriter (or placement agent) does not have a fiduciary duty to the issuer under the federal securities laws and is therefore not required by federal law to act in the best interests of an issuer without regard to its own financial or other interests. As underwriter (or placement agent), Baird has a duty to purchase (or facilitate the purchase of) securities from an issuer at a fair and reasonable price but must balance that duty with its duty to sell those securities to investors at prices that are fair and reasonable. As underwriter (or placement agent), Baird will review the official statement (if any) applicable to the proposed issuance in accordance with, and as part of, its responsibilities to investors under the federal securities laws, as applied to the facts and circumstances of the proposed issuance.

Any information or estimates contained in the Materials are based on publicly available data or information provided by the Potential Client, and are subject to change without notice. Baird has not independently verified the accuracy of such data or information. Interested parties are advised to contact Baird for more information.

If you have any questions or concerns about the above disclosures, please contact Baird Public Finance.

IRS Circular 230 Disclosure: To ensure compliance with requirements imposed by the IRS, we inform you that the Materials do not constitute tax advice and shall not be used for the purpose of (i) avoiding tax penalties or (ii) promoting, marketing or recommending to another party any transaction or matter addressed herein.

APPENDIX A

- Addendum No. 1
- Conflict of Interest Questionnaire
- MBE/WBE Procurement Program Package or No Goals Form

Under separate cover

APPENDIX B

- Baird's Consolidated Finance Statements for Years Ended December 31 2014 and 2013
- Baird's January 2016 FOCUS Report

Under separate cover

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Not applicable

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7 Robert W. Baird & Co. Incorporated

Signature of vendor doing business with the governmental entity

3/8/2016

Date

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

(A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;

(B) a transaction conducted at a price and subject to terms available to the public; or

(C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

***

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds $2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than $100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	X	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes		**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Robert W. Baird & Co. Incorporated

Company Name

Not applicable

Name and Title of Authorized Representative (Print or Type)

Robert W. Baird & Co. Incorporated

Signature **Date**

Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Utilization Plan
(Please duplicate as needed)

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

PRIME CONTRACTOR / CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant	Robert W. Baird & Co. Incorporated		
Address	210 University Blvd., Suite 460		
City, State Zip	Denver, CO 80206		
Phone Number	303-270-6337	Fax Number	303-270-6339
Name of Contact Person	Brian Kelso		
Is Company City certified?	Yes ☐ No ■ MBE ☐ WBE ☐ MBE/WBE Joint Venture ☐		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

Brian Kelso, Managing Director

Name and Title of Authorized Representative (Print or Type)

3/8/2016

Signature **Date**

Provide a list of all proposed subcontractors / sub-consultants / suppliers that will be used in the performance of this Contract. **Attach Good Faith Effort documentation if non MBE/WBE firms will be used.**

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor _____ **Date** _____ **Director/Deputy Director** _____ **Date** _____

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

FORM X-17A-5

FOCUS REPORT
(FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT)
PART II [11]

(Please read instructions before preparing Form)

This report is being filed pursuant to (Check Applicable Block(s)):

1) Rule 17a-5(a) [X] 16 2) Rule 17a-5(b) [ ] 17 3) Rule 17a-11 [ ] 18

4) Special request by designated examining authority [ ] 19 5) Other [ ] 26

NAME OF BROKER-DEALER

ROBERT W. BAIRD & CO. INCORPORATED [13]

ADDRESS OF PRINCIPAL PLACE OF BUSINESS (Do not use P.O. Box No.)

777 E. WISCONSIN AVENUE [20]
(No. and Street)

MILWAUKEE [21] (City) WI [22] (State) 53202 [23] (Zip Code)

SEC. FILE NO.
8-00497 [14]

FIRM ID NO.
8158 [15]

FOR PERIOD BEGINNING (MM/DD/YY)
01/01/16 [24]

AND ENDING (MM/DD/YY)
01/31/16 [25]

NAME AND TELEPHONE NUMBER OF PERSON TO CONTACT IN REGARD TO THIS REPORT(Area code) - Telephone No.

Mike Kopischkie [30] (414) 298-1894 [31]

NAME(S) OF SUBSIDIARIES OR AFFILIATES CONSOLIDATED IN THIS REPORT

[32] [33]
[34] [35]
[36] [37]
[38] [39]

OFFICIAL USE

DOES RESPONDENT CARRY ITS OWN CUSTOMER ACCOUNTS ? YES [X] 40 NO [ ] 41

CHECK HERE IF RESPONDENT IS FILING AN AUDITED REPORT [ ] 42

EXECUTION:

The registrant/broker or dealer submitting this Form and its attachments and the person(s) by whom it is executed represent hereby that all information contained therein is true, correct and complete. It is understood that all required items, statements, and schedules are considered integral parts of this Form and that the submisson of any amendment represents that all unamended items, statements and schedules remain true, correct and complete as previously submitted.

Dated the 24 day of February 20 16

Manual Signatures of:

1) _____
Principal Executive Officer or Managing Partner

2) _____
Principal Financial Officer or Partner

3) _____
Principal Operations Officer or Partner

ATTENTION - Intentional misstatements or omissions of facts constitute Federal Criminal Violations. (See 18 U.S.C. 1001 and 15 U.S.C. 78:f (a))

FINRA

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER				
ROBERT W. BAIRD & CO. INCORPORATED	N	2		100

STATEMENT OF FINANCIAL CONDITION

as of (MM/DD/YY) 01/31/16 [99]
SEC FILE NO. 8-00497 [98]
Consolidated [ ] [198]
Unconsolidated [X] [199]

ASSETS	Allowable		Nonallowable		Total	
1. Cash	$ 41,491,587	200			$ 41,491,587	750
2. Cash segregated in compliance with federal and other regulations	52,000,000	210			52,000,000	760
3. Receivable from brokers or dealers and clearing organizations:						
A. Failed to deliver:						
1. Includable in "Formula for Reserve Requirements"	1,891,439	220				
2. Other	21,881,940	230			23,773,379	770
B. Securities borrowed:						
1. Includable in "Formula for Reserve Requirements"	4,780,989	240				
2. Other	508,325,036	250			513,106,025	780
C. Omnibus accounts:						
1. Includable in "Formula for Reserve Requirements"		260				
2. Other		270				790
D. Clearing Organizations:						
1.Includable in "Formula for Reserve Requirements"		280				
2. Other	43,981,059	290			43,981,059	800
E. Other	5,477,094	300	$	550	5,477,094	810
4. Receivables from customers:						
A. Securities accounts:						
1. Cash and fully secured accounts	249,294,070	310				
2. Partly secured accounts		320		560		
3. Unsecured Accounts			34,569	570		
B. Commodity accounts		330		580		
C. Allowance for doubtful accounts	( )	335	( )	590	249,328,639	820
5. Receivables from non-customers:						
A. Cash and fully secured accounts	41,697	340				
B. Partly secured and unsecured accounts		350	2,382,475	600	2,424,172	830
6. Securities purchased under agreements to resell	330,233,000	360		605	330,233,000	840
7. Securities and spot commodities owned, at market value:						
A. Banker's acceptances, certificates of deposit and commercial paper	1,291,871	370				
B. U.S. and Canadian government obligations	194,578,166	380				
C. State and municipal government obligations	203,596,676	390				
D. Corporate obligations	433,669,921	400				

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED
as of 01/31/16

STATEMENT OF FINANCIAL CONDITION

ASSETS (continued)

		Allowable		Nonallowable		Total	
E. Stocks and warrants	$	68,464,504	410				
F. Options			420				
G. Arbitrage			422				
H. Other securities		125,000,000	424				
I. Spot Commodities			430				
J. Total inventory - includes encumbered securities of ... $ 360,095,780 120						$ 1,026,601,138	850
8. Securities owned not readily marketable:							
A. At Cost ..... $ 77,063,030 130			440	$ 76,853,148	610	76,853,148	860
9. Other investments not readily marketable: ..... $ 140							
B. At estimated fair value			450		620		870
10. Securities borrowed under subordination agreements and partners' individual and capital securities accounts, at market value:							
A. Exempted securities .... $ 150							
B. Other ..... $ 160			460		630		880
11. Secured demand notes-market value of collateral:							
A. Exempted securities .... $ 170							
B. Other ..... $ 180			470		640		890
12. Memberships in exchanges:							
A. Owned, at market value ..... $ 190							
B. Owned at cost					650		
C. Contributed for use of company, at market value					660		900
13. Investment in and receivables from affiliates, subsidiaries and associated partnerships			480	53,725,653	670	53,725,653	910
14. Property, furniture, equipment, leasehold improvements and rights under lease agreements: At cost (net of accumulated depreciation and amortization)			490	67,453,422	680	67,453,422	920
15. Other Assets:							
A. Dividends and interest receivable		2,996,013	500	484	690		
B. Free shipments			510		700		
C. Loans and advances			520		710		
D. Miscellaneous		26,426,976	530	357,186,147	720		
E. Collateral accepted under SFAS 140			536				
F. SPE Assets		429,704,358	537			816,313,978	930
16. TOTAL ASSETS	$	2,745,126,396	540	$ 557,635,898	740	$ 3,302,762,294	940

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED

as of 01/31/16

STATEMENT OF FINANCIAL CONDITION
LIABILITIES AND OWNERSHIP EQUITY

Liabilities	A.I. Liabilities *		Non-A.I. Liabilities *		Total	
17. Bank loans payable:						
A. Includable in "Formula for Reserve Requirements"	$	1030	$	1240	$ 27,132,227	1460
B. Other		1040		1250		1470
18. Securities sold under repurchase agreements.				1260	872,878,703	1480
19. Payable to brokers or dealers and clearing organizations:						
A. Failed to receive:						
1. Includable in "Formula for Reserve Requirements"		1050		1270	7,733,810	1490
2. Other		1060		1280	10,434,874	1500
B. Securities loaned:						
1. Includable in "Formula for Reserve Requirements"		1070			25,864,758	1510
2. Other		1080		1290	46,142	1520
C. Omnibus accounts:						
1. Includable in "Formula for Reserve Requirements"		1090				1530
2. Other		1095		1300		1540
D. Clearing organizations:						
1. Includable in "Formula for Reserve Requirements"		1100				1550
2. Other		1105		1310		1560
E. Other		1110		1320	23,833,978	1570
20. Payable to customers:						
A. Securities accounts - including free credits of $ 198,865,445 [950]		1120			211,872,588	1580
B. Commodities accounts		1130		1330		1590
21. Payable to non customers:						
A. Securities accounts		1140		1340	950	1600
B. Commodities accounts		1150		1350		1610
22. Securities sold not yet purchased at market value - including arbitrage of $ [960]				1360	554,060,911	1620
23. Accounts payable and accrued liabilities and expenses:						
A. Drafts payable		1160				1630
B. Accounts payable		1170			103,477,200	1640
C. Income taxes payable		1180			10,798,657	1650
D. Deferred income taxes				1370		1660
E. Accrued expenses and other liabilities		1190			226,443,176	1670
F. Other		1200		1380	458,966	1680
G. Obligation to return securities				1386		1686
H. SPE Liabilities				1387	429,704,358	1687

OMIT PENNIES

*Brokers or Dealers electing the alternative net capital requirement method need not complete these columns.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED
as of 01/31/16

STATEMENT OF FINANCIAL CONDITION
LIABILITIES AND OWNERSHIP EQUITY (continued)

	Liabilities	A.I. Liabilities *	Non-A.I. Liabilities *	Total
24. Notes and mortgages payable:				
A. Unsecured		$ 1210		$ 1690
B. Secured		1211	$ 1390	1700
25. Liabilities subordinated to claims of general creditors:				
A. Cash borrowings:			1400	230,266,620 1710
1. from outsiders	$ 0970			
2. Includes equity subordination(15c3-1(d)) of	$ 45,800,000 0980			
B. Securities borrowings, at market value: from outsiders	$ 0990		1410	1720
C. Pursuant to secured demand note collateral agreements:			1420	1730
1. from outsiders	$ 1000			
2. Includes equity subordination(15c3-1(d)) of	$ 1010			
D. Exchange memberships contributed for use of company, at market value			1430	1740
E. Accounts and other borrowings not qualified for net capital purposes		1220	1440	1750
26. TOTAL LIABILITIES		$ 1230	$ 1450	$ 2,735,007,918 1760

Ownership Equity

27. Sole proprietorship	$	1770
28. Partnership - limited partners	$ 1020	1780
29. Corporation:		
A. Preferred stock		1791
B. Common stock	26,501,574	1792
C. Additional paid- in capital	196,184,201	1793
D. Retained Earnings	346,554,648	1794
E. Total	569,240,423	1795
F. Less capital stock in treasury	(1,486,047)	1796
30. TOTAL OWNERSHIP EQUITY	$ 567,754,376	1800
31. TOTAL LIABILITIES AND OWNERSHIP EQUITY	$ 3,302,762,294	1810

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* Brokers or Dealers electing the alternative net capital requirement method need not complete these columns.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT

PART II

BROKER OR DEALER

ROBERT W. BAIRD & CO. INCORPORATED as of 01/31/16

COMPUTATION OF NET CAPITAL

1. Total ownership equity (from Statement of Financial Condition - Item 1800)			$ 567,754,376	3480
2. Deduct: Ownership equity not allowable for Net Capital			( )	3490
3. Total ownership equity qualified for Net Capital			567,754,376	3500
4. Add:				
A. Liabilities subordinated to claims of general creditors allowable in computation of net capital			230,266,620	3520
B. Other (deductions) or allowable credits (List)				3525
5. Total capital and allowable subordinated liabilities			$ 798,020,996	3530
6. Deductions and/or charges:				
A. Total non-allowable assets from Statement of Financial Condition (Notes B and C)	$ 557,635,898	3540		
1. Additional charges for customers' and non-customers' security accounts		3550		
2. Additional charges for customers' and non-customers' commodity accounts		3560		
B. Aged fail-to-deliver:	24,149	3570		
1. number of items 3	3450			
C. Aged short security differences-less reserve of $	3460	5,104	3580	
number of items 3	3470			
D. Secured demand note deficiency		3590		
E. Commodity futures contracts and spot commodities - proprietary capital charges		3600		
F. Other deductions and/or charges	3,097,542	3610		
G. Deductions for accounts carried under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x)		3615		
H. Total deductions and/or charges			(560,762,693)	3620
7. Other additions and/or allowable credits (List)				3630
8. Net Capital before haircuts on securities positions			$ 237,258,303	3640
9. Haircuts on securities: (computed, where applicable, pursuant to 15c3-1(f)):				
A. Contractual securities commitments	$	3660		
B. Subordinated securities borrowings		3670		
C. Trading and investment securities:				
1. Bankers' acceptances, certificates of deposit and commercial paper	20,607	3680		
2. U.S. and Canadian government obligations	7,431,369	3690		
3. State and municipal government obligations	11,612,661	3700		
4. Corporate obligations	33,015,242	3710		
5. Stocks and warrants	10,273,426	3720		
6. Options		3730		
7. Arbitrage		3732		
8. Other securities	2,525,390	3734		
D. Undue concentration	666,949	3650		
E. Other (List)		3736	(65,545,644)	3740
10. Net Capital			$ 171,712,659	3750

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PART II

BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED

as of 01/31/16

COMPUTATION OF BASIC NET CAPITAL REQUIREMENT

Part A

11. Minimal net capital required (6-2/3% of line 19)		$	3756
12. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)		$	3758
13. Net capital requirement (greater of line 11 or 12)		$	3760
14. Excess net capital (line 10 less 13)		$	3770
15. Net capital less greater of 10% of line 19 or 120% of line 12		$	3780

COMPUTATION OF AGGREGATE INDEBTEDNESS

16. Total A.I. liabilities from Statement of Financial Condition				$	3790
17. Add:					
A. Drafts for immediate credit	$		3800		
B. Market value of securities borrowed for which no equivalent value is paid or credited	$		3810		
C. Other unrecorded amounts (List)	$		3820	$	3830
18. Deduct: Adjustment based on deposits in Special Reserve Bank Accounts(15c3-1(c)(1)(vii))				$	3838
19. Total aggregate indebtedness				$	3840
20. Percentage of aggregate indebtedness to net capital (line 19 divided by line 10)				%	3850
21. Percentage of aggregate indebtedness to net capital after anticipated capital withdrawals (line 19 divided by line 10 less item 4880 page 12)				%	3853

COMPUTATION OF ALTERNATE NET CAPITAL REQUIREMENT

Part B

22. 2% of combined aggregate debit items as shown in Formula for Reserve Requirements pursuant to Rule 15c3-3 prepared as of the date of net capital computation including both brokers or dealers and consolidated subsidiaries' debits	$	4,594,020	3870
23. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note(A)	$	1,135,760	3880
24. Net capital requirement (greater of line 22 or 23)	$	4,594,020	3760
25. Excess net capital (line 10 less 24)	$	167,118,639	3910
26. Percentage of Net Capital to Aggregate Debits (line 10 divided by line 18 page 8)	%	74.75	3851
27. Percentage of Net Capital, after anticipated capital withdrawals, to Aggregate Debits item 10 less item 4880 page 12 divided by line 17 page 8)	%	45.39	3854
28. Net capital in excess of the greater of: 5% of combined aggregate debit items or 120% of minimum net capital requirement	$	160,227,609	3920

OTHER RATIOS

Part C

29. Percentage of debt to debt-equity total computed in accordance with Rule 15c3-1 (d)	%	23.12	3860
30. Options deductions/Net Capital ratio (1000% test) total deductions exclusive of liquidating equity under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x) divided by Net Capital	%		3852

NOTES:

(A) The minimum net capital requirement should be computed by adding the minimum dollar net capital requirement of the reporting broker dealer and, for each subsidiary to be consolidated, the greater of:
1. Minimum dollar net capital requirement, or
2. 6-2/3% of aggregate indebtedness or 2% of aggregate debits if alternate method is used.

(B) Do not deduct the value of securities borrowed under subordination agreements or secured demand notes covered by subordination agreements not in satisfactory form and the market values of memberships in exchanges contributed for use of company (contra to item 1740) and partners' securities which were included in non-allowable assets.

(C) For reports filed pursuant to paragraph (d) of Rule 17a-5, respondent should provide a list of material non-allowable assets.

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BROKER OR DEALER	For the period (MMDDYY) from 01/01/16 [3932] to 01/31/16 [3933]
ROBERT W. BAIRD & CO. INCORPORATED	Number of months included in this statement 1 [3931]

STATEMENT OF INCOME (LOSS)

REVENUE

1. Commissions:			
a. Commissions on transactions in listed equity securities executed on an exchange		$ 302,628	3935
b. Commissions on transactions in exchange listed equity securities executed over-the-counter		7,123,069	3937
c. Commissions on listed option transactions		176,168	3938
d. All other securities commissions		159,707	3939
e. Total securities commissions		7,761,572	3940
2. Gains or losses on firm securities trading accounts			
a. From market making in over-the-counter equity securities		6,820,036	3941
1. Includes gains or (losses) OTC market making in exchange listed equity securities	3943		
b. From trading in debt securities		11,268,138	3944
c. From market making in options on a national securities exchange			3945
d. From all other trading			3949
e. Total gains or (losses)		18,088,174	3950
3. Gains or losses on firm securities investment accounts			
a. Includes realized gains (losses)	4235		
b. Includes unrealized gains (losses)	4236		
c. Total realized and unrealized gains (losses)			3952
4. Profits or losses from underwriting and selling groups		4,822,719	3955
a. Includes underwriting income from corporate equity securities	3,230,506 4237		
5. Margin interest		836,039	3960
6. Revenue from sale of investment company shares		10,444,949	3970
7. Fees for account supervision, investment advisory and administrative services		36,825,165	3975
8. Revenue from research services		221,360	3980
9. Commodities revenue		118,665	3990
10. Other revenue related to securities business		1,532,256	3985
11. Other revenue		4,948,310	3995
12. Total revenue		$ 85,599,209	4030

EXPENSES

13. Registered representatives' compensation		$ 15,661,181	4110
14. Clerical and administrative employees' expenses		12,513,540	4040
15. Salaries and other employment costs for general partners and voting stockholder officers		30,471,576	4120
a. Includes interest credited to General and Limited Partners capital accounts	4130		
16. Floor brokerage paid to certain brokers (see definition)		28,526	4055
17. Commissions and clearance paid to all other brokers (see definition)			4145
18. Clearance paid to non-brokers (see definition)		423,076	4135
19. Communications		3,002,328	4060
20. Occupancy and equipment costs		3,982,747	4080
21. Promotional costs		1,378,202	4150
22. Interest expense		1,306,260	4075
a. Includes interest on accounts subject to subordination agreements	891,027 4070		
23. Losses in error account and bad debts		37,313	4170
24. Data processing costs (including service bureau service charges)		94,265	4186
25. Non-recurring charges			4190
26. Regulatory fees and expenses		455,433	4195
27. Other expenses		11,168,698	4100
28. Total expenses		$ 80,523,145	4200

NET INCOME

29. Income (loss) before Federal income taxes and items below (Item 12 less Item 28)		$ 5,076,064	4210
30. Provision for Federal income taxes (for parent only)		1,861,079	4220
31. Equity in earnings (losses) of unconsolidated subsidiaries not included above		(194,496)	4222
a. After Federal income taxes of	4238		
32. Extraordinary gains (losses)			4224
a. After Federal income taxes of	4239		
33. Cumulative effect of changes in accounting principles			4225
34. Net income (loss) after Federal income taxes and extraordinary items		$ 3,020,489	4230

MONTHLY INCOME

35. Income (current month only) before provision for Federal income taxes and extraordinary items		$ 5,076,064	4211

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED

as of 01/31/16

FORMULA FOR DETERMINATION OF CUSTOMER ACCOUNT RESERVE REQUIREMENTS OF BROKERS AND DEALERS UNDER RULE 15c3-3
(See Rule 15c3-3, Exhibit A and Related Notes)

CREDIT BALANCES

1. Free credit balances and other credit balances in customers' security accounts (See Note A)	$ 213,285,960	4340		
2. Monies borrowed collateralized by securities carried for the accounts of customers (See Note B)	37,098,002	4350		
3. Monies payable against customers' securities loaned (See Note C)	25,864,758	4360		
4. Customers' securities failed to receive (See Note D)	7,733,926	4370		
5. Credit balances in firm accounts which are attributable to principal sales to customers	7,167,865	4380		
6. Market value of stock dividends, stock splits and similar distributions receivable outstanding over 30 calendar days		4390		
7. ** Market value of short security count differences over 30 calendar days old		4400		
8. ** Market value of short securities and credits (not to be offset by longs or by debits) in all suspense accounts over 30 calendar days	349,177	4410		
9. Market value of securities which are in transfer in excess of 40 calendar days and have not been confirmed to be in transfer by the transfer agent or the issuer during the 40 days		4420		
10. Other (List)	2,229,610	4425		
11. TOTAL CREDITS			$ 293,729,298	4430

DEBIT BALANCES

12. ** Debit balances in customers' cash and margin accounts excluding unsecured accounts and accounts doubtful of collection (See Note E)	$ 212,043,531	4440		
13. Securities borrowed to effectuate short sales by customers and securities borrowed to make delivery on customers' securities failed to deliver	6,842,489	4450		
14. Failed to deliver of customers' securities not older than 30 calendar days	849,214	4460		
15. Margin required and on deposit with the Options Clearing Corporation for all option contracts written or purchased in customer accounts (See Note F)	9,965,775	4465		
16. Margin required and on deposit with a clearing agency registered with the Commission under section 17A of the Act (15 U.S.C. 78q-1) or a derivatives clearing organization registered with the Commodity Futures Trading Commission under section 5b of the Commodity Exchange Act (7 U.S.C. 7a-1) related to the following types of positions written, purchased or sold in customer accounts: (1) security futures products and (2) futures contracts (and options thereon) carried in a securities account pursuant to an SRO portfolio margining rule (See Note G)		4467		
17. Other (List)		4469		
18. ** Aggregate debit items			$ 229,701,009	4470
19. ** Less 3% (for alternative method only - see Rule 15c3-1(a)(1)(ii))			(6,891,030)	4471
20. ** TOTAL 15c3-3 DEBITS			222,809,979	4472

RESERVE COMPUTATION

21. Excess of total debits over total credits (line 20 less line 11)			$ 0	4480
22. Excess of total credits over total debits (line 11 less line 20)			70,919,319	4490
23. If computation is made monthly as permitted, enter 105% of excess of total credits over total debits				4500
24. Amount held on deposit in "Reserve Bank Account(s)", including $ ____ 4505 value of qualified securities, at end of reporting period			52,000,000	4510
25. Amount of deposit (or withdrawal) including $ ____ 4515 value of qualified securities			61,000,000	4520
26. New amount in Reserve Bank Account(s) after adding deposit or subtracting withdrawal including $ ____ 4525 value of qualified securities			$ 113,000,000	4530
27. Date of deposit (MMDDYY)			02/02/16	4540

FREQUENCY OF COMPUTATION

OMIT PENNIES

28. Daily ____ 4332 Weekly X 4333 Monthly ____ 4334

** In the event the Net Capital Requirement is computed under the alternative method, this "Reserve Formula" shall be prepared in accordance with the requirements of paragraph (a)(1)(ii) of Rule 15c3-1.

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BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED
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FORMULA FOR DETERMINATION OF PAB ACCOUNT RESERVE REQUIREMENTS OF BROKERS AND DEALERS UNDER RULE 15c3-3

(See Rule 15c3-3, Exhibit A and Related Notes*)

CREDIT BALANCES

1. Free credit balances and other credit balances in PAB security accounts (See Note A)	$	2110	
2. Monies borrowed collateralized by securities carried for the accounts of PAB (See Note B)		2120	
3. Monies payable against PAB securities loaned (See Note C)		2130	
4. PAB securities failed to receive (See Note D)		2140	
5. Credit balances in firm accounts which are attributable to principal sales to PAB		2150	
6. Market value of stock dividends, stock splits and similar distributions receivable outstanding over 30 calendar days		2152	
7. ** Market value of short security count differences over 30 calendar days old		2154	
8. ** Market value of short securities and credits (not to be offset by longs or by debits) in all suspense accounts over 30 calendar days		2156	
9. Market value of securities which are in transfer in excess of 40 calendar days and have not been confirmed to be in transfer by the transfer agent or the issuer during the 40 days		2158	
10. Other (List)		2160	
11. TOTAL PAB CREDITS			$ 2170

DEBIT BALANCES

12. Debit balances in PAB cash and margin accounts excluding unsecured accounts and accounts doubtful of collection (See Note E)	$	2180	
13. Securities borrowed to effectuate short sales by PAB and securities borrowed to make delivery on PAB securities failed to deliver		2190	
14. Failed to deliver of PAB securities not older than 30 calendar days		2200	
15. Margin required and on deposit with the Options Clearing Corporation for all option contracts written or purchased in PAB accounts (See Note F)		2210	
16. Margin required and on deposit with a clearing agency registered with the Commission under section 17A of the Act (15 U.S.C. 78q-1) or a derivatives clearing organization registered with the Commodity Futures Trading Commission under section 5b of the Commodity Exchange Act (7 U.S.C. 7a-1) related to the following types of positions written, purchased or sold in PAB accounts: (1) security futures products and (2) futures contracts (and options thereon) carried in a securities account pursuant to an SRO portfolio margining rule (See Note G)		2215	
17. Other (List)		2220	
18. TOTAL PAB DEBITS			$ 2230

RESERVE COMPUTATION

19. Excess of total PAB debits over total PAB credits (line 18 less line 11)	$		2240
20. Excess of total PAB credits over total PAB debits (line 11 less line 18)			2250
21. Excess debits in customer reserve formula computation		0	2260
22. PAB Reserve Requirement (line 20 less line 21)		0	2270
23. Amount held on deposit in "Reserve Bank Account(s)", including $ 2275 value of qualified securities, at end of reporting period			2280
24. Amount of deposit (or withdrawal) including $ 2285 value of qualified securities			2290
25. New amount in Reserve Bank Account(s) after adding deposit or subtracting withdrawal including $ 2295 value of qualified securities	$		2300
26. Date of deposit (MMDDYY)			2310

FREQUENCY OF COMPUTATION

OMIT PENNIES

27. Daily _____ 2315 Weekly _____ 2320 Monthly _____ 2330

* See Notes regarding the PAB Reserve Bank Account Computation (Notes 1 through 10).

** In the event the Net Capital Requirement is computed under the alternative method, this "Reserve Formula" shall be prepared in accordance with the requirements of paragraph (a)(1)(ii) of Rule 15c3-1.

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COMPUTATION FOR DETERMINATION OF RESERVE REQUIREMENTS FOR BROKER-DEALERS UNDER RULE 15c3-3 (continued)

EXEMPTIVE PROVISIONS

26. If an exemption from Rule 15c3-3 is claimed, identify below the section upon which such exemption is based:

A. (k) (1)-Limited business (mutual funds and/or variable annuities only) ..... $ _____ 4550

B. (k) (2)(i)-"Special Account for the Exclusive Benefit of customers" maintained ..... _____ 4560

C. (k) (2)(ii)-All customer transactions cleared through another broker-dealer on a fully disclosed basis.
Name(s) of Clearing Firm(s) - Please separate multiple names with a semi-colon
_____ 4335 _____ 4570

D. (k) (3)-Exempted by order of the Commission ..... _____ 4580

Information for Possession or Control Requirements Under Rule 15c3-3

State the market valuation and the number of items of:

1. Customers' fully paid securities and excess margin securities not in the respondent's possession or control as of the report date (for which instructions to reduce to possession or control had been issued as of the report date) but for which the required action was not taken by respondent within the time frames specified under Rule 15c3-3. Notes A and B. ..... $ _____ 4586

A. Number of items ..... _____ 4587

2. Customers' fully paid securities and excess margin securities for which instructions to reduce to possession or control had not been issued as of the report date, excluding items arising from "temporary lags which result from normal business operations" as permitted under Rule 15c3-3. Notes B,C and D ..... _____ 4588

A. Number of items ..... $ _____ 4589

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3. The system and procedures utilized in complying with the requirement to maintain physical possession or control of customers' fully paid and excess margin securities have been tested and are functioning in a manner adequate to fulfill the requirements of Rule 15c3-3 ... Yes X 4584 No _____ 4585

NOTES

A--Do not include in item one customers' fully paid and excess margin securities required by Rule 15c 3-3 to be in possession or control but for which no action was required by the respondent as of the report date or required action was taken by respondent within the time frames specified under Rule 15c3-3.

B--State separately in response to items one and two whether the securities reported in response thereto were subsequently reduced to possession or control by the respondent.

C--Be sure to include in item two only items not arising from "temporary lags which result from normal business operations" as permitted under Rule 15c3-3.

D--Item two must be responded to only with report which is filed as of the date selected for the broker's or dealer's annual audit of financial statements, whether or not such date is the end of a calendar quarter. The response to item two should be filed within 60 calendar days after such date, rather than with the remainder of this report. This information may be required on a more frequent basis by the Commission or the designated examining authority in accordance with Rule 17a-5(a)(2)(iv).

SUPPLEMENT TO
FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER ROBERT W. BAIRD & CO. INCORPORATED	as of 01/31/16

STATEMENT OF SEGREGATION REQUIREMENTS AND FUNDS IN SEGREGATION FOR CUSTOMERS TRADING ON U.S. COMMODITY EXCHANGES

SEGREGATION REQUIREMENTS (Section 4d(2) of the CEAct)			
1. Net ledger balance			
A. Cash		$	7010
B. Securities (at market)			7020
2. Net unrealized profit (loss) in open futures contracts traded on a contract market			7030
3. Exchange traded options			
A. Add market value of open option contracts purchased on a contract market			7032
B. Deduct market value of open option contracts granted (sold) on a contract market		( )	7033
4. Net equity (deficit) (add lines 1, 2, and 3)			7040
5. Accounts liquidating to a deficit and accounts with debit balances - gross amount	7045		
Less: amount offset by customer owned securities	( ) 7047		7050
6. Amount required to be segregated (add lines 4 and 5)		$	7060
FUNDS IN SEGREGATED ACCOUNTS			
7. Deposited in segregated funds bank accounts			
A. Cash			7070
B. Securities representing investments of customers' funds (at market)			7080
C. Securities held for particular customers or option customers in lieu of cash (at market)			7090
8. Margins on deposit with derivatives clearing organizations of contract markets			
A. Cash		$	7100
B. Securities representing investments of customers' funds (at market)			7110
C. Securities held for particular customers or option customers in lieu of cash (at market)			7120
9. Net settlement from (to) derivatives clearing organizations of contract markets			7130
10. Exchange traded options			
A. Value of open long option contracts			7132
B. Value of open short option contracts		(	7133
11. Net equities with other FCMs			
A. Net liquidating equity			7140
B. Securities representing investments of customers' funds (at market)			7160
C. Securities held for particular customers or option customers in lieu of cash (at market)			7170
12. Segregated funds on hand (describe:)			7150
13. Total amount in segregation (add lines 7 through 12)			7180
14. Excess (deficiency) funds in segregation (subtract line 6 from line 13)		$	7190
15. Management Target Amount for Excess funds in segregation		$	7194
16. Excess (deficiency) funds in segregation over (under) Management Target Amount Excess		$	7198

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ROBERT W. BAIRD & CO. INCORPORATED	as of 01/31/16

STATEMENT OF SEGREGATION REQUIREMENTS AND FUNDS IN SEGREGATION FOR CUSTOMERS' DEALER OPTIONS ACCOUNTS

1. Amount required to be segregated in accordance with Commission regulation 32.6			$	7200
2. Funds in segregated accounts				
A. Cash	$	7210		
B. Securities (at market)		7220		
C. Total				7230
3. Excess (deficiency) funds in segregation (subtract line 2.C from line 1)			$	7240

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FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
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BROKER OR DEALER ROBERT W. BAIRD & CO. INCORPORATED	as of 01/31/16

STATEMENT OF SECURED AMOUNTS AND FUNDS HELD IN SEPARATE ACCOUNTS PURSUANT TO COMMISSION REGULATION 30.7

FOREIGN FUTURES AND FOREIGN OPTIONS SECURED AMOUNTS

Amount required to be set aside pursuant to law, rule or regulation of a foreign government or a rule of a self-regulatory organization authorized thereunder			$	7305
1. Net ledger balance - Foreign Futures and Foreign Option Trading - All Customers				
A. Cash			$	7315
B. Securities (at market)				7317
2. Net unrealized profit (loss) in open futures contracts traded on a foreign board of trade				7325
3. Exchange traded options				
A. Market value of open option contracts purchased on a foreign board of trade				7335
B. Market value of open contracts granted (sold) on a foreign board of trade				7337
4. Net equity (deficit) (add lines 1. 2. and 3.)			$	7345
5. Accounts liquidating to a deficit and accounts with debit balances - gross amount	$	7351		
Less: amount offset by customer owned securities	( )	7352		7354
6. Amount required to be set aside as the secured amount - Net Liquidating Equity Method (add lines 4 and 5)			$	7355
7. Greater of amount required to be set aside pursuant to foreign jurisdiction (above) or line 6.			$	7360

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PART II

BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED
as of 01/31/16

STATEMENT OF SECURED AMOUNTS AND FUNDS HELD IN SEPARATE ACCOUNTS PURSUANT TO COMMISSION REGULATION 30.7

FUNDS DEPOSITED IN SEPARATE REGULATION 30.7 ACCOUNTS

1. Cash in banks			
A. Banks located in the United States	$	7500	
B. Other banks qualified under Regulation 30.7			
Name(s):	7510	7520	$ 7530
2. Securities			
A. In safekeeping with banks located in the United States	$	7540	
B. In safekeeping with other banks qualified under Regulation 30.7			
Name(s):	7550	7560	7570
3. Equities with registered futures commission merchants			
A. Cash	$	7580	
B. Securities		7590	
C. Unrealized gain (loss) on open futures contracts		7600	
D. Value of long option contracts		7610	
E. Value of short option contracts	( )	7615	7620
4. Amounts held by clearing organizations of foreign boards of trade			
Name(s):	7630		
A. Cash	$	7640	
B. Securities		7650	
C. Amount due to (from) clearing organizations - daily variation		7660	
D. Value of long option contracts		7670	
E. Value of short option contracts	( )	7675	7680
5. Amounts held by members of foreign boards of trade			
Name(s):	7690		
A. Cash	$	7700	
B. Securities		7710	
C. Unrealized gain (loss) on open futures contracts		7720	
D. Value of long option contracts		7730	
E. Value of short option contracts	( )	7735	7740
6. Amounts with other depositories designated by a foreign board of trade			
Name(s):	7750		7760
7. Segregated funds on hand (describe:)			7765
8. Total funds in separate section 30.7 accounts			$ 7770
9. Excess (deficiency) set Aside Funds for Secured Amount (subtract Line 7 Secured Statement page T10-3 from Line 8)			$ 7380
10. Management Target Amount for Excess funds in separate section 30.7 accounts			$ 7780
11. Excess (deficiency) funds in separate 30.7 accounts over (under) Management Target			$ 7785

SUPPLEMENT TO
FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER	
ROBERT W. BAIRD & CO. INCORPORATED	as of 01/31/16

STATEMENT OF CLEARED SWAPS CUSTOMER SEGREGATION REQUIREMENTS AND FUNDS IN CLEARED SWAPS CUSTOMER ACCOUNTS UNDER 4D(F) OF THE CEA

Cleared Swaps Customer Requirements			
1. Net ledger balance			
A. Cash		$	8500
B. Securities (at market)			8510
2. Net unrealized profit (loss) in open cleared swaps			8520
3. Cleared swaps options			
A. Market value of open cleared swaps option contracts purchased			8530
B. Market value of open cleared swaps option contracts granted (sold)		( )	8540
4. Net equity (deficit) (add lines 1, 2, and 3)		$	8550
5. Accounts liquidating to a deficit and accounts with debit balances - gross amount	$ 8560		
Less: amount offset by customer owned securities	( ) 8570		8580
6. Amount required to be segregated for cleared swaps customers (add lines 4 and 5)		$	8590
Funds in Cleared Swaps Customer Segregated Accounts			
7. Deposited in cleared swaps customer segregated accounts at banks			
A. Cash		$	8600
B. Securities representing investments of cleared swaps customers' funds (at market)			8610
C. Securities held for particular cleared swaps customers in lieu of cash (at market)			8620
8. Margins on deposit with derivatives clearing organizations in cleared swaps customer segregated accounts			
A. Cash			8630
B. Securities representing investments of cleared swaps customers' funds (at market)			8640
C. Securities held for particular cleared swaps customers in lieu of cash (at market)			8650
9. Net settlement from (to) derivatives clearing organizations			8660
10. Cleared swaps options			
A. Value of open cleared swaps long option contracts			8670
B. Value of open cleared swaps short option contracts		( )	8680
11. Net equities with other FCMs			
A. Net liquidating equity			8690
B. Securities representing investments of cleared swaps customers' funds (at market)			8700
C. Securities held for particular cleared swaps customers in lieu of cash (at market)			8710
12. Cleared swaps customer funds on hand (describe:)			8715
13. Total amount in cleared swaps customer segregation (add lines 7 through 12)		$	8720
14. Excess (deficiency) funds in cleared swaps customer segregation (subtract line 6 from line 13)		$	8730
15. Management Target Amount for Excess funds in cleared swaps segregated accounts		$	8760
16. Excess (deficiency) funds in cleared swaps customer segregated accounts over (under) Management Target Excess		$	8770

SUPPLEMENT TO
FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER	
ROBERT W. BAIRD & CO. INCORPORATED	as of 01/31/16

COMPUTATION OF CFTC MINIMUM NET CAPITAL REQUIREMENT

Net Capital required

A. Risk-Based Requirement

i. Amount of Customer Risk Maintenance Margin requirement		7415	
ii. Enter 8% of line A.i			7425
iii. Amount of Non-Customer Risk Maintenance Margin requirement		7435	
iv. Enter 8% of line A.iii			7445
v. Add lines A.ii and A.iv.			7455
B. Minimum Dollar Amount Requirement			7465
C. Other NFA Requirement			7475

D. Minimum CFTC Net Capital Requirement.
Enter the greatest of lines A, B or C 7490

Note: If amount on Line D (7490) is greater than minimum net capital requirement computed on Line 3760 (Page 6) then enter this greater amount on Line 3760. The greater of the amount required by SEC or CFTC is the minimum net capital requirement.

CFTC Early Warning Level 7495

Note: If the Minimum Net Capital Requirement computed on Line D (7490) is:

(1) Risk Based Requirement, enter 110% of Line A (7455), or

(2) Minimum Dollar Requirement of $1,000,000 enter 150% of Line B (7465), or

(3) Minimum Dollar Requirement of $20,000,000 for FCMs offering or engaging in retail forex transactions or Retail Foreign Exchange Dealers ("RFED"), enter 110% of Line B (7465), or

(4) Other NFA Requirement of $20,000,000 plus five percent of the FCM's offering or engaging in retail forex transactions or Retail Foreign Exchange Dealers ("RFED") total retail forex obligations in excess of $10,000,000 enter 110% of Line C (7475), or

(5) Other NFA Requirement, enter 150% of Line C (7475).

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER

ROBERT W. BAIRD & CO. INCORPORATED as of 01/31/16

Ownership Equity and Subordinated Liabilities maturing or proposed to be withdrawn within the next six months and accruals, (as defined below), which have not been deducted in the computation of Net Capital.

Type of Proposed withdrawal or Accrual (See below for code to enter)		Name of Lender or Contributor		Insider or Outsider ? (In or Out)		Amount to be withdrawn (cash amount and/or Net Capital Value of Securities)		(MMDDYY) Withdrawal or Maturity Date		Expect to Renew (Yes or No)	
2	4600	Baird Financial Corporation	4601	IN	4602	11,000,000	4603	02/28/16	4604	NO	4605
2	4610	Baird Financial Corporation	4611	IN	4612	11,000,000	4613	05/31/16	4614	NO	4615
2	4620	Baird Financial Corporation	4621	IN	4622	45,000,000	4623	06/30/16	4624	YES	4625
2	4630	Financial Advisors DC Plan	4631	IN	4632	442,699	4633	04/30/16	4634	NO	4635
	4640		4641		4642		4643		4644		4645
	4650		4651		4652		4653		4654		4655
	4660		4661		4662		4663		4664		4665
	4670		4671		4672		4673		4674		4675
	4680		4681		4682		4683		4684		4685
	4690		4691		4692		4693		4694		4695

TOTAL $ 67,442,699 4699*

OMIT PENNIES

* To agree with the total on Recap (Item No. 4880)

Instructions: Detail listing must include the total of items maturing during the six month period following the report date, regardless of whether or not the capital contribution is expected to be renewed. The schedule must also include proposed capital withdrawals scheduled within the six month period following the report date including the proposed redemption of stock and payments of liabilities secured by fixed assets (which are considered allowable assets in the capital computation pursuant to Rule 15c3-1(c) (2) (iv)), which could be required by the lender on demand or in less than six months.

WITHDRAWAL CODE:	DESCRIPTION
1	Equity Capital
2.	Subordinated Liabilities
3.	Accruals
4.	15c3-1(c) (2) (iv) Liabilities

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
Capital Withdrawals
PART II

BROKER OR DEALER

ROBERT W. BAIRD & CO. INCORPORATED

as of 01/31/16

RECAP

Ownership Equity and Subordinated Liabilities maturing or proposed to be withdrawn within the next six months and accruals, which have not been deducted in the computation of Net Capital.

1. Equity Capital			
A. Partnership Capital:			
1. General Partners	$		4700
2. Limited			4710
3. Undistributed Profits			4720
4. Other (describe below)			4730
5. Sole Proprietorship			4735
B. Corporation Capital:			
1. Common Stock			4740
2. Preferred Stock			4750
3. Retained Earnings (Dividends and Other)			4760
4. Other (describe below)			4770
2. Subordinated Liabilities			
A. Secured Demand Notes			4780
B. Cash Subordinations		67,442,699	4790
C. Debentures			4800
D. Other (describe below)			4810
3. Other Anticipated Withdrawals			
A. Bonuses			4820
B. Voluntary Contributions to Pension or Profit Sharing Plans			4860
C. Other (describe below)			4870
Total	$	67,442,699	4880

4. Description of Other

STATEMENT OF CHANGES IN OWNERSHIP EQUITY (SOLE PROPRIETORSHIP, PARTNERSHIP OR CORPORATION)

1. Balance, beginning of period		$ 560,224,699		4240
A. Net income (loss)		3,020,489		4250
B. Additions (Includes non-conforming capital of	$	4262)	4,968,910	4260
C. Deductions (Includes non-conforming capital of	$	4272)	459,722	4270
2. Balance, end of period (From Item 1800)		$ 567,754,376		4290

STATEMENT OF CHANGES IN LIABILITIES SUBORDINATED TO CLAIMS OF GENERAL CREDITORS

3. Balance, beginning of period	$	230,266,620	4300
A. Increases			4310
B. Decreases		( )	4320
4. Balance, end of period (From item 3520)	$	230,266,620	4330

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART II

BROKER OR DEALER

ROBERT W. BAIRD & CO. INCORPORATED as of 01/31/16

FINANCIAL AND OPERATIONAL DATA

	Valuation		Number	
1. Month end total number of stock record breaks unresolved over three business days.				
A. breaks long	$	4890		4900
B. breaks short	$	4910		4920

2. Is the firm in compliance with Rule 17a-13 regarding periodic count and verification of securities positions and locations at least once in each calendar quarter ? (Check one) ..... Yes [X] 4930 No [ ] 4940

A) If response is negative attach explanation of steps being taken to comply with Rule 17a-13.

3. Personnel employed at end of reporting period:		
A. Income producing personnel	1,574	4950
B. Non-income producing personnel (all other)	1,696	4960
C. Total	3,270	4970
4. Actual number of tickets executed during current month of reporting period	636,430	4980
5. Number of corrected customer confirmations mailed after settlement date	759	4990

	No. of Items		Debit (Short Value)		No. of Items		Credit (Long Value)	
6. Money differences		5000	$	5010		5020	$	5030
7. Security suspense accounts		5040	$	5050		5060	$	5070
8. Security difference accounts		5080	$	5090		5100	$	5110
9. Commodity suspense accounts		5120	$	5130		5140	$	5150
10. Open transactions with correspondents, other brokers, clearing organizations, depositories and interoffice and intercompany accounts which could result in a charge-unresolved amounts over 30 calendar days		5160	$	5170		5180	$	5190
11. Bank account reconciliations-unresolved amounts over 30 calendar days		5200	$	5210		5220	$	5230
12. Open transfers over 40 calendar days, not confirmed		5240	$	5250		5260	$	5270
13. Transactions in reorganization accounts-over 60 calendar days		5280	$	5290		5300	$	5310
14. Total		5320	$	5330		5340	$	5350

	No. of Items		Ledger Amount		Market Value	
15. Failed to deliver 5 business days or longer (21 business days or longer in the case of Municipal Securities)		5360	$	5361		5362
16. Failed to receive 5 business days or longer (21 business days or longer in the case of Municipal Securities)		5363	$	5364	$	5365

17. Security concentrations (See instructions in Part I):		
A. Proprietary positions	$ 39,418,750	5370
B. Customers' accounts under Rule 15c3-3	$	5374
18. Total of personal capital borrowings due within six months	$	5378
19. Maximum haircuts on underwriting commitments during the period	$ 9,562,980	5380
20. Planned capital expenditures for business expansion during next six months	$ 11,000,000	5382
21. Liabilities of other individuals or organizations guaranteed by respondent	$ 31,096	5384
22. Lease and rentals payable within one year	$ 27,640,265	5386
23. Aggregate lease and rental commitments payable for entire term of the lease		
A. Gross	$ 167,018,898	5388
B. Net	$ 167,018,898	5390

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART I (OR PART II)

BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED

as of 01/31/16

FINANCIAL AND OPERATIONAL DATA
Operational Deductions From Capital (Note A)

		I No. of Items		II Debits (Short Value)		III Credits (Long Value)		IV Deductions In Computing Net Capital	
1. Money suspense and balancing differences			5610	$	5810	$	6010	$	6012
2. Security suspense and differences with related money balances	L		5620		5820		6020		6022
	S		5625		5825		6025		6027
3. Market value of short and long security suspense and differences without related money (other than reported in line 4., below)		5	5630		5830		6030	2,214	6032
4. Market value of security record breaks			5640		5840		6040		6042
5. Unresolved reconciling differences with others:									
A. Correspondents and Broker/Dealers	L		5650		5850		6050		6052
	S		5655		5855		6055		6057
B. Depositories			5660		5860		6060		6062
C. Clearing Organizations	L		5670		5870		6070		6072
	S		5675		5875		6075		6077
D. Inter-company Accounts			5680		5880		6080		6082
E. Bank Accounts and Loans		1	5690		5890		6090	5,000	6092
F. Other		2	5700		5900		6100	104	6102
G. (Offsetting) Items A. through F.			5720	( )	5920	( )	6120		
TOTAL Line 5		3	5730		5930		6130	5,104	6132
6. Commodity Differences			5740		5940		6140		6142
7. Open transfers and reorganization account items over 40 days not confirmed or verified			5760		5960		6160		6162
8. TOTAL (Line 1.-7.)		8	5770	$	5970	$	6170	$ 7,318	6172
9. Lines 1.-6. resolved subsequent to report date			5775	$	5975	$	6175	$	6177
10. Aged Fails –to deliver		3	5780	$ 188	5980	$ 333	6180	$ 24,149	6182
–to receive		2	5785	$ 3	5985	$ 3	6185	$ 116	6187
				(Omit 000's)		(Omit 000's)		(Omit Pennies)	

NOTE A - This section must be completed as follows:

1. All member organizations must complete column IV, lines 1. through 8. and 10., reporting deductions from capital as of the report date whether resolved subsequently or not (see instructions relative to each line item).
2. a. Columns I, II and III of lines 1. through 8. and 10. must be completed when a Part II filing is required.
   b. Columns I, II and III of lines 1. through 8. must be completed with a Part I filing, only if the total deduction on line 8 column IV equals or exceeds 25% of excess net capital as of the prior month end reporting date. All columns of line 10. require completion.
3. A response to line 9., cols. I through IV and the "Potential Operational Charges Not Deducted From Capital" schedule on p. 3 are required only if:
   a. the parameters cited in 2.b. above exist, and
   b. the total deduction, line 8. column IV, for the current month exceeds the total deductions for the prior month by 50% or more.
4. All columns and line items (1. through 10.) must be answered if required. If respondent has nothing to report enter -0-.

Other Operational Data (Items 1., 2. and 3. below require an answer)

Item 1. Have the accounts enumerated on line 5.A. through F. above been reconciled with statements received from others within 35 days for lines 5.A. through D. and 65 days for lines 5.E. and F. prior to the report date and have all reconciling difference been appropriately comprehended in the computation of net capital at the report date? If this has not been done in all respects, answer No.

Yes X 5600
No 5601

Item 2. Do the respondent's books reflect a concentrated position (See Instruction) in commodities? If yes report the totals ($000 omitted) in accordance with the specific instructions; If No answer -0- for:

A. Firm Trading and Investment Accounts A. 5602
B. Customers' and Non-Customers' and Other Accounts B. 5603

Item 3. Does respondent have any planned operational changes? (Answer Yes or No based on specific instructions.)

Yes 5604
No X 5605

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART I (OR PART II)

BROKER OR DEALER
ROBERT W. BAIRD & CO. INCORPORATED as of 01/31/16

FINANCIAL AND OPERATIONAL DATA

Potential Operational Charges Not Deducted From Capital (Note B)

		I No. of Items		II Debits (Short Value)		III Credits (Long Value)		IV Deductions In Computing Net Capital	
1. Money suspense and balancing differences			6210	$	6410	$	6610	$	6612
2. Security suspense and differences with related money balances	L		6220		6420		6620		6622
	S		6225		6425		6625		6627
3. Market value of short and long security suspense and differences without related money (other than reported in line 4., below)			6230		6430		6630		6632
4. Market value of security record breaks			6240		6440		6640		6642
5. Unresolved reconciling differences with others:									
A. Correspondents and Broker/Dealers	L		6250		6450		6650		6652
	S		6255		6455		6655		6657
B. Depositories			6260		6460		6660		6662
C. Clearing Organizations	L		6270		6470		6670		6672
	S		6275		6475		6675		6677
D. Inter-company Accounts			6280		6480		6680		6682
E. Bank Accounts and Loans			6290		6490		6690		6692
F. Other			6300		6500		6700		6702
G. (Offsetting) Items A. through F.			6310	(	6510	(	6710		
TOTAL (Line 5.)			6330		6530		6730		6732
6. Commodity Differences			6340		6540		6740		6742
TOTAL (Line 1.-6.)			6370	$	6570	$	6770	$	6772
				(Omit 000's)		(Omit 000's)		(Omit Pennies)	

NOTE B - This section must be completed as follows:

1. All line items (1. through 6.) and columns (I through IV) must be completed only if:
   a. the total deductions on line 8., column IV, of the "Operational Deductions From Capital" schedule equal or exceed 25% of excess net capital as of the prior month end reporting date; and
   b. the total deduction on line 8., column IV, for the current month exceeds the total deductions for the prior month by 50% or more. If respondent has nothing to report enter -0-.
2. Include only suspense and difference items open at the report date which were NOT required to be deducted in the computation of net capital AND which were not resolved seven (7) business days subsequent to the report date.
3. Include in column IV only additional deductions not comprehended in the computation of net capital at the report date.
4. Include on line 5. A. through F. unfavorable differences offset by favorable differences (see instructions for line 5) at the report date if resolution of the favorable items resulted in additional deductions in the computation of net capital subsequent to the report date.
5. Exclude from lines 5. A. through F. new reconciling differences disclosed as a result of reconciling with the books of account statements received subsequent to the report date.
6. Line items 1. through 5. above correspond to similar line items in the "Operational Deductions From Capital" schedule (page 2) and the same instructions should be followed except as stated in Note (B-1 through 5.) above.

Robert W. Baird & Co. Incorporated

Consolidated Financial Statements
As of and for the Years Ended December 31, 2014 and 2013
Together with Report of Independent Registered Public Accounting Firm

SEC File Number: 8-00497

Grant Thornton

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors
Robert W. Baird & Co. Incorporated

We have audited the accompanying consolidated statement of financial condition of Robert W. Baird & Co. Incorporated (a Wisconsin corporation) and its consolidated private equity partnerships (Baird Private Equity Partnerships) (collectively, the Company) as of December 31, 2014, and the related consolidated statements of income and comprehensive income, changes in stockholders' equity, changes in liabilities subordinated to claims of general creditors, and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit. We did not audit the financial statements of the Baird Private Equity Partnerships, which statements reflect total assets constituting 17% of consolidated total assets as of December 31, 2014, and total revenues constituting 6% of consolidated total revenues for the year then ended. Those statements were audited by other auditors whose reports have been furnished to us, and our opinion, insofar as it relates to the amounts included for the Baird Private Equity Partnerships, is based solely on the reports of the other auditors.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, based on our audit and the reports of the other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Robert W. Baird & Co. Incorporated and its consolidated private equity partnerships as of

December 31, 2014, and the results of their operations and their cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Grant Thornton LLP

Chicago, Illinois
February 23, 2015

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors
Robert W. Baird & Co. Incorporated

We have audited the accompanying consolidated financial statements of Robert W. Baird & Co. Incorporated (a Wisconsin corporation) and its consolidated private equity partnerships (Baird Private Equity Partnerships) (collectively, the Company), which comprise the consolidated statement of financial condition as of December 31, 2013, and the related consolidated statements of income and comprehensive income, changes in stockholders' equity, changes in liabilities subordinated to claims of general creditors, and cash flows for the year then ended, and the related notes to the financial statements.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We did not audit the financial statements of the Baird Private Equity Partnerships, which statements reflect total assets constituting 23% of consolidated total assets as of December 31, 2013, and total revenues constituting 8% of consolidated total revenues for the year then ended. Those statements were audited by other auditors whose reports have been furnished to us, and our opinion, insofar as it relates to the amounts included for the Baird Private Equity Partnerships, is based solely on the reports of the other auditors. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk

assessments, the auditor considers internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, based on our audit and the reports of the other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Robert W. Baird & Co., Incorporated and its consolidated private equity partnerships as of December 31, 2013, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Grant Thornton LLP

Chicago, Illinois
February 25, 2014

Robert W. Baird & Co. Incorporated

Consolidated Statements of Financial Condition
As of December 31, 2014 and 2013

(In Thousands)

Assets	2014	2013
Cash and Cash Equivalents	$ 133,584	$ 215,231
Cash Segregated Under Federal Regulations	76,000	67,000
Cash Held by Baird Private Equity Partnerships	4,514	4,348
Securities Purchased Under Agreements to Resell	699,157	682,205
Deposits with Clearing Corporations	22,599	11,322
Receivables:		
Clients, Net	199,828	157,843
Brokers and Dealers	6,553	4,784
Deposits Paid on Securities Borrowed	112,476	63,164
Notes Receivable, Net	112,423	102,436
Other	97,396	83,668
	528,676	411,895
Securities Owned, at Fair Value	716,241	506,508
Securities Owned by Baird Private Equity Partnerships, at Fair Value	472,287	608,654
Furniture, Equipment, Leasehold Improvements and Capital Leases at Cost, Less Accumulated Depreciation and Amortization of $96,579 and $107,074, respectively	59,376	57,889
Goodwill	86,069	26,437
Intangible Assets, at Cost, Less Accumulated Amortization of $11,802 and $10,710, respectively	18,565	12,419
Net Deferred Tax Assets	26,871	18,456
Other Assets	53,178	41,334
Total Assets	$ 2,897,117	$ 2,663,698

The accompanying notes are an integral part of these financial statements.

Robert W. Baird & Co. Incorporated

Consolidated Statements of Financial Condition
As of December 31, 2014 and 2013

(In Thousands)

(Continued)

Liabilities and Stockholders' Equity	2014	2013
Liabilities:		
Money Borrowed:		
Book Credit Balances in Bank Accounts	$ 34,494	$ 30,810
Securities Sold Under Agreements to Repurchase	860,766	812,518
Payables:		
Clients	132,134	102,844
Brokers and Dealers	55,409	9,867
Deposits Received on Securities Loaned	21,371	12,199
	208,914	124,910
Securities Sold, Not Yet Purchased, at Fair Value	101,989	64,924
Accounts Payable, Accrued Expenses and Other Liabilities	446,037	392,859
Subordinated Liabilities	270,221	292,271
Total Liabilities	1,922,421	1,718,292
Stockholders' Equity:		
Common Stock	26,502	26,502
Additional Paid-In Capital	191,215	112,387
Retained Earnings	280,365	209,085
Treasury Stock, at Cost	(1,486)	(1,486)
Accumulated Other Comprehensive Income	1,752	2,253
Total Robert W. Baird & Co. Incorporated Stockholders' Equity	498,348	348,741
Noncontrolling Interests in Baird Private Equity Partnerships	476,348	596,665
Total Stockholders' Equity	974,696	945,406
Total Liabilities and Stockholders' Equity	$ 2,897,117	$ 2,663,698

The accompanying notes are an integral part of these financial statements.

Robert W. Baird & Co. Incorporated

Consolidated Statements of Income and Comprehensive Income
For the Years Ended December 31, 2014 and 2013

(In Thousands)

	2014	2013
Revenues:		
Investment Advisory Fees	$ 440,012	$ 350,580
Commissions	186,646	194,128
Principal Transactions, Net	193,777	184,051
Investment Banking and Underwriting	250,534	218,123
Interest	18,225	30,155
Other, Net	82,823	88,322
Gross Revenues	1,172,017	1,065,359
Interest Expense	(1,692)	(1,727)
Net Revenues	1,170,325	1,063,632
Expenses:		
Associate Compensation and Benefits	789,741	692,277
Communication and Technology	59,773	51,076
Occupancy and Equipment	46,218	42,260
Floor Brokerage and Clearance	25,179	22,960
Professional Services	15,877	37,698
Travel	28,122	25,235
Sales Promotion	9,780	9,238
Other Operating Expenses	25,493	23,431
Long-term Financing	12,808	13,759
Total Expenses	1,012,991	917,934
Equity in Gain of Affiliate	7,854	4,711
Income Before Provision for Income Taxes	165,188	150,409
Provision for Income Taxes	45,077	35,102
Net Income	120,111	115,307
Less: Net Income Attributable to Noncontrolling Interests in Baird Private Equity Partnerships	48,831	62,293
Net Income Attributable to Robert W. Baird & Co. Incorporated	$ 71,280	$ 53,014
Other Comprehensive Income, Net of Tax:[1]		
Foreign Currency Translation Adjustment	(501)	58
Total Comprehensive Income	$ 70,779	$ 53,072

[1] The components of Other Comprehensive Income, Net of Tax, are attributable to Robert W. Baird & Co. Incorporated, none of the components of other comprehensive income are attributable to noncontrolling interests.

The accompanying notes are an integral part of these financial statements.

Robert W. Baird & Co. Incorporated

Consolidated Statements of Changes in Stockholders' Equity
For the Years Ended December 31, 2014 and 2013

(In Thousands)

	Common Stock	Additional Paid-In Capital	Retained Earnings	Treasury Stock, at Cost	Accumulated Other Comprehensive Income	Noncontrolling Interests in Baird Private Equity Partnerships	Total
Balance, January 1, 2013	$ 26,502	$ 112,387	$ 156,071	$ (1,486)	$ 2,195	$ 521,066	$ 816,735
Effects of Contributions to Baird Private Equity Partnership Interests, Net	-	-	-	-	-	13,306	13,306
Net Income	-	-	53,014	-	-	62,293	115,307
Foreign Currency Translation Adjustment	-	-	-	-	58	-	58
Balance, December 31, 2013	26,502	112,387	209,085	(1,486)	2,253	596,665	945,406
Effects of Distributions from Baird Private Equity Partnership Interests, Net	-	-	-	-	-	(169,148)	(169,148)
Effects of Merger with McAdams Wright Ragen, Inc. (Footnote 3)	-	78,828	-	-	-	-	78,828
Net Income	-	-	71,280	-	-	48,831	120,111
Foreign Currency Translation Adjustment	-	-	-	-	(501)	-	(501)
Balance, December 31, 2014	$ 26,502	$ 191,215	$ 280,365	$ (1,486)	$ 1,752	$ 476,348	$ 974,696

The accompanying notes are an integral part of these financial statements.

Robert W. Baird & Co. Incorporated

Consolidated Statements of Cash Flows
For the Years Ended December 31, 2014 and 2013

(In Thousands)

	2014	2013
Cash Flows from Operating Activities:		
Net Income	$ 120,111	$ 115,307
Adjustments to Reconcile Net Income to Net Cash Provided by (Used for) Operating Activities -		
Depreciation and Amortization	16,427	13,888
Note Amortization	26,638	20,763
Deferred Income Taxes	(6,814)	(10,125)
Loss on Disposal of Fixed Assets	1,178	62
Gain on Investments	(125)	(943)
Realized (Gain) Loss on Investments Attributable to Baird Private Equity Partnerships	(175,308)	27,076
Unrealized (Gain) Loss on Investments Attributable to Baird Private Equity Partnerships	109,989	(98,295)
(Increase) Decrease in Operating Assets -		
Cash Segregated Under Federal Regulations	(9,000)	43,000
Cash Held by Baird Private Equity Partnerships	(166)	12,607
Securities Purchased Under Agreements to Resell	(16,952)	189,585
Deposits with Clearing Corporations	(11,027)	400
Receivables:		
Clients, Net	(41,985)	9,980
Brokers and Dealers	(623)	14,261
Deposits Paid on Securities Borrowed	(49,312)	(40,713)
Notes Receivable, Net	(36,389)	(32,101)
Other	(13,473)	6,784
Securities Owned, Net	(200,448)	72,258
Other Assets	(7,492)	5,205
Increase (Decrease) in Operating Liabilities -		
Securities Sold Under Agreements to Repurchase	48,248	(166,891)
Payables:		
Clients	29,290	(49,252)
Brokers and Dealers	45,542	(7,347)
Deposits Received on Securities Loaned	9,172	(42,371)
Securities Sold, Not Yet Purchased	37,039	44,778
Accounts Payable, Accrued Expenses and Other Liabilities	45,265	74,728
Changes in Subordinated Liabilities, Payable to Associates	(3,850)	5,441
Net Cash Provided by (Used for) Operating Activities	(84,065)	208,085

The accompanying notes are an integral part of these financial statements.

Robert W. Baird & Co. Incorporated

Consolidated Statements of Cash Flows
For the Years Ended December 31, 2014 and 2013

(In Thousands)

(Continued)

	2014	2013
Cash Flows from Investing Activities:		
Purchases of Investments	$ (5,469)	$ (6)
Purchases of Investments Attributable to Baird Private Equity Partnerships	(79,070)	(50,901)
Purchases of Fixed Assets	(17,042)	(16,449)
Purchase of Client List	-	(2,400)
Purchase of Trade Mark	-	(603)
Sales of Investments	508	70
Sales of Investments Attributable to Baird Private Equity Partnerships	276,336	34,288
Receipt of Dividend from Affiliate	-	5,092
Receipt of Cash in Merger with McAdams Wright Ragen, Inc. (Footnote 3)	10,818	-
Net Cash Provided by (Used for) Investing Activities	186,081	(30,909)
Cash Flows from Financing Activities:		
Change in Book Credit Balances in Bank Accounts, Net	3,684	(11,776)
Payments for Subordinated Notes	(40,000)	(40,000)
Proceeds from Subordinated Notes	21,800	30,000
Contributions to Baird Private Equity Partnerships	88,357	71,472
Distributions from Baird Private Equity Partnerships	(257,504)	(64,755)
Net Cash Used for Financing Activities	(183,663)	(15,059)
Net Increase (Decrease) in Cash	(81,647)	162,117
Cash and Cash Equivalents at Beginning of Year	215,231	53,114
Cash and Cash Equivalents at End of Year	$ 133,584	$ 215,231
Supplemental Disclosures of Cash Flow Information:		
Cash Paid During the Period for-		
Interest	$ 14,304	$ 15,387
Income Taxes, Net	52,936	37,517
Non Cash Investing Transaction		
Consolidation of private equity partnerships persuant to ASC 810, *Consolidation*	$ -	$ 6,588
Merger with McAdams Wright Ragen, Inc. (Footnote 3)	68,010	-
Non Cash Financing Transaction		
Capital Lease Obligation	$ 2,390	$ 2,139

The accompanying notes are an integral part of these financial statements.

Robert W. Baird & Co. Incorporated

Notes to Consolidated Financial Statements
December 31, 2014 and 2013

(In Thousands, Except Share and Per Share Amounts)

(1) Organization and Description of Business

The consolidated financial statements include Robert W. Baird & Co. Incorporated ("RWB"), Baird Insurance Services and RWB's consolidated private equity partnerships as more fully discussed in Footnote 15 (together, the "Company"). The Company is registered as a securities broker dealer and an investment adviser with the Securities and Exchange Commission ("SEC") under the Securities and Exchange Act of 1934 and the Investment Advisers Act of 1940, and is also a member of the Financial Industry Regulatory Authority ("FINRA") and various securities exchanges. The Company engages in a broad range of activities in the private wealth management, equity and fixed income capital markets, asset management and private equity businesses, including securities brokerage; investment advisory and asset management services; institutional equity and fixed income sales; research services; origination of and participation in underwritings and distribution of corporate and municipal securities issuances; municipal advisory services; merger and acquisition advisory services; private equity and venture capital investing; and market making and trading activities in equity, municipal and other fixed income securities. The Company is a wholly-owned subsidiary of Baird Financial Corporation ("BFC"), which is a wholly-owned subsidiary of Baird Holding Company ("BHC"), which is a wholly-owned subsidiary of Baird Financial Group, Inc. ("BFG" or the "Parent"). Refer to Footnote 3 for information on acquisitions made by the Company during the year.

The Company owns a 48% ownership interest in Baird UK Ltd. ("Baird UK"), located principally in London, England. Baird UK is the parent company of Robert W. Baird Group Limited, located in London, which provides investment banking, private equity and institutional U.S. equity services. Robert W. Baird Group Limited conducts its business through three principal operating subsidiaries: Robert W. Baird Limited, based in London and regulated by the Financial Conduct Authority ("FCA"), which is engaged in transatlantic mergers and acquisitions advisory services and institutional U.S. equity sales; Robert W. Baird GmbH, based in Frankfurt, Germany which is engaged in transatlantic mergers and acquisitions advisory services; and Baird Capital Partners Europe Limited, based in London and regulated by the FCA, which is engaged in private equity activities in the United Kingdom. The Company enters into revenue allocation agreements with Robert W. Baird Limited and Robert W. Baird GmbH as more fully discussed in Footnote 4.

(2) Summary of Significant Accounting Policies

The following is a summary of the significant accounting policies followed by the Company in the preparation of its consolidated financial statements:

(a) Estimates

The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates.

(b) Cash and Cash Equivalents

Cash equivalents are defined as short-term investments with maturities of generally three months or less at the time of purchase.

(c) Cash Segregated Under Federal Regulations

Cash segregated under federal regulations represents cash segregated in a special reserve bank account for the benefit of U.S. customers under Rule 15c3-3 of the Securities and Exchange Commission (SEC).

(d) Cash Held by Baird Private Equity Partnerships

Cash held by Baird Private Equity Partnerships represents cash and cash equivalents held by consolidated private equity partnerships. Such amounts are not available to fund the general liquidity needs of RWB.

(e) Securities Purchased Under Agreements to Resell and Securities Sold Under Agreements to Repurchase

The Company enters into short-term securities purchased under agreements to resell ("reverse repurchase agreements") and short-term securities sold under agreements to repurchase ("repurchase agreements"). Both reverse repurchase and repurchase agreements are accounted for as collateralized financings and are carried at contractual amounts. Interest income and interest expense related to these agreements is included in Interest and Interest Expense, respectively, on the Consolidated Statements of Income and Comprehensive Income. Interest receivable and interest payable is included within Receivables Other and Accounts Payable, Accrued Expenses and Other Liabilities, respectively, on the Consolidated Statements of Financial Condition. Amounts are recorded when earned or due. It is the Company's policy to obtain possession of collateral with a market value equal to or in excess of the principal amount loaned under the reverse repurchase agreements. To ensure the market value of the underlying collateral remains sufficient, the collateral is valued daily, and the Company may require counterparties to deposit additional collateral (or may return collateral to counterparties) when necessary. Reverse repurchase and repurchase agreements with the same counterparty are reported on a gross basis on the Consolidated Statements of Financial Condition. Refer to Footnote 18 for additional information on collateralized transactions.

(f) Receivables and Payables

Clients - receivables include amounts receivable on cash and margin transactions, which are generally collateralized by securities owned by clients. When a receivable is considered to be impaired, the amount of impairment is generally measured based on the fair value of the securities acting as collateral, which is measured based on current prices from independent sources such as listed market prices or broker-dealer price quotations. The Company has recorded a reserve related to client receivables. Payables include amounts owed to clients on cash and margin transactions.

Brokers and Dealers – include amounts receivable and payable to clearing organizations, and receivable and payable to other brokers and dealers for securities failed-to-deliver or receive and trade date commissions not yet settled.

Deposits Paid on Securities Borrowed and Deposits Received on Securities Loaned - reported as collateral financings and are recorded at the amount of cash collateral advanced or received. Securities borrowed transactions require the Company to deposit cash, letters of credit or other collateral with the lender. With respect to securities loaned, the Company receives collateral in the form of cash in an amount in excess of the market value of securities loaned. The Company monitors the market value of securities borrowed and loaned on a daily basis. Additional collateral is obtained or refunded as necessary. Securities borrowed or securities loaned transactions with the same counterparty are reported on a gross basis on the Consolidated Statements of Financial Condition. Refer to Footnote 18 for additional information on collateralized transactions.

Notes Receivable, Net – includes loans or pay advances to associates primarily for recruiting purposes. These associate advances are generally repaid over a three to nine year period. In determining the allowance for doubtful accounts related to those advances, management considers a number of factors including: amounts due from associates, the number of terminated associates, as well as the Company's historical loss experience. This involves the use of estimates and the actual amounts may be substantially higher or lower than the recorded amounts.

Refer to Footnote 5 for further information.

(g) Fair Value Measurements

The Company follows Accounting Standards Codification ("ASC") Topic 820, *"Fair Value Measurements."* ASC Topic 820 defines fair value, establishes a framework for measuring fair value, establishes a fair value hierarchy based on the inputs used to measure fair value and enhances disclosure requirements for fair value measurements. ASC Topic 820 prescribes the methodology of observable inputs by requiring that the observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from independent sources. Unobservable inputs reflect assumptions that market participants would use in pricing the asset or liability based on the best information available in the circumstances. The hierarchy, defined by ASC Topic 820, is broken down into three levels based on the transparency of inputs as follows:

Level I — Quoted prices are available in active markets for identical assets or liabilities as of the report date. A quoted price for an identical asset or liability in an active market provides the most reliable fair value measurement because it is directly observable to the market.

Level II — Pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the report date. The nature of these securities include investments for which quoted prices are available but traded less frequently and investments that are fair valued using other securities, the parameters of which can be directly observed.

Level III — Securities that have little to no pricing observability as of the report date. These securities are measured using management's best estimate of fair value, where the inputs into the determination of fair value are not observable and require significant management judgment or estimation.

The fair value of securities owned is the amount at which the security could be exchanged in an orderly transaction between market participants at the measurement date. Based on the nature of the Company's business and its role as a dealer in the securities industry, the fair values of its securities are determined internally. When available, the Company values securities at observable market prices, observable market parameters, or broker or dealer prices (bid and ask prices). In the case of securities transacted on recognized exchanges, the observable market prices represent quotations for completed transactions from the exchange on which the securities are principally traded.

The Company's securities owned and securities sold, not yet purchased are based on observable market prices, observable market parameters, or derived from broker or dealer prices. The availability of observable market prices and pricing parameters can vary from product to product. Where available, observable market prices and pricing, or market parameters in a product may be used to derive a price without requiring significant judgment. In certain markets, observable market prices or market parameters are not available for all products, and fair value is determined using techniques appropriate for each particular product. These techniques involve some degree of judgment.

For investments in illiquid or privately held securities that do not have readily determinable fair values, the determination of fair value requires the Company to estimate the value of the securities using the best information available. Among the factors considered by the Company in determining the fair value of such securities are the cost, terms and liquidity of the investment, the financial condition and operating results of the issuer, the quoted market price of publicly traded securities with similar quality and yield, and other factors generally pertinent to the valuation of the investments. In addition, even where the Company derives the value of a security based on information from an independent source, certain assumptions may be required to determine the security's fair value.

Investments in corporate stocks are included within other securities and are primarily publicly traded with observable prices in active markets. These investments are included within Level I in the fair value hierarchy. Any corporate stock not actively traded is valued by the Company and included within Level II or Level III depending on the nature and observability of the inputs used in the valuation. Investments in U.S. government and agency obligations, municipal bonds, corporate bonds, collateralized mortgage obligations and auction rate securities, which include securities backed by pools of student loans, securities issued by municipalities, and auction rate preferred securities issued by closed end mutual funds, are generally valued using quoted prices from external data providers and market participants and are generally included within Level II of the fair value hierarchy. Valuation information provided by external data providers and market participants generally includes a derived fair value utilizing a model where inputs to the model are directly observed by the market, or can be derived principally from or corroborated by observable market data, or fair value using other financial instruments, the parameters of which can be directly observed. For certain investments where there is limited activity or less transparency around significant inputs, the investments are valued as determined by the Company utilizing available market information and included within Level III of the fair value hierarchy.

The Company makes investments in certain private companies which are included within other securities and generally fair valued by management. In the absence of readily ascertainable market values, these investments may be valued using the market approach or the income approach, or a combination thereof. Under the market approach, fair value may be determined by reference to multiples of market-comparable companies or transactions, including earnings before interest, taxes, depreciation and amortization ("EBITDA") multiples. Under the income approach fair value may be determined by discounting the cash flows to a single present amount using current market expectations about those future amounts. These valuation techniques require inputs that are both significant to the fair value and unobservable, and thus are included within Level III of the fair value hierarchy.

Securities Owned by Baird Private Equity Partnerships includes investments in private companies, which are consolidated as the Company has a controlling interest in a limited liability company which is the general partner, or in which the Company is the primary beneficiary of a variable interest entity. In the absence of readily ascertainable market values, these investments may be valued using the market approach or the income approach, or a combination thereof, as described above. These investments are generally included within Level II or Level III of the fair value hierarchy, depending on the availability of the significant inputs into the valuation.

The Company employs specific control processes to determine the reasonableness of the fair value of its securities owned and securities sold, not yet purchased. The Company's processes are designed to ensure that the internally estimated fair values are accurately recorded and that the data inputs and the valuation techniques used are appropriate, consistently applied, and that the assumptions are reasonable and consistent with the objective of determining fair value. Individuals outside of the trading departments perform independent pricing verification reviews. The Company has established parameters which set forth when securities are independently verified. The selection parameters are generally based on the type of security, the level of estimation of risk of a security, the materiality of the security, the age of the security in the Company's securities portfolio, and other specific facts and circumstances of the Company's securities portfolio.

Cash and cash equivalents, cash segregated under federal regulations, cash held by Baird Private Equity partnerships, deposits with clearing corporations and receivables are financial assets with carrying values that approximate fair value due to their relatively short-term nature. Money borrowed, payables, accounts payable, accrued expenses and other liabilities are financial liabilities with carrying values that approximate fair value due to their relatively short-term nature. The carrying amount of subordinated liabilities approximates fair value based on current market conditions and interest rates available to the Company for similar financial instruments. Securities either purchased or sold under agreements to resell or repurchase are carried at contractual amounts.

See Footnote 9 for further information.

(h) Income Taxes

Certain income and expense items are accounted for in different periods for financial reporting purposes than for income tax purposes. Appropriate provisions are made in the Company's consolidated financial statements for deferred income taxes in recognition of these temporary differences as more fully disclosed in Footnote 12.

(i) Furniture, Equipment, Leasehold Improvements, and Capital Leases

Furniture, equipment, leasehold improvements, and capital leases are stated at cost less accumulated depreciation. Depreciation is provided by using the straight-line method over the estimated useful lives of the assets, which range from three years for software and computer equipment to ten years for certain leasehold improvements.

Additions, improvements and expenditures for repairs and maintenance that significantly extend the useful life of an asset are capitalized, as more fully disclosed in Footnote 6. Other expenditures for repairs and maintenance are charged to expense in the period incurred.

(j) Goodwill and Intangible Assets

Goodwill and intangible assets with indefinite lives are not amortized but are reviewed at least annually for impairment. The Company has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than the carrying amount. If the Company determines it is more likely than not that the fair value of a reporting unit is greater than the carrying amount it would not be required to perform the two-step impairment test for that reporting unit. As of December 31, 2014 and 2013, the Company determined it was more likely than not that the reporting units' fair value was greater than the carrying value as it relates to goodwill and intangible assets and therefore no impairment was identified. Intangibles with finite lives are amortized on a straight-line basis over their respective lives as more fully disclosed in Footnote 7.

(k) Revenue Recognition

i. Investment Advisory Fees - The Company recognizes investment advisory fees in the period earned and are based on the value of the clients' portfolios. The fees are recorded ratably over the period earned.

ii. Commissions and Principal Transactions, Net - Client securities transactions are reported on a settlement date basis with related commission income and expense reported on a trade date basis. Securities Owned and Securities Sold, Not Yet Purchased are recorded on a trade date basis. Realized and unrealized gains and losses are reported on a trade date basis and are included within Principal Transactions, Net on the Consolidated Statements of Income and Comprehensive Income.

iii. Investment Banking and Underwriting - Investment banking and underwriting revenues are recorded at the time the transaction is completed and the related income is reasonably determinable. Investment banking and underwriting revenues include management fees and underwriting fees, net of unreimbursed expenses. Sales concessions earned in connection with the distribution of the underwritten securities are recorded on trade date.

(l) Long-term Financing

Long-term financing represents interest expense on intercompany debt, as well as on other subordinated liabilities payable to BFC, as more fully disclosed in Footnote 11.

(m) Foreign Currency Translation

Assets and liabilities of the Company's foreign investments are translated at the current exchange rate, and the related revenues and expenses are translated at the average monthly exchange rates in effect. Net exchange gains or losses resulting from the translation of foreign financial statements are credited or charged directly to Accumulated Other Comprehensive Income, a separate component of Stockholders' Equity. These gains or losses are the only component of Accumulated Other Comprehensive Income.

(n) Commitments and Contingencies

The Company regularly enters into office space and other equipment lease arrangements, some of which are non-cancelable for the term of the lease. In addition, the Company is occasionally involved in legal and regulatory proceedings, arbitrations, underwriting commitments, private equity capital commitments and various other contingent obligations as more fully disclosed in Footnote 17.

(o) Consolidation

The consolidated financial statements include the accounts of those entities in which the Company has a controlling interest in a limited liability company which is the general partner or in which the Company is the primary beneficiary of a variable interest entity (''VIE''). In evaluating whether the Company has a controlling financial interest in entities in which the Company would consolidate, the Company considers the following: (1) the Company consolidates those entities in which the Company owns a majority of the voting interests; (2) for VIEs the Company consolidates those entities in which the Company is considered the primary beneficiary because the Company (i) has the direct or indirect ability through voting rights or similar rights to make decisions about the VIE's activities that have a significant effect on its success and (ii) absorbs the majority of the VIE's expected losses, receives a majority of the VIE's expected residual returns, or both; and (3) for limited partnership entities that are not considered VIEs, the Company consolidates those entities if the Company is the general partner, or has a controlling interest in a limited liability company which is the general partner of such entities and for which no substantive kick-out rights (the rights underlying the limited partners' ability to dissolve the limited partnership or otherwise remove the general partners are collectively referred to as ''kick-out'' rights) or participating rights exist. All material intercompany accounts and transactions have been eliminated in consolidation. The Company's disclosures regarding partnerships and VIEs are discussed in Footnote 15.

(p) Noncontrolling Interests in Baird Private Equity Partnerships

Noncontrolling Interests in Baird Private Equity Partnerships represent the component of partnership capital in consolidated entities held by third party investors.

(q) Legal Liabilities

The Company recognizes liabilities for contingencies when there is an exposure that, when analyzed, indicates it is both probable that a liability has been incurred and the amount of loss can be reasonably estimated. Whether a loss is probable, and if so, the estimated range of possible loss is based on currently available information and is subject to significant judgment, a variety of assumptions, and uncertainties. When a range of possible loss can be estimated, we accrue the most likely amount within that range. If the most likely amount of possible loss within that range is not determinable, we accrue a minimum based on the range of possible loss. No liability is recognized for those matters which, in management's judgment, the determination of a reasonable estimate of loss is not possible.

The Company records liabilities related to legal proceedings in Accounts Payable, Accrued Expenses, and Other Liabilities on the Consolidated Statements of Financial Condition. The determination of these liability amounts requires significant judgment on the part of management. Management considers many factors including, but not limited to: the amount of the claim; the amount of the loss in the client's account; the basis and validity of the claim; the possibility of wrongdoing on the part of one of our associates; previous results in similar cases; and legal precedents and case law. Each legal proceeding is reviewed and the liability balance is adjusted as deemed appropriate by management. Any change in the liability amount is recorded in the consolidated financial statements and is recognized as either a charge, or a credit, to net income in that period. The actual costs of resolving legal proceedings may be substantially higher or lower than the recorded liability amounts for those matters.

See Footnote 17 for further information.

(r) Upcoming Accounting Pronouncements

In May 2014, ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)* was issued, which provides comprehensive guidance on the recognition of revenue from customers arising from the transfer of goods and services. The standard provides guidance on accounting for certain contract costs, and requires new disclosures. The standard is effective for annual reporting periods beginning after December 15, 2016. Early adoption is not permitted. The Company is currently evaluating the impact of the new standard on its consolidated financial statements.

In June 2014, ASU 2014-11, *Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures* was issued, which requires entities to account for repurchase-to-maturity transactions and linked repurchase financings as secured borrowings, which is consistent with the accounting for other repurchase agreements. The amendments also require new disclosures, including additional information regarding collateral pledged in securities lending transactions and similar transactions that are accounted for as secured borrowings. This standard is effective for annual periods beginning after December 15, 2014. The Company currently does not engage in repurchase-to-maturity transactions, and therefore the adoption of this accounting change is not expected to have any impact on the Consolidated Statements of Financial Condition. The new disclosure requirements will be effective for the year ended December 31, 2015. The Company is currently evaluating the impact of the new disclosures to the consolidated financial statements.

(s) Reclassifications

Certain prior year expenses have been reclassified to conform to current year presentation.

(3) Acquisitions

On July 1, 2014 ("Closing Date" or "Acquisition Date") BFC completed the acquisition of all of the issued and outstanding shares of Manzanita Capital, Inc. ("Manzanita"), and its wholly-owned subsidiary McAdams Wright Ragen, Inc. ("MWR"), a fully disclosed broker-dealer and investment advisor registered with the SEC and a member of FINRA, located principally in the Pacific Northwest. MWR provided services to retail and institutional clients which included principal and agency transactions, investment banking and investment advisory services.

On the Acquisition Date, BFC paid $92,000 in cash in exchange for all of the outstanding shares of Manzanita. Manzanita immediately merged into BFC and MWR became a wholly-owned subsidiary of BFC. The acquisition has been accounted for using the acquisition method of accounting, with the excess purchase price over the fair market value of the assets acquired and liabilities assumed allocated to goodwill. The following table summarizes the purchase price allocation:

Purchase Price, Net of Cash Acquired		$ 73,674
Identifiable Assets Acquired and Liabilities Assumed		
Receivables	$ 11,627	
Securities Owned, at Fair Value	4,199	
Furniture, Equipment, Leasehold Improvements and Capital Leases	1,087	
Intangible Assets	7,238	
Deferred Tax Asset	1,602	
Prepaid and Other Assets	331	
Securities Sold, Not Yet Purchased, at Fair Value	(27)	
Accounts Payable, Accrued Expenses and Other Liabilities	(12,015)	
Net Assets Acquired		14,042
Goodwill		$ 59,632

The goodwill resulting from the purchase price allocation is primarily attributable to the acquisition of the MWR workforce (which is not eligible for separate recognition as an identifiable intangible asset) and the expected synergy benefits of adding MWR clients to the existing RWB platform.

The following table presents the estimated fair values and useful lives of the intangible assets acquired:

	Useful Life	Amount
Client List	14 years	$ 6,800
Leasehold Intangible	6 years	308
Noncompete Agreement	1 year	70
Trade Name	4 months	60
		$ 7,238

The useful lives of these intangible assets are based upon the patterns in which the economic benefits related to such assets are expected to be realized, and the intangible assets are amortized on a basis reflecting those economic patterns. The goodwill and acquired intangible assets are not deductible for tax purposes.

On November 10, 2014 ("Merger Date"), BFC merged MWR into RWB, upon which RWB assumed all MWR assets and liabilities. In the merger more than 99% of former MWR client accounts with assets totaling $10.2 billion elected to, and were transferred from a third party fully disclosed arrangement to RWB's platform. This merger was accounted for as a business combination between entities under common control with the financial statements presented as if MWR had been a part of RWB since the Acquisition Date. The following table summarizes the assets acquired and liabilities assumed by RWB on the Acquisition Date:

Assets		
Cash and Cash Equivalents	$	10,818
Deposits with Clearing Corporations		250
Receivables:		
Brokers and Dealers		1,145
Notes Receivable, Net		236
Other		257
Securities Owned, at Fair Value		4,199
Furniture, Equipment, Leasehold Improvements and Capital Leases		1,060
Goodwill		59,632
Intangible Assets		7,238
Deferred Tax Asset		1,602
Other Assets		331
Total Assets	$	86,768
Liabilities and Equity		
Securities Sold, Not Yet Purchased, at Fair Value	$	27
Accounts Payable, Accrued Expenses and Other Liabilities		7,913
Total Liabilities		7,940
Total Equity		78,828
Total Liabilities and Equity	$	86,768

The Company elected to apply push down accounting, and therefore the intangible assets acquired and goodwill recognized on the Acquisition Date is recorded at RWB. Refer to Footnote 7 for further information on the Company's goodwill and intangible assets.

The merger contributed $25,969 to the Company's Net Revenues and a loss of $1,579 to the Company's Income Before Provision for Income Tax, since the Acquisition Date. The unaudited pro forma information presented in the following table summarizes the Company's Net Revenues and Net Income as if the acquisition had occurred on January 1, 2013. The pro forma financial information is presented for comparative purposes only and is not necessarily indicative of the results that actually would have been achieved if the acquisition had taken place at the beginning of 2013, nor is it intended to be a projection of future results.

	Pro Forma Year Ended December 31, 2014		Pro Forma Year Ended December 31, 2013	
Net Revenues	$	1,195,523	$	1,110,581
Income Before Provision for Income Taxes	$	164,252	$	152,194

During July, subsequent to the closing date of the transaction, the Company made $21,516 of loans to MWR financial advisors as part of an associate retention program. The loans were financed through a subordinated note payable to BFC. Refer to Footnote 11 for further information on the Company's subordinated notes.

(4) Related-Party Transactions

Pursuant to the intercompany revenue allocation agreements in place, certain revenue is allocated between the Company and its European and German affiliates. During 2014 and 2013, $26.0 million and $20.3 million, respectively, of revenue subject to allocation was allocated to the Company's European affiliates and $6.2 million and $6.5 million, respectively, was allocated to the Company's German affiliates. The Company reviews the terms of these agreements annually.

The Company serves as an investment advisor and provides administrative services to the Baird Funds, Inc. and various affiliated Baird private equity partnerships under management agreements (together, "Affiliated Funds"). Receivables from Affiliated Funds include $9,048 and $13,847 at December 31, 2014 and 2013, respectively, and are included within Receivables Other on the Consolidated Statements of Financial Condition. Revenues earned from Affiliated Funds for providing services under the management agreements for the years ended December 31, 2014 and 2013 were $41,936 and $29,241, respectively, included within Investment Advisory Fees and $3,323 and $4,848, respectively, included within Revenue Other on the Consolidated Statements of Income and Comprehensive Income.

The Company has invested $20,186 and $24,036 into Affiliated Funds at December 31, 2014 and 2013, respectively.

Other amounts receivable from affiliates includes $7,027 and $9,985 at December 31, 2014 and 2013, respectively, which is included within Receivables Other on the Consolidated Statements of Financial Condition. Other amounts payable to affiliates includes $2,324 and $2,005 at December 31, 2014 and 2013 respectively, which is included within Accounts Payable, Accrued Expenses and Other Liabilities on the Consolidated Statements of Financial Condition.

(5) Receivables and Payables

Amounts receivable from clients at December 31, 2014 and 2013, consist of the following:

	2014	2013
Receivables from Clients	$ 204,201	$ 162,018
Allowance for Doubtful Accounts	(4,373)	(4,175)
Receivables from Clients, Net	$ 199,828	$ 157,843

Amounts receivable from and payable to brokers and dealers and clearing organizations at December 31, 2014 and 2013, consist of the following:

	2014	2013
Securities Failed-to-Deliver	$ 3,776	$ 2,251
Commissions Receivable	2,777	2,533
Receivables from Brokers and Dealers	$ 6,553	$ 4,784

	2014	2013
Securities Failed-to-Receive	$ 55,388	$ 9,854
Payables to Clearing Organization	21	13
Payables to Brokers and Dealers	$ 55,409	$ 9,867

Amounts receivable from associates, including the related allowance for doubtful accounts at December 31, 2014 and 2013 consist of the following:

	2014	2013
Notes Receivable	$ 120,623	$ 108,736
Allowance for Doubtful Accounts	(8,200)	(6,300)
Notes Receivable, Net	$ 112,423	$ 102,436

(6) Furniture, Equipment, Leasehold Improvements, and Capital Leases

Furniture, Equipment, Leasehold Improvements, and Capital Leases as of December 31, 2014 and 2013 consist of the following:

	2014	2013
Furniture and Fixtures	$ 32,498	$ 40,534
Equipment	38,203	34,629
Software	25,055	28,450
Leasehold Improvements	55,196	58,107
Capital Leases	5,003	3,243
Total Fixed Assets	155,955	164,963
Less Accumulated Depreciation	(94,931)	(106,160)
Less Accumulated Amortization	(1,648)	(914)
Total Accumulated	(96,579)	(107,074)
Furniture, Equipment, Leasehold Improvements and Capital Leases, Net	$ 59,376	$ 57,889

Depreciation expense for fixed assets was $14,400 and $12,701 in 2014 and 2013, respectively. Amortization expense on capital leases was $733 and $893 in 2014 and 2013, respectively.

(7) Goodwill and Intangible Assets

At December 31, 2014 and 2013 goodwill and intangible assets consist of the following:

	Useful Life	2014	2013
Finite Life Intangibles			
Client lists	5 -14 Years	$ 19,761	$ 12,961
Trade Mark	4 Years	603	603
Noncompete agreements	1 - 5 Years	310	240
Leasehold	6 Years	308	-
Trade Name	4 Months	60	-
		21,042	13,804
Accumulated Amortization			
Client lists		(11,291)	(10,473)
Noncompete agreements		(275)	(237)
Trade Mark		(151)	-
Leasehold		(25)	-
Trade Name		(60)	-
		(11,802)	(10,710)
Net Finite Life Intangibles		9,240	3,094
Indefinite Life Intangibles			
Trade Names	N/A	9,325	9,325
Net Intangibles		18,565	12,419
Goodwill	N/A	86,069	26,437
		$ 104,634	$ 38,856

Amortization expense for the finite life intangibles was $991 and $294 in 2014 and 2013, respectively.

Estimated future amortization expense is as follows:

2015	$ 1,263
2016	1,198
2017	1,186
2018	899
2019 and thereafter	4,694
	$ 9,240

(8) Money Borrowed

(a) Bank Loans

At December 31, 2014 and 2013, the Company had available a $200,000 and $250,000 committed unsecured credit facility, respectively. The weighted average interest rate on the line of credit during the years ended December 31, 2014 and 2013 was 1.45% and 1.49%, respectively. The line of credit expires on November 27, 2015. At December 31, 2014 and 2013, there were no amounts outstanding on the available line of credit.

(b) Book Credit Balances in Bank Accounts

The Company has $34,494 and $30,810 at December 31, 2014 and 2013, respectively, in credit balances at certain banks with which it does business. The Company does not have a right of offset regarding these balances and, as a result, they are classified as Money Borrowed on the Consolidated Statements of Financial Condition.

(9) Fair Value of Financial Instruments

The following table summarizes the fair value of Financial Instruments as of December 31, 2014:

	Level I	Level II	Level III	Total
Cash Equivalents				
Money Market Funds	$ 70,000	$ -	$ -	$ 70,000
Commercial Paper	-	1,000	-	1,000
Total Cash Equivalents	$ 70,000	$ 1,000	$ -	$ 71,000
Securities Owned				
Certificates of Deposit	$ -	$ 1,574	$ -	$ 1,574
U.S. Government and Agency Obligations	-	148,442	-	148,442
Municipal Bonds	-	127,295	-	127,295
Corporate Bonds	-	196,830	-	196,830
Collateralized Mortgage Obligations	-	147,835	-	147,835
Auction Rate Securities	-	-	1,705	1,705
Other Securities	84,348	-	8,212	92,560
Total Securities Owned	$ 84,348	$ 621,976	$ 9,917	$ 716,241
Securities Owned by Baird Private Equity Partnerships	$ -	$ 1,938	$ 470,349	$ 472,287
Securities Sold, Not Yet Purchased				
Certificates of Deposit	$ -	$ 4,594	$ -	$ 4,594
U.S. Government and Agency Obligations	-	94,395	-	94,395
Other Securities	3,000	-	-	3,000
Total Securities Sold, Not Yet Purchased	$ 3,000	$ 98,989	$ -	$ 101,989

The following table summarizes the fair value of Financial Instruments as of December 31, 2013:

	Level I	Level II	Level III	Total
Cash Equivalents				
Money Market Funds	$ 175,000	$ -	$ -	$ 175,000
Securities Owned				
Certificates of Deposit	$ -	$ 1,729	$ -	$ 1,729
U.S. Government and Agency Obligations	-	147,992	-	147,992
Municipal Bonds	-	58,888	-	58,888
Corporate Bonds	-	73,320	-	73,320
Collateralized Mortgage Obligations	-	134,391	-	134,391
Auction Rate Securities	-	-	2,070	2,070
Other Securities	79,965	-	8,153	88,118
Total Securities Owned	$ 79,965	$ 416,320	$ 10,223	$ 506,508
Securities Owned by Baird Private Equity Partnerships	$ -	$ 4,770	$ 603,884	$ 608,654
Securities Sold, Not Yet Purchased				
Certificates of Deposit	$ -	$ 2,386	$ -	$ 2,386
U.S. Government and Agency Obligations	-	56,840	-	56,840
Corporate Bonds	-	619	-	619
Other Securities	5,079	-	-	5,079
Total Securities Sold, Not Yet Purchased	$ 5,079	$ 59,845	$ -	$ 64,924

Other Securities consist principally of corporate stocks. The valuation of equity ownership in privately owned companies, the type of investment principally included in Securities Owned by Baird Private Equity Partnerships, requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and long-term nature of these assets. As a result, these values cannot be determined with precision and the calculated fair value estimates may not be realizable in a current sale or immediate settlement of the instruments.

The following table summarizes the change in fair values of Level III assets during 2014 and 2013:

	Auction Rate Securities	Other Securities	Securities Owned by Baird Private Equity Partnerships
Balance, January 1, 2013	$ 2,909	$ 7,653	$ 519,317
Purchases	-	6	50,901
Sales / Pay-downs	-	(70)	(34,032)
Transfers into Level III	-	-	6,588
Transfers out of Level III	-	-	(5,000)
Realized Gains/(Losses)	-	38	(32,235)
Unrealized Gains/(Losses)	(839)	526	98,345
Balance, December 31, 2013	2,070	8,153	603,884
Purchases	-	339	79,070
Sales / Pay-downs	(200)	(200)	(274,166)
Realized Gains/(Losses)	-	-	170,657
Unrealized Gains/(Losses)	(165)	(80)	(109,096)
Balance, December 31, 2014	$ 1,705	$ 8,212	$ 470,349
Change in Unrealized Gain/(Loss) on Securities Still Held as of December 31, 2014	$ (173)	$ (80)	$ (35,670)

There were no transfers between Levels I, II or III during the year ended December 31, 2014.

Transfers into Level III during the year ended December 31, 2013 include certain securities owned by Baird Private Equity Partnerships consolidated during the year in accordance with ASC 810, *Consolidation.* Transfers out of Level III during the year ended December 31, 2013 include a private company investment that went through an Initial Public Offering during the year.

There were no transfers between Level I and Level II during the year ended December 31, 2013. The Company's policy is to use the beginning of each respective reporting period to determine when transfers of financial instruments between levels are recognized.

All net realized and unrealized gains (losses) related to the Level III securities in the table above are recorded in the accompanying Consolidated Statements of Income and Comprehensive Income as Principal Transactions, Net.

The following table summarizes quantitative information related to the significant unobservable inputs utilized in the fair value measurements of the Level III assets as of December 31, 2014:

	Fair Value	Valuation Technique	Unobservable Input(s)	Range (Weighted Average)
Auction Rate Securities	$ 1,705	Recent trades	Trades in inactive markets of in-portfolio securities	70% of par - 100% of par (72% of par)
Other Securities	$ 8,212	Discounted cash flow	Discount rate	12% - 14% (13%)
			Terminal multiple range	7.5 - 8.5 (8.0)
		Market comparable companies	EBITDA multiple	4.0 - 6.0 (5.0)
Securities Owned by Baird Private Equity Partnerships	$ 470,349	Market comparable companies	EBITDA multiple	5.0 - 13.1 (7.6)
			Revenue multiple	0.0 - 4.7 (2.3)
			Net Income Multiple	12.0 - 12.0 (12.0)
		Precedent transactions	N/A	N/A

The following table summarizes quantitative information related to the significant unobservable inputs utilized in the fair value measurements of the Level III assets as of December 31, 2013:

	Fair Value	Valuation Technique	Unobservable Input(s)	Range (Weighted Average)
Auction Rate Securities	$ 2,070	Recent trades	Trades in inactive markets of in-portfolio securities	70% of par - 100% of par (81% of par)
Other Securities	$ 8,153	Discounted cash flow	Discount rate	12% - 14% (13%)
			Terminal multiple range	7.5 - 8.5 (8.0)
		Market comparable companies	EBITDA multiple	5.0 - 8.5 (6.75)
Securities Owned by Baird Private Equity Partnerships	$ 603,884	Market comparable companies	EBITDA multiple	4.0 - 10.8 (7.3)
			Revenue multiple	0.4 - 5.0 (3.8)
		Precedent transactions	N/A	N/A

For auction rate securities the significant unobservable input used in the fair value measurement relates to judgments regarding whether the level of observable trading activity is sufficient to conclude the markets are active. Where insufficient levels of trading activity are determined to exist as of the reporting date, management's assessment of how much weight to apply to trading prices in inactive markets may vary, and significantly impact the fair value measurement of auction rate securities.

For other securities and securities owned by Baird Private Equity Partnerships, where the discounted cash flow method is used, a significant increase or decrease in the discount rate or terminal multiple range in isolation could result in a significantly lower or higher fair value measurement, respectively. Where the market comparable companies approach is used a significant increase or decrease in the EBITDA, revenue or net income multiples in isolation could result in a significantly higher or lower fair value measurement, respectively.

(10) Net Capital Requirements

The Company is subject to the requirements of Rule 15c3-1 (the "net capital rule") under the Securities Exchange Act of 1934. The basic concept of the net capital rule is liquidity, its objective being to require a broker and dealer to maintain adequate net capital, as defined. The Company has elected to operate under the alternative net capital requirement as allowed by the net capital rule, which requires that net capital exceed 2% of aggregate debit items as those terms are defined. Withdrawal of equity capital may be restricted if net capital is less than 5% of such aggregate debit items.

At December 31, 2014 and 2013, the Company's net capital percentage was 68% and 132%, respectively, of aggregate debit items, and net capital, as defined, was $145,098 and $237,559, respectively, which was $140,820 and $233,954, respectively, in excess of the required minimum amount. At December 31, 2014 and 2013, net capital after anticipated withdrawals as a percentage of aggregate debits was 58% and 118%, respectively.

(11) Subordinated Liabilities

At December 31, 2014 and 2013, the Company had $270,221 and $292,271 of subordinated notes, including $216,800 and $235,000, respectively, payable to BFC, and $53,421 and $57,271, respectively, payable to associates, all of which are covered by agreements approved by FINRA that are available in computing adjusted net capital under the net capital rule at December 31, 2014 and 2013, respectively. Interest expense related to the BFC subordinated notes is included in Long-Term Financing on the Consolidated Statements of Income and Comprehensive Income.

The following schedule discloses the major components of subordinated debt including repayment terms:

	2014	2013
Subordinated Note, variable interest rate (5.0%, plus 1 month LIBOR), due November 2016. Scheduled principal payments begin in February 2015.	$ 120,000	$ 120,000
Subordinated Note, variable interest rate (5.0%, plus 1 month LIBOR), due November 2014. Scheduled principal payments began in February 2013.	-	40,000
Subordinated Note, variable interest rate (7.5%, plus 3 month LIBOR), due June 2016.	45,000	45,000
Subordinated Note, variable interest rate (5.0%, plus 1 month LIBOR), due June 2018.	30,000	30,000
Subordinated Note, variable interest rate (5.0%, plus 1 month LIBOR), due May 2019. Scheduled principal payments begin in August 2015.	21,800	-
	216,800	235,000
Payable to Associates	53,421	57,271
	$ 270,221	$ 292,271

Subordinated Liabilities mature as follows at December 31:

2015	$	49,279
2016		134,675
2017		11,591
2018		44,695
2019		20,470
Thereafter		9,511
	$	270,221

To the extent that such notes are required for the Company's continued compliance with minimum net capital requirements, they may not be repaid. At December 31, 2014 and 2013, the Company had sufficient capital that such restrictions did not apply. The right of the note holders to receive any payment from the Company under the terms of the notes is subordinated to the claims of all present and future creditors of the Company that arise prior to maturity and is dependent on approval by FINRA.

(12) Income Taxes

(a) Uncertain Tax Positions

The Company recognizes the financial statement benefit of a tax position only after determining that the relevant tax authority would more-likely-than-not sustain the position following an audit. For tax positions meeting the more-likely-than-not threshold, the amount recognized in the financial statements is the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate settlement with the relevant tax authority.

The Company is included in the consolidated income tax returns of BFG in the U.S. Federal jurisdiction and various consolidated states. It also files separate income tax returns in various states and local jurisdictions. The income tax returns for the years prior to 2011 are no longer subject to examination by income tax authorities, unless subsequently amended.

The Company classifies interest and penalties, if any, related to unrecognized tax benefits as a component of tax expense.

The Company's unrecognized tax benefits are analyzed and monitored to ensure they are adequate and reflective of known events. The Company does not believe there will be a material change in the balance within the subsequent 12 month period.

(b) Tax Provision

The provision for income taxes results in an effective income tax rate of 27% and 23% for 2014 and 2013, respectively, which is computed by dividing the provision for income taxes by income before provision for income taxes. The difference between the effective income tax rate and the statutory Federal income tax rate of 35% is attributable primarily to the impact of consolidating the Baird private equity funds, which as partnerships do not pay income tax or recognize tax benefits. Instead, income tax is the responsibility of the partners in the partnerships, the majority of which are third parties and not the Company. Additional items impacting the effective income tax rate include state income taxes, less the Federal tax impact thereon, offset by state tax refunds, excludable dividends, municipal interest income and other permanent items.

The provision for income taxes is comprised of the following:

	2014	2013
Current Tax Expense - Federal	$ 40,510	$ 37,241
Current Tax Expense - State	3,070	2,846
Current Tax Expense - Foreign	-	7
Deferred Tax Expense - Federal	1,390	(4,638)
Deferred Tax Expense - State	107	(354)
	$ 45,077	$ 35,102

(c) Deferred Income Tax

The major deferred tax items are as follows:

	2014	2013
Deferred Tax Assets:		
Deferred Compensation Plans	$ 33,611	$ 24,529
Accrued Expenses	14,631	16,985
Tax Credit Carryforward	3,077	-
Other	-	302
	51,319	41,816
Deferred Tax Liabilities:		
Margin Debt	1,008	691
Goodwill and Intangibles	5,093	5,243
Equipment and Leasehold Improvements	10,923	8,653
Foreign Unremitted Earnings	4,813	2,195
Flow Through Investments	2,562	6,308
Other	49	270
	24,448	23,360
Net Deferred Tax Assets	$ 26,871	$ 18,456

No valuation allowance is required as management believes it is more-likely-than-not that the deferred tax assets are realizable.

(13) Stockholders' Equity

As of December 31, 2014 and 2013, the Company had 26,501,574 shares of Common Stock and 47,086 shares of Common Treasury Stock outstanding. There were no share transactions in the Company's Common Stock or Common Treasury Stock during the year ended December 31, 2014.

The Company has authorized 72,450,000 shares of $1 stated value common stock. The Company has also authorized 1,000 shares of no par value, cumulative, nonvoting preferred stock. No shares of preferred stock were issued or outstanding in 2014 or 2013. The shares of the Company are subject to strict transfer restrictions.

(14) Associate Compensation and Retirement Plans

(a) The Baird Profit Sharing and Savings Plan

Substantially all associates of the Company are eligible to participate in the Robert W. Baird & Co. Incorporated Profit Sharing and Savings Plan. The plan complies with Section 401(k) of the Internal Revenue Code. The Company matches 100% of the first two thousand dollars contributed by each eligible participant annually. The Company's 401(k) match expense was $4,749 and $4,483 in 2014 and 2013, respectively. Employer profit sharing contributions are made annually at the discretion of the Company's Board of Directors. The Company's profit sharing expense was $12,660 and $10,990 in 2014 and 2013, respectively, and is included within Associate Compensation and Benefits in the Consolidated Statements of Income and Comprehensive Income.

(b) Non-Qualified Compensation

The Company has three non-qualified compensation plans, entitled the Baird Capital Participation Plan ("BCPP"), the Baird Financial Advisors Deferred Compensation Plan ("FADCP") and the Baird Long Term Incentive Plan ("LTIP"). The BCPP no longer grants awards and all balances in the Plan are fully vested. For services performed, the FADCP and LTIP grant awards to certain associates. The awards, which vest after seven years, are expensed at the date of grant as no future services are required, subject to continued employment. Associates have the ability to allocate their awards among several investment options.

The Company has established an allowance for unvested award forfeitures. In determining the allowance, management considers the Company's historical forfeiture experience which involves the use of estimates. The actual amounts may be substantially higher or lower than the recorded amounts.

Certain BCPP participants own restricted stock units ("RSUs"). The RSUs are fully vested in accordance with the terms of the BCPP and are ultimately convertible into BFG common stock. BCPP participants owning RSUs are entitled to cumulative distributions and dividends issued by BFG on its common stock. The RSUs become payable in full upon a change in control, as defined in the plan. The RSUs and shares issued on conversion of the RSUs are subject to strict transfer restrictions.

(15) Partnership Consolidation

The following table presents information about the carrying value of the assets, liabilities and equity of the partnerships which are consolidated and included within the Consolidated Statements of Financial Condition. The noncontrolling interests presented in this table represent the portion of net assets not owned by the Company.

	2014	2013
Assets:		
Cash Held by Baird Private Equity Partnerships	$ 4,514	$ 4,348
Receivables, Other	1,202	2,828
Securities Owned by Baird Private Equity Partnerships, at Fair Value	472,287	608,654
Other Assets	5,874	1,584
Total Assets	$ 483,877	$ 617,414
Liabilities and Partners' Equity:		
Accounts Payable, Accrued Expenses and Other Liabilities	$ 5,430	$ 8,119
Total Liabilities	5,430	8,119
Partners' Equity Attributable to the Company	2,099	12,630
Partners' Equity Attributable to Noncontrolling Interests in Baird Private Equity Partnerships	476,348	596,665
Total Equity	478,447	609,295
Total Liabilities and Partners' Equity	$ 483,877	$ 617,414

The following table presents information about the net income of the partnerships which are consolidated and included in the Consolidated Statements of Income and Comprehensive Income. The noncontrolling interests presented in this table represent the portion of the net income which are not the Company's.

	2014	2013
Other Revenues:		
Change in Unrealized Gain (Loss) on Investments, Net	$ (109,989)	$ 98,295
Realized Gain (Loss), Net	175,308	(27,076)
Other	902	10,288
Total Other Revenues	66,221	81,507
Interest Expense	525	419
Net Revenues	65,696	81,088
Expenses:		
Professional Services	14,626	10,862
Other Operating Expenses	817	825
Total Expenses	15,443	11,687
Net Income Including Noncontrolling Interests in Baird Private Equity Partnerships	50,253	69,401
Net Income Attributable to Noncontrolling Interests in Baird Private Equity Partnerships	48,831	62,293
Net Income Attributable to the Company	$ 1,422	$ 7,108

Certain Baird Private Equity Partnerships are not consolidated pursuant to the accounting rules previously mentioned in Footnote 2(o). Net assets of the partnerships not consolidated were $132 million and $114 million at December 31, 2014 and 2013, respectively. These partnerships were determined to be Variable Interest Entities (VIEs) and the general partner (an affiliate) was determined not to be the primary beneficiary. The general partner ownership interest in these partnerships was 0.2% at December 31, 2014 and 2013.

The Company has a controlling interest in a limited liability company that serves as a general partner or limited partner in various partnerships. The Company has committed a total of $31,850, in amounts generally ranging from $300 to $18,500, in 10 different private equity partnerships. As of December 31, 2014, the Company has invested $27,531 of committed amounts.

(16) Baird UK

The Company reports the results of its investment in Baird UK using the equity method of accounting. At December 31, 2014 and 2013, the Company's investment in Baird UK Ltd. was $32,127 and $25,083 respectively, and is included in Other Assets on the Consolidated Statements of Financial Condition. The Company's gain on this investment is included in the Equity in Gain of Affiliate on the Consolidated Statements of Income and Comprehensive Income.

(17) Commitments and Contingencies

(a) Leases

The Company occupies office space and leases equipment under cancelable and non-cancelable operating lease arrangements. These lease arrangements include escalating clauses which are recognized on a straight-line basis over the life of the lease. Capital leases consist of computers, servers and other computer related items. Future minimum lease payments are as follows:

Calendar Year	Capital	Operating	Total
2015	$ 1,279	$ 26,091	$ 27,370
2016	1,190	23,150	24,340
2017	1,013	20,079	21,092
2018	33	15,991	16,024
2019	-	12,835	12,835
Thereafter	-	68,748	68,748
	3,515	$ 166,894	$ 170,409
Less amounts representing interest	(140)		
Present value of minimum lease payments	$ 3,375		

Total rental expense on operating leases was $23,312 and $22,522 during 2014 and 2013, respectively.

The capital lease obligation was $3,375 and $2,387 at December 31, 2014 and 2013, respectively, and is recorded in Accounts Payable, Accrued Expenses and Other Liabilities on the Consolidated Statements of Financial Condition.

(b) Letters of Credit

The Company had a letter of credit of $20,000 as of December 31, 2013, secured by client securities held in margin accounts. The Company utilized $14,693 to meet margin requirements of a clearing corporation as of December 31, 2013. The Company terminated the letter of credit during 2014.

(c) Other

The Company is involved in legal actions from time to time that are incidental to its securities business, including without limitation, client complaints and arbitrations, employment related disputes, regulatory investigations and proceedings, securities class action claims arising from underwriting activity, and claims brought against the Company in connection with its recruitment of associates from other firms. The Company has established reserves against such contingencies. Based on its understanding of the facts and the advice of legal counsel, management believes that resolution of these various actions will not result, after taking into account the reserves, in any material adverse effect on the financial condition of the Company. As of December 31, 2014 and 2013 the estimated aggregate range of possible loss in excess of the reserve for these matters is from $0 to an amount up to $35 million and $0 to an amount up to $30 million, respectively.

In the normal course of business, the Company enters into underwriting commitments. Transactions relating to underwriting commitments that were open as of December 31, 2014 and 2013 were not material.

The Company is a member of numerous exchanges and clearinghouses. Under the membership agreements, members are generally required to guarantee performance of other members. Additionally, if a member becomes unable to satisfy its obligations to the clearinghouse, other members would be required to meet these shortfalls. To mitigate these performance risks, the exchanges and clearinghouses often require members to post collateral. The Company's maximum potential liability under these arrangements cannot be quantified. However, the potential for the Company to be required to make payments under these arrangements is remote. Accordingly, no contingent liability is recorded on the Consolidated Statements of Financial Condition for these arrangements.

(18) Collateralized Transactions

The Company enters into reverse repurchase agreements, repurchase agreements, securities borrowed and securities loaned transactions in order to, among other things, acquire securities to cover short positions, accommodate customers' needs, earn residual interest spreads and finance the Company's inventory positions. Under these transactions, the Company either receives or provides collateral, including securities. The Company receives collateral in connection with reverse repurchase agreements and securities borrowed transactions, and pledges collateral, including cash and securities, to collateralize repurchase agreements and enter into securities lending transactions. Under many agreements, the Company is permitted to repledge securities held as collateral. As of December 31, 2014 and 2013, the fair value of securities accepted as collateral was $813,610 and $748,073, respectively.

Substantially all reverse repurchase agreements and repurchase agreements are transacted under legally enforceable master repurchase agreements and substantially all securities borrowed and securities lending transactions are transacted under legally enforceable master securities lending agreements. In the event of default by a counterparty, these agreements give the Company the right to liquidate securities held as collateral and to offset receivables and payables with the defaulting counterparty.

The table below reconciles the gross amounts of assets and liabilities on these transactions on the Consolidated Statements of Financial Condition to the net exposure to the Company, considering all effects of legally enforceable master netting agreements as of December 31, 2014:

	Gross Amounts[1]	Amounts Offset on the Consolidated Statement of Financial Condition	Net Amounts Presented on the Consolidated Statement of Financial Condition[1]	Amounts Not Offset on the Consolidated Statement of Financial Condition		Net Amounts
				Financial Instruments[2]	Collateral Received/ Pledged[3]	
Assets:						
Securities Purchased Under Agreements to Resell	$ 699,157	$ -	$ 699,157	$ (60,415)	$ (638,742)	$ -
Deposits Paid on Securities Borrowed	112,476	-	112,476	(10,070)	(101,249)	1,157
Liabilities:						
Securities Sold Under Agreements to Repurchase	$ 860,766	$ -	$ 860,766	$ (60,415)	$ (800,351)	$ -
Deposits Received on Securities Loaned	21,371	-	21,371	(10,070)	(11,301)	-

The table below reconciles the gross amounts of assets and liabilities on these transactions on the Consolidated Statements of Financial Condition to the net exposure to the Company, considering all effects of legally enforceable master netting agreements as of December 31, 2013:

	Gross Amounts[1]	Amounts Offset on the Consolidated Statement of Financial Condition	Net Amounts Presented on the Consolidated Statement of Financial Condition[1]	Amounts Not Offset on the Consolidated Statement of Financial Condition		Net Amounts
				Financial Instruments[2]	Collateral Received/ Pledged[3]	
Assets:						
Securities Purchased Under Agreements to Resell	$ 682,205	$ -	$ 682,205	$ (66,661)	$ (615,544)	$ -
Deposits Paid on Securities Borrowed	63,164	-	63,164	(5,233)	(56,569)	1,362
Liabilities:						
Securities Sold Under Agreements to Repurchase	$ 812,518	$ -	$ 812,518	$ (66,661)	$ (745,857)	$ -
Deposits Received on Securities Loaned	12,199	-	12,199	(5,233)	(6,744)	222

[1] Amounts include all financial instruments, irrespective of whether there is a legally enforceable master netting agreement in place. The Company reports gross assets and liabilities on the Consolidated Statements of Financial Condition.

[2] Amounts relate to master netting arrangements which have been determined by the Company to be legally enforceable in the event of default.

[3] Collateral received on Securities Purchased Under Agreements to Resell and Deposits Paid on Securities Borrowed, includes securities received from the counterparty. These securities are not included on the Consolidated Statements of Financial Condition, unless there is an event of default.

Collateral pledged on Securities Sold Under Agreements to Repurchase and Deposits Received on Securities Loaned, includes the fair value of securities pledged to the counterparty. These securities are included on the Consolidated Statements of Financial Condition, unless there is an event of default.

(19) Financial Instruments with Off-Balance Sheet Risk

In the normal course of business, the Company's client securities activities involve the execution, settlement and financing of various client securities transactions. These activities may expose the Company to off-balance sheet risk in the event the client or other broker is unable to fulfill its contracted obligations and the Company has to purchase or sell the financial instrument underlying the contract at a loss.

The Company seeks to control the risks associated with its client activities by requiring clients to maintain margin collateral in compliance with various regulatory and internal guidelines. The Company monitors required margin levels daily and, pursuant to such guidelines, requires the client to deposit additional collateral or to reduce security positions when necessary. Such collateral is not reflected in the accompanying Consolidated Statements of Financial Condition.

The Company enters into various transactions involving derivatives and other off-balance sheet financial instruments. These financial instruments include TBA mortgage-backed securities, as well as securities purchased and sold on a when-issued basis (when-issued securities). These financial instruments are used to meet the needs of customers, conduct trading activities, and manage market risks and are, therefore, subject to varying degrees of market and credit risk.

TBAs and when-issued securities provide for the delayed delivery of the underlying instrument. The contractual or notional amounts related to these financial instruments reflect the volume and activity and do not reflect the amounts at risk. The gain or loss on these transactions is recognized on a trade date basis. The credit risk for TBAs, options, and when-issued securities is limited to the unrealized fair valuation gains and losses recorded in the Consolidated Statements of Financial Condition. The Company's exposure to market risk is determined by a number of factors, including but not limited to the size, composition and diversification of positions held, the absolute and relative levels of interest rates, and market volatility.

In addition, the Company has sold securities that it does not currently own (securities sold, not yet purchased) and will therefore be obligated to purchase such securities at a future date. The Company has recorded these obligations in the Consolidated Statements of Financial Condition at December 31, 2014 and 2013, at fair values of the related securities and will incur a loss if the fair value of the securities increases.

The Company's customer securities activities are transacted on either a cash or margin basis. In margin transactions, the Company extends credit to its customers, subject to various regulatory and internal margin requirements, collateralized by cash and securities in the customers' accounts. In connection with these activities, the Company executes and clears customer transactions involving the sale of securities not yet purchased, substantially all of which are transacted on a margin basis subject to individual exchange regulations. Such transactions may expose the Company to significant off-balance-sheet risk in the event margin requirements are not sufficient to fully cover losses that customers may incur. In the event the customer fails to satisfy its obligations, the Company may be required to purchase or sell financial instruments at prevailing market prices to fulfill the customer's obligations. The Company seeks to control the risks associated with its customer activities by requiring clients to maintain margin collateral in compliance with various regulatory and internal guidelines. The Company monitors required margin levels daily, and pursuant to such guidelines, requires the clients to deposit additional collateral or to reduce positions when necessary.

In conjunction with certain borrowing transactions, the Company's client financing and securities settlement activities require the Company to pledge certain securities. In the event the counterparty is unable to meet its contractual obligation to return securities pledged as collateral, the Company may be exposed to the risk of acquiring the securities at prevailing market prices in order to satisfy its obligations. The Company controls this risk by monitoring the fair value of securities pledged on a daily basis and by requiring adjustments of collateral levels in the event of excess market exposure. In addition, the Company establishes monitoring limits for such activities and monitors them on a daily basis.

The Company may use financial futures and options to manage market risk related to trading securities. The Company did not have open futures or options positions as of December 31, 2014 and 2013. The Company had minimal gains and losses on these transactions included in Principal Transactions, Net on the Consolidated Statements of Income and Comprehensive Income.

(20) Federal Deposit Insurance Corporation

The Company has certain cash deposit accounts with financial institutions in which the balances occasionally exceed the Federal Deposit Insurance Corporation ("FDIC") insured limit. The Company has not experienced any losses in such accounts and management believes it is not exposed to any significant risk.

(21) Subsequent Events

The Company evaluated its December 31, 2014 financial statements for subsequent events through February 23, 2015, the date that the financial statements were available to be issued. The Company is not aware of any subsequent events which would require recognition of disclosure in the financial statements.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-103163

Date Filed:
08/23/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Robert W. Baird & Co. Inc.
Milwaukee, WI United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Bond underwriting services for 3 series of tax-exempt bonds (Series 2016)

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Purcell, Paul	Milwaukee, WI United States	X	
Booth, Steve	Milwaukee, WI United States	X	
Lawton, Pat	Milwaukee, WI United States	X	
Mahler, Bill	Milwaukee, WI United States	X	
Schroeder, Mike	Milwaukee, WI United States	X	
Stanek, Mary Ellen	Milwaukee, WI United States	X	
Doyal, Brian	Chicago, IL United States	X	
McDonagh, Brian	Chicago, IL United States	X	
Bracewell LLP	Austin, TX United States		X

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

RHONDA PSOTA
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID # 20164000256
MY COMMISSION EXPIRES JANUARY 05, 2020

Brian M. Kelso
Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Brian M Kelso, this the 23rd day of August, 2016, to certify which, witness my hand and seal of office.

State of Colorado
County of Denver

Rhonda Psota	Rhonda Psota	Notary
Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Estrada Hinojosa & Company, Inc. ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Estrada Hinojosa & Company, Inc having offices at 823 Congress Avenue, Suite 1550, Austin, TX 78701 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Estrada Hinojosa & Company, Inc. Offer, dated 3/4/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

ESTRADA HINOJOSA & COMPANY, INC.

Adrian Galvan
Printed Name of Authorized Person

Signature

Managing Director
Title:

06/23/2016
Date:

CITY OF AUSTIN

Terry V. Nicholson
Printed Name of Authorized Person

Signature

Senior Buyer Supervisor
Title:

6/23/16
Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Estrada Hinojosa & Company, Inc.

Company Address: 823 Congress Avenue, Suite 1550

City, State, Zip: Austin, TX 78701

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Adrian Galvan

Title: Managing Director

Signature of Officer or Authorized Representative:

Date: March 8, 2016

Email Address: agalvan@ehmuni.com

Phone Number: 214-658-1670

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

Proposal to Provide
Underwriting Services for

Solicitation No. TVN0103REBID

Submitted By:

ESTRADA • HINOJOSA
INVESTMENT BANKERS

823 Congress Avenue, Suite 1550
Austin, TX 78701

Telephone: 512-605-2442
Facsimile: 512-605-3870

www.estradahinojosa.com

March 8, 2016

ESTRADA • HINOJOSA
INVESTMENT BANKERS

EXECUTIVE SUMMARY

March 08, 2016

City of Austin
Purchasing Office
124 W. 8th Street, Room 310
Austin, TX 78701

Re: Solicitation No: TVN0103REBID

To Whom It May Concern:

Estrada Hinojosa & Company, Inc. ("Estrada Hinojosa" or the "Firm") is pleased to submit this response to your Request for Qualification Statements for Underwriting Services. We respectfully request your consideration of Estrada Hinojosa to serve the City of Austin (the "City") as Underwriter in connection with any upcoming financing projects. We believe the credentials presented herein, along with our past association with the City, merit our selection for this role.

ESTRADA HINOJOSA CATEGORY

Estrada Hinojosa is submitting this response under the category of "Other." For over 20 years, the firm has remained minority owned and will continue to be minority owned for the foreseeable future. Estrada Hinojosa is proud to say that we are the largest Hispanic-owned full service investment bank in Texas and focus our efforts on serving Texas issuers. Our headquarters and trading desk is located in Dallas, TX and is supported by three other Texas offices (Austin, San Antonio, and Houston).

PROVEN UNDERWRITING EXPERTISE

Estrada Hinojosa is well recognized as a leader in providing investment banking services to municipal issuers throughout the Southwest and particularly in Texas. We have provided underwriting and/or financial advisory services to numerous issuers for a wide range of projects. Estrada Hinojosa has considerable experience serving as either underwriter or financial advisor to Texas issuers. Our total dollar volume of underwriting transactions has exceeded $280.9 billion, representing a total of 2,770 bond issues.

PROVEN CITY OF AUSTIN UNDERWRITING EXPERIENCE

Most recently, Estrada Hinojosa served as a co-manager on the Utility System refunding in 2015 ($290 million). As a co-manager, we supported the transaction by committing capital and entering orders in a number of maturities, thus creating critical mass throughout the curve. In years past, Estrada Hinojosa has served the City of Austin on 42 transactions with a total par amount of $4.9 billion.

CITY CLIENTS

Estrada Hinojosa has earned the trust of cities throughout Texas. We have assisted 131 Texas cities with underwriting transactions, and 47 Texas cities with financial advisory transactions. As a regional firm, we are keenly aware of the needs of Texas cities. The Firm stays abreast of legislation impacting cities and makes it a priority to inform our clients of issues affecting them. In addition to Texas, Estrada Hinojosa has served as managing underwriter or financial advisor for cities in Arizona, California, Connecticut, Florida, Georgia, Illinois, Louisiana, Massachusetts, Nevada, New Mexico, Ohio, Oregon, Washington, and Wisconsin.

SUMMARY STATEMENT

Estrada Hinojosa is confident that with the public finance expertise and resources at our disposal, we can continue to provide the City with the most competitive and comprehensive effort available in today's marketplace. We would be pleased to answer any questions you might have, and we look forward to working with you and your staff.

Respondent's Contact Information

Estrada Hinojosa & Company, Inc.

Contact Responsible for Questions with Respect to the Proposal
Adrian Galvan, Managing Director
1717 Main Street, Suite 4700
Dallas, TX 75201
214-658-1670
agalvan@ehmuni.com

Thank you for your consideration of this proposal.

Sincerely,

Adrian Galvan
Managing Director

AG/dt

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RESPONSE TO REQUEST FOR QUALIFICATIONS NO. TVN0103REBID
UNDERWRITING SERVICES

Estrada Hinojosa & Company, Inc. ("Estrada Hinojosa" or "Firm") is pleased to submit this proposal to provide Underwriting Services to the City of Austin, Texas (the "City"). We submit for your consideration a comprehensive proposal that addresses the pertinent points of your criteria for evaluation.

I. BUSINESS ORGANIZATION

State full name and address of your organization and identify parent company if you are a subsidiary. Specify the branch office or other subordinate element which will perform, or assist in performing, work herein. Indicate whether you operate as a partnership, corporation, or individual. Include the State in which incorporated or licensed to operate.

Estrada Hinojosa & Company, Inc. (Headquarters)
1717 Main Street, Suite 4700
Dallas, TX 75201
214-658-1670-Telephone 214-658-1671-Facsimile

Estrada Hinojosa & Company, Inc.
823 Congress Avenue, Suite 1550
Austin, TX 78701
512-605-2442-Telephone 512-605-3870-Facsimile

www.estradahinojosa.com

Estrada Hinojosa operates as a corporation, and is incorporated in the State of Texas.

i. Management/Ownership: Provide any recent or proposed changes in the firm's management or ownership.
There are no recent or proposed changes in Estrada Hinojosa's management or ownership.

ii. Confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response.
Estrada Hinojosa understands and is submitting a completed City non-discrimination certificate with our response.

iii. Confirm an understanding that the firm' officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.
Estrada Hinojosa understands and will abide by the provision that Estrada Hinojosa's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to our proposal response, directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.

iv. Municipal sales offices in the United States.
Estrada Hinojosa maintains one sales office at its headquarters in Dallas, Texas.

v. Account Executives employed selling municipal bonds in the United States.
Estrada Hinojosa employs three account executives to sell municipal bonds in the U.S.

vi. Texas offices and locations, if any, along with the number of Account Executives selling municipal bonds in each Texas office identified.
Our Texas offices are as follows:

Headquarters
1717 Main Street, Suite 4700
Dallas, TX 75201
214-658-1670-Telephone 214-658-1671-Facsimile
3 Account Executives

Austin
823 Congress Avenue, Suite 1550
Austin, TX 78701
512-605-2442-Telephone 512-605-3870-Facsimile

Houston
801 Travis Street, Suite 1400
Houston, TX 77002
713-622-6690-Telephone 713-622-6686-Facsimile

San Antonio
100 West Houston Street, Suite 1400
San Antonio, TX 78205
210-223-4888-Telephone 210-223-4849-Facsimile

II. AUTHORIZED NEGOTIATOR

Include name, address, and telephone number of person in your organization authorized to negotiate Contract terms and render binding decisions on Contract matters.

Mr. Adrian Galvan will serve as the Firm's authorized negotiator. His contact information is as follows:

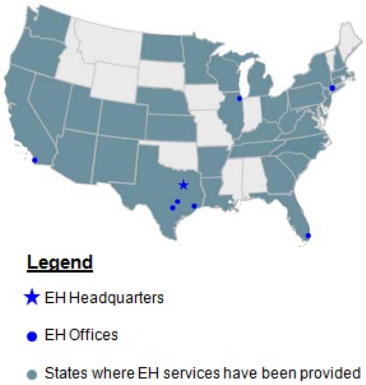
Adrian Galvan, Managing Director
1717 Main Street, Suite 4700 Dallas, TX 75201
214-658-1670-Telephone 214-658-1671-Facsimile
agalvan@ehmuni.com

III. BACKGROUND AND PRIOR EXPERIENCE

Describe only relevant corporate experience and individual experience for personnel who will be actively engaged in the contract. Do not include corporate experience unless personnel assigned to this project actively participated. Do not include experience prior to 2000. Supply the project title, year, and reference name, title, present address, and phone number of principal person for whom prior projects were accomplished.

Profile of Estrada Hinojosa

The Firm was founded in January of 1992 by Noé Hinojosa, Jr. and Robert Estrada, and has been in business for 24 years. The Firm has specialized in public finance with particular strength in financial advisory and municipal underwriting services, and has grown considerably over the last several years partly due to this singular focus. The Firm has become the largest Hispanic-owned full service investment bank in Texas, and second largest in the nation, with a concentrated focus on municipal clients, including state agencies, in the State of Texas. The Firm maintains its headquarters and municipal trading desk in Dallas, Texas.



The Firm has grown to 43 employees, including 29 Registered Representatives. Estrada Hinojosa operates in eight cities around the country, including San Antonio, Austin, Dallas, Houston, Los Angeles, Miami, Chicago, and New York. We have operated our Austin office since 2009 and have built a strong foundation with numerous Travis, Williamson, and Hays County issuers. We also provide municipal financial advisor or underwriting services in 35 states and the District of Columbia. (See above for a map showing our national reach and the location of our offices). The Firm is a minority-owned business enterprise which is majority Hispanic-owned, and is a certified MBE in the State.

Firm and Legal Organization

Estrada Hinojosa is a privately-held corporation. There are no outside investors, and the Firm has no outstanding corporate debt. No recent changes in the structure or ownership of the Firm have occurred, except the addition of more professional and support staff to serve our clients. Estrada Hinojosa is led by Mr. Noe Hinojosa, Jr., who serves as President and Chief

Executive Officer. Additionally, Adrian Galvan, who will serve as Lead Banker on this engagement, is a Managing Director and shareholder of Estrada Hinojosa.

Overall Activity

The Firm consistently ranks among the top financial advisory and bond underwriting firms in the country. We believe that our experience as financial advisor helps us better serve our underwriting clients. Estrada Hinojosa completed *349* transactions (financial advisory and underwriting) in 2015 totaling more than *$40 billion*. To date, the Firm has provided financial advisory services on *1,679* financings totaling more than *$105.2* billion, and has served as an underwriter in *2,770* bond underwritings totaling over *$280.9 billion*.

Estrada Hinojosa continues to grow and serve municipal clients as a financial advisor or municipal underwriter. Given our size, we are able to give our clients the utmost attention without having to go through layers of bureaucracy typically found at larger firms. Estrada Hinojosa is able to compete with larger, established firms in quality credit underwritings of the type issued by the City.

Commitment to Public Finance Investment Banking Services

Estrada Hinojosa specializes in Public Finance. We have vast experience in providing a host of services for a broad array of different credits. Estrada Hinojosa will devote all necessary resources to assist the City in reaching its financing goals. All of our clients receive the highest possible level of value-added service, and the City can be assured that whatever task Estrada Hinojosa is assigned, it will be undertaken with the thoroughness and attention to detail that are the trademarks of our Firm. The nature of our business often requires that our professionals act quickly to meet our clients' needs. Estrada Hinojosa is committed to providing the City with all of the resources necessary to implement a successful financing strategy. We also believe that under no circumstances will any competing engagement or constraint affect our ability to meet our commitments to the City.

IV. PERSONNEL

Include names, titles, and qualifications of key professional personnel who will be assigned to this contract. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

The personnel assigned to the City's account are among the Firm's most senior professionals. All have extensive financing experience with city financings in both underwriting and financial advisory capacities. The Firm pledges full use of the necessary professional and support staff to serve the City, as well as all physical resources needed. Estrada Hinojosa uses the "team approach" when providing services to our clients. To ensure first-rate service, Estrada Hinojosa appoints a Primary Contact for each transaction. The role of the Primary Contact is to be 100% available to the client and to see the engagement through from conception to completion. All persons named below are full-time professional employees of Estrada Hinojosa.

ESTRADA HINOJOSA FINANCE TEAM FOR THE CITY			
Name	Title	Role	Location
Noe Hinojosa	President & CEO	Project Supervision	Dallas, TX
Adrian Galvan	Managing Director	Primary Contact/Lead Banker	Dallas, TX
Rudy Mejia	Vice President	Secondary Banker	Austin, TX
Paul Jack	Managing Director	Secondary Banker	Austin, TX
Troy Madres	Executive Vice President	Quantitative Analysis	Austin, TX
Esther Young	Vice President	Support Banker	Dallas, TX
Thomas Nolan	Senior Managing Director	Sales & Marketing	Dallas, TX
Kathy Tenison	Senior Vice President	Trading & Underwriting	Dallas, TX
Randle Clontz	Senior Vice President	Trading & Underwriting	Dallas, TX

Noe Hinojosa
Project Supervision
1717 Main Street, Suite 4700 Telephone: 214.658.1670
Dallas, TX 75201 E-Mail: nhinojosa@ehmuni.com

Since co-founding Estrada Hinojosa in 1992, Mr. Hinojosa has been responsible for managing the firm's transactions and growth of the firm. In the past two years alone, the firm participated in 470 transactions totaling $48 billion. As founding partner and CEO he has led the firm in 22 years of consecutive profits.

Mr. Hinojosa has built a strong reputation for creative solutions to complex challenges in the public finance arena. He has broad experience as a financial advisor to many diverse type of political subdivisions and municipalities, as well as direct involvement with the firm's municipal bond underwriting activities.

In 2006, Mr. Hinojosa was elected by industry peers to serve on the global board of the Securities Industry and Financial Markets Association (SIFMA). SIFMA is the industry's think-tank, with offices in New York, Washington, London and Hong Kong. He was appointed in 2002 by the President and confirmed by the United States Senate to serve on the Board of Directors of the Securities Industry Protection Corporation, completing his second term in 2006. Most recently, he was elected to serve on Board of the Bond Dealers of America headquartered in Washington, D.C.

As an active member of the community he has participated in many civic and church related organizations. Most recently he was the recipient of the first Monarch Award by Mi Escuelita, Dallas for his many years of service and advocacy for an organization that teaches children how to read, write and speak English and basic math before entering elementary school. Recognized as an authority in the Investment Banking industry, Mr. Hinojosa has provided expert testimony in numerous seminars in the United States, Mexico and Spain.

Adrian Galvan, Managing Director
Lead Banker
1717 Main Street, Suite 4700 Telephone: 214.658.1670
Dallas, TX 75201 E-Mail: agalvan@ehmuni.com

Mr. Galvan heads Estrada Hinojosa's Quantitative Group, which provides primary technical and modeling expertise for clients. He has broad experience developing plans of finance for debt transactions, both new money and refunding. Over the past 22 years, he has personally structured over 900 financings totaling more than $19 billion for a range of issuers, including cities, counties, school districts, utilities and water authorities.

Mr. Galvan is responsible for developing comprehensive financial models, structuring multiyear capital improvement plans, determining borrowing capacity, and identifying and structuring refunding opportunities.

Prior to joining Estrada Hinojosa, Mr. Galvan worked for Public Financial Management, Inc., where he assisted in capital planning, financial analysis and cash flow modeling activities and as a financial consultant trainee for Merrill Lynch, where he gained extensive knowledge on equity and fixed income securities. While completing his degree at the University of Pennsylvania, Mr. Galvan was active in Hispanic student organizations and peer mentoring programs. Mr. Galvan is fluent in Spanish.

Rudy Mejia, Vice President
Secondary Banker
823 Congress Avenue, Suite 1550 Telephone: 512.605.2442
Austin, TX 78701 E-Mail: rmejia@ehmuni.com

Rudy Mejia is charged with providing transactional and quantitative support for the Firm's Central and West Texas clients. Since joining the Firm, Mr. Mejia has served as lead banker for many financings. These financings include some of Central Texas' largest issuers, such as the City of Austin, Austin ISD, Hays CISD, TPFA, and the University of Texas.

Mr. Mejia performs detailed quantitative analysis and generates financing plans to assist clients in achieving short- and long-term capital objectives. He is currently an integral member of our financial advisory team that supports issuers such as: the Texas Department of Transportation, Texas Water Development Board, and many Independent School Districts in Texas.

Mr. Mejia graduated from the United States Military Academy at West Point in 2007 with a Bachelor of Science in Economics and holds a Master's in business administration from The University of Texas, McCombs School of Business. Prior to joining the Firm, Mr. Mejia served as a Captain in the Army.

Paul Jack, Managing Director
Secondary Banker
823 Congress Avenue, Suite 1550 Telephone: 512.605.2442
Austin, TX 78701 E-Mail: pjack@ehmuni.com

Mr. Jack has over 19 years of experience in the structuring and issuance of debt obligations for political entities in Texas and the U.S. While serving as financial advisor or underwriter, Mr. Jack has managed or supported the bond issuance process for over $30 billion in debt obligations.

Prior to Estrada Hinojosa, Mr. Jack worked for J.P. Morgan, Public Financial Management and Citigroup. His public finance experience includes a wide spectrum of public projects including general city infrastructure, water and sewer systems, convention centers, stadiums and arenas, public utility systems, school districts, universities, airports, hospitals, and economic development projects. He also served as an adjunct professor at The University of Texas LBJ School of Public Affairs, teaching Public Financial Management.

Clients have depended on Mr. Jack's expertise for a wide range of services, such as developing complex analytical spreadsheets for financial modeling, structuring of derivative products, cash flow analyses, project finance debt/revenue models and new money, as well as refunding bond issue sizings. He also served on Transaction Review Committees, which provide guidance and quality control review on all aspects of the structuring of tax-exempt and taxable municipal bond issues and derivative products for clients. In addition, Mr. Jack managed the execution of the bond issuance process, including work with the Texas Bond Review Board, Texas Municipal Advisory Council, Issuer Bond Counsels, Tax Counsels, Underwriters' Counsels, Financial Advisors, and Trustees.

Troy Madres, Executive Vice President
Quantitative Analysis
823 Congress Avenue, Suite 1550 Telephone: 512.605.2442
Austin, TX 78701 E-Mail: tmadres@ehmuni.com

Mr. Madres has over 14 years of experience in the structuring and issuance of debt obligations for political entities in Texas and around the U.S. While serving as financial advisor or underwriter, Mr. Madres has managed or supported the bond issuance process for over $15 billion in debt obligations.

Mr. Madres has specialized in infrastructure related projects, with a strong focus on toll road, mass transit, water, and public power, and has experience issuing debt under traditional and project finance/P3 methods. Mr. Madres also has experience working with traditional municipal clients using general obligation, special tax credits, and for economic development projects. Prior to joining Estrada Hinojosa and Company, Inc., Mr. Madres worked for FirstSouthwest Company, J.P. Morgan, Public Resources Advisory Group, and Public Financial Management. In addition to his public finance background, Mr. Madres previously served as the manager of a small suburban town outside Philadelphia, where he managed a staff of 26 and a $2 million budget.

In his capacity as advisor or underwriter, Mr. Madres has undertaken a wide range of services, including serving as the major point of contact to clients, running bond structuring and long-range development models, reviewing/editing bond and

offering documents, assembling rating agency presentation, and serving as point person during pricing and closing activities.

Esther Young, Vice President
Support Banker
1717 Main Street, Suite 4700 Telephone: 214.658.1670
Dallas, TX 75201 E-Mail: eyoung@ehmuni.com

Ms. Young provides quantitative analysis and transactional support primarily for the Firm's Texas issuers. Performing detailed quantitative analysis and generating financing models to assist clients in achieving short- and long-term capital objectives, her responsibilities include determining borrowing capacity, structuring multiyear capital improvement plans, and identifying refunding and restructuring opportunities for debt service savings. Ms. Young has been directly involved in the structuring and issuance of over $3 billion of municipal debt for a range of issuers including cities, counties, utilities, school districts, higher education authorities, transit and transportation authorities, and public private partnerships. Additionally, she manages the bond issuance process for her clients, including coordinating with Bond Counsel, Underwriter's Counsel, Financial Advisors, Underwriters, Trustees, Bond Insurers, and Rating Agencies.

Thomas Nolan, Senior Managing Director
Sales & Marketing
1717 Main Street, Suite 4700 Telephone: 214.658.1636
Dallas, TX 75201 E-Mail: tnolan@ehmuni.com

Mr. Nolan serves as the Senior Managing Director responsible for the Firm's marketing efforts and trading/underwriting of municipal securities. He has more than 30 years of securities industry experience.

Prior to joining Estrada Hinojosa, Mr. Nolan was a Managing Director as SAMCO Capital Markets and a Senior Vice President in institutional sales with Dain Rauscher, both in Dallas. Early investment banking experience included working with Moody's Investors Services and Dillon Read & Company, both in New York City.

Kathy Tenison, Senior Vice President
Trading & Underwriting
1717 Main Street, Suite 4700 Telephone: 214.658.1636
Dallas, TX 75201 E-Mail: ktenison@ehmuni.com

Ms. Tenison serves as a municipal underwriter in Estrada Hinojosa's Dallas office, in addition to providing support for the Firm's banking efforts. She has more than 25 years of Municipal bond experience.

Prior to joining Estrada Hinojosa, Ms. Tenison was a Vice President at BOSC, Inc. and Morgan Stanley.

Randle Clontz, Senior Vice President
Trading & Underwriting
1717 Main Street, Suite 4700 Telephone: 214.658.1636
Dallas, TX 75201 E-Mail: rclontz@ehmuni.com

Mr. Clontz is responsible for customer relationships and business development with institutional investors. He began his career with the First National Bank in Dallas as an investment representative in 1975. During his tenure, he has successfully conducted business with everything from smaller community banks to large insurance companies. Prior to joining Estrada Hinojosa, Mr. Clontz was a First Vice President at Hilltop Securities, Inc. for 18 years. Mr. Clontz holds Series 7 and 63 licenses from FINRA.

V. INNOVATIVE FINANCING TECHNIQUES

Provide two innovative financing techniques, suggestions or ideas which would be relevant, or of interest to, the City of Austin. This can also include derivatives, debt restructuring, and self-liquidity ideas. If the idea(s) was (were) used in actual transaction(s),this section should include the following:

i. Indicate the individuals referenced in Part IV above who were involved in the transaction.
ii. Provide the name, title, organization, address and telephone number of the issuer.

(1) Muller Development Refunding

In addition to the basic general obligation, utility, and airport financings, the City of Austin has a couple of smaller entities that would benefit from a refinancing that produces annual savings. Below we present one financing option that the Estrada Hinojosa team has proposed and presented to the City in the past. The Mueller refinancing presented below is considered a current refunding and therefore will have little negative arbitrage.

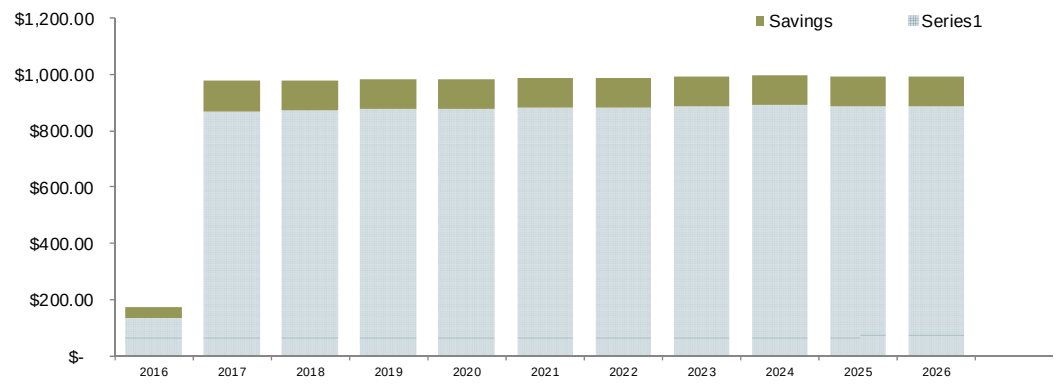
FYE (9/30)	Prior Debt Service	2016 Refunding Savings	Aggregate Debt Service
2016	$ 172,928	$ 35,361	$ 137,567
2017	975,856	107,406	868,450
2018	979,081	106,731	872,350
2019	981,031	105,781	875,250
2020	981,706	105,956	875,750
2021	986,106	106,356	879,750
2022	988,075	106,075	882,000
2023	993,513	106,013	887,500
2024	997,200	106,200	891,000
2025	993,700	106,200	887,500
2026	993,200	105,950	887,250
Total	$ 10,042,397	$ 1,098,030	$ 8,944,367

Refunding Summary		
Sources		
Par	$	6,895,000
Premium		1,208,289
Existing Debt Service Funds		
Total Sources	$	8,103,289
Uses		
Cash Deposit	$	1.24
SLGS Purchases		7,978,283
Cost of Issuance		76,739
Underwriter's Discount		48,265
Additional Proceeds		-
Total Uses	$	8,103,289
Summary of Savings Results		
Refunded Par Amount	$	7,810,000
Gross Savings		1,098,030
Negative Arbitrage		28,128
Net PV Savings		981,215
Savings as % Refunded Par		12.56%

Notes

Assumes Current Market Non-BQ AA+ Rates as of 3/4/16
Level Savings
Dated Date 6/8/16
UW Discount: $7/bond

Outstanding Debt Service / Savings (Level)

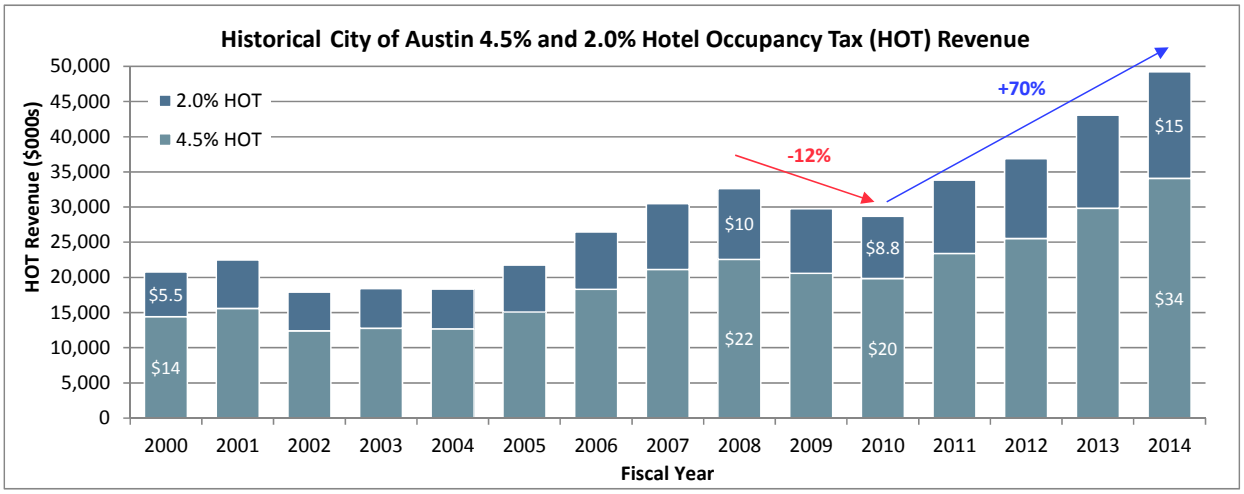


(2) Hotel Occupancy Tax (HOT) Capacity Analysis

The City has issued Hotel Occupancy Tax (HOT) bonds in the past for a variety of purposes, most recently for the Convention Center and Waller Creek related improvements. In this section, we put forth a proposal to issue additional HOT taxes based on the explosive growth of this tax in recent years.

HOT has experienced rapid growth since the recession

Since 2000, HOT has grown by an average of 7%, which reflects the overall population growth of the City, but also the enlarging appeal of the City as a tourist destination, music festival and tech/music conference (ACL, SXSW) location, site for traditional conventions, and role as the State's capital. As shown in the chart below, while HOT decreased by 12% from FY 2008-2010 during the recession, it increased by 71% since 2010, reflecting the strengthening economy and hotel room expansion (symbolized by the opening of the 1,000+ room JW Marriot, and construction of the equally large Fairmont). Note: FY 2015 data will be updated once the annual audit is finalized.



In this analysis, we will focus on additional bonding capacity from the 4.5% HOT. Excess revenue from 2.0% HOT is used to fund operations of the Convention Center.

Work Product Assurance

In this analysis, we look at additional subordinate lien bonding capacity. Additional bonds are constrained by the historical 1.25X ABT (though MADs is reduced by 2% HOT supporting Prior Lien Bonds). We aim to structure the new money bonds to 2.00x, which allows for a) the maintenance of current bond ratings, and b) allows for excess 4.5% HOT to be used for operations and future borrowing needs. Below, please find a list of major financing assumptions of the transaction:

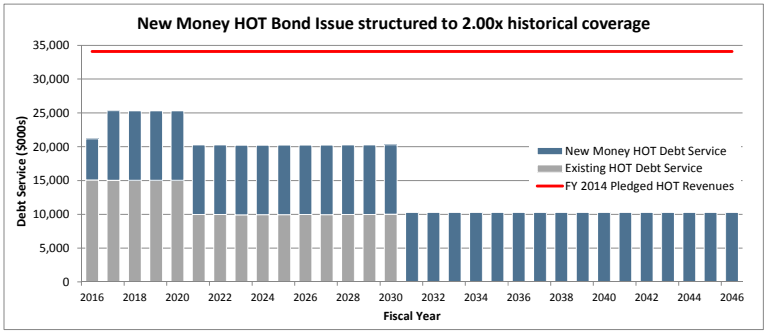
- Interest Rates: EHCI rates as of 3/2/2016 + 75bps
- Issue Date: August 2016
- Term: 30 years
- Pledged Revenues: FY 2014 4.5% HOT revenue of $34.1 million
- DSRF cash funded (though could be funded through surety)
- Financing Costs:
  - Costs of Issuance: $450,000
  - Underwriting: $1.25-$5.00/bond plus expenses
- Assumed current Subordinate Lien ratings: A1/A (M/S)
- Structure: Level Debt Service

New Money HOT Bond Issue Financing Results

Using 2.00x ABT coverage, we structured level debt service around the existing debt service with a maximum annual debt service of $10.3 million. This financing produced net proceeds of $155.6 million. Project funds could be used for a variety

of capital projects, including the proposed convention center expansion, ongoing Waller creek improvements, etc. If coverage was pushed down to 1.25x (and we assume the City could maintain its current A1/A ratings), it would produce $311 million in net proceeds. Below, please find major bond statistics and an illustration of the HOT debt service.

Bond Statistics	
Delivery Date	8/24/2016
Final Maturity	11/15/2046
Par Amount	$146,950,000
Project Fund	$155,694,055
True Interest Cost	4.66%
Arb Yield	3.98%
Max Annual Debt Service	$10,279,944
Average Annual Debt Service	$10,401,892



VI. FINANCIAL VIABILITY

Provide the most recent audited annual Audit Report and most recent interim financial report as an attachment or appendix item. Hard copies must be included in the original submittal.

Included herein as part of our response is the most recent audited annual Audit Report, as well as the most recent FOCUS Report.

VII. AUSTIN BOND EXPERIENCE

In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

Estrada Hinojosa acknowledges that the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales.

VIII. REFERENCES

Provide exactly three (3) government client references, at least two of which are covered by individuals listed in Part IV above. For each reference, provide a name, title, and organization, address and telephone number. In addition to the list provided, the City may independently solicit other references.

Selected References

Estrada Hinojosa believes that strong recommendations from our clients are the most accurate indications of our firm's level of service and expertise. Below are selected client references that will be helpful in assessing our ability to serve the City.

Bexar County	Travis County	City of Irving
Mr. David Smith	Jessica Rio	Mr. Max Duplant
County Manager	Budget Manager	Chief Financial Officer
101 W. Nueva, Suite 901	700 Lavaca, Suite 1560	825 W. Irving Blvd.
San Antonio, TX 78205	Austin, TX 78701	Irving, TX 75060
210-335-2405	512-854-4455	972-721-4615

CIP ID Number:

City of Austin, Texas
Equal Employment/Fair Housing Office

To: City of Austin, Texas, ("OWNER")

I hereby certify that our firm conforms to the Code of the City of Austin Section 5-4-2 as reiterated below:

Chapter 5-4. Discrimination in Employment by City Contractors.

Sec. 4-2 Discriminatory Employment Practices Prohibited. (B) As an Equal Employment Opportunity (EEO) employer, the Contractor will conduct its personnel activities in accordance with established federal, state and local EEO laws and regulations and agrees:

(1) Not to engage in any discriminatory employment practice defined in this chapter.

(2) To take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without discrimination being practiced against them as defined in this chapter. Such affirmative action shall include, but not be limited to: all aspects of employment, including hiring, placement, upgrading, transfer, demotion, recruitment, recruitment advertising; selection for training and apprenticeship, rates of pay or other forms of compensation, and layoff or termination.

(3) To post in conspicuous places, available to employees and applicants for employment, notices to be provided by OWNER setting forth the provisions of this chapter.

(4) To state in all solicitations or advertisements for employees placed by or on behalf of Contractor, that all qualified applicants will receive consideration for employment without regard to race, creed, color, religion, national origin, sexual orientation, gender identity, disability, veteran status, sex or age.

(5) To obtain a written statement from any labor union or labor organization furnishing labor or service to Contractors in which said union or organization has agreed not to engage in any discriminatory employment practices as defined in this chapter and to take affirmative action to implement policies and provisions of this chapter.

(6) To cooperate fully with OWNER's Equal Employment/Fair Housing Office in connection with any investigation or conciliation effort of said Equal Employment/Fair Housing Office to ensure that the purpose of the provisions against discriminatory employment practices are being carried out.

(7) To require compliance with provisions of this chapter by all subcontractors having fifteen or more employees who hold any subcontract providing for expenditure of $2,000.00 or more in connection with any contract with OWNER subject to the terms of this chapter. .

For the purposes of this Bid and any resulting Contract, Contractor adopts the provisions of the City's Minimum Standard Nondiscrimination and Non-Retaliation Policy as set forth below.

City of Austin

Minimum Standard Non-Discrimination and Non-Retaliation in Employment Policy

As an Equal Employment Opportunity (EEO) employer, the Contractor will conduct its personnel activities in accordance with established federal, state and local EEO laws and regulations.

The Contractor will not discriminate against any applicant or employee based on race, creed, color, national origin, sex, age, religion, veteran status, gender identity, disability, or sexual orientation. This policy covers all aspects of employment, including hiring, placement, upgrading, transfer, demotion, recruitment, recruitment advertising, selection for training and apprenticeship, rates of pay or other forms of compensation, and layoff or termination.

The Contractor agrees to prohibit retaliation, discharge or otherwise discrimination against any employee or applicant for employment who has inquired about, discussed or disclosed their compensation.

Further, employees who experience discrimination, sexual harassment, or another form of harassment should immediately report it to their supervisor. If this is not a suitable avenue for addressing their complaint, employees are advised to contact another member of management or their human resources representative. No employee shall be discriminated against, harassed, intimidated, nor suffer any reprisal as a result of reporting a violation of this policy. Furthermore, any employee, supervisor, or manager who becomes aware of any such discrimination or harassment should immediately report it to executive management or the human resources office to ensure that such conduct does not continue.

Contractor agrees that to the extent of any inconsistency, omission, or conflict with its current non-discrimination and non- retaliation employment policy, the Contractor has expressly adopted the provisions of the City's Minimum Non-Discrimination Policy contained in Section 5-4-2 of the City Code as set forth above and the City's Non-Retaliation Policy, as the Contractor's Non-Discrimination and Non-Retaliation Policy or as an amendment to such Policy and such provisions are intended to not only supplement the Contractor's policy, but will also supersede the Contractor's policy to the extent of any conflict.

UPON CONTRACT AWARD, THE CONTRACTOR SHALL PROVIDE A COPY TO THE CITY OF THE CONTRACTOR'S NON-DISCRIMINATION AND NON-RETALIAITON POLICY ON COMPANY LETTERHEAD, WHICH CONFORMS IN FORM, SCOPE, AND CONTENT TO THE CITY'S MINIMUM NON-DISCRIMINATION AND NON-RETALIATION POLICY, AS SET FORTH HEREIN, ***OR*** *THIS NON-DISCRIMINATION AND NON-RETALIATION POLICY, WHICH HAS BEEN ADOPTED BY THE CONTRACTOR FOR ALL PURPOSES (THE FORM OF WHICH HAS BEEN APPROVED BY THE CITY'S EQUAL EMPLOYMENT/FAIR HOUSING OFFICE), WILL BE CONSIDERED THE CONTRACTOR'S NON-DISCRIMINATION AND NON-RETALIATION POLICY WITHOUT THE REQUIREMENT OF A SEPARATE SUBMITTAL. (http://austintexas.gov/page/bid-docs).*

Sanctions:

Our firm understands that non-compliance with Chapter 5-4 may result in sanctions, including termination of the contract and suspension or debarment from participation in future City contracts until deemed compliant with the requirements of Chapter 5-4.

Term:

The Contractor agrees that this Section 00630 Non-Discrimination and Non-Retaliation Certificate or the Contractor's separate conforming policy, which the Contractor has executed and filed with the Owner, will remain in force and effect for one year from the date of filing. The Contractor further agrees that, in consideration of the receipt of continued Contract payments, the Contractor's Non-Discrimination Policy will automatically renew from year-to-year for the term of the underlying Contract.

Dated this 8th day of March, 2016.

CONTRACTOR Estrada Hinojosa & Company, Inc.

Authorized Signature

Title Managing Director

END

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	X	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes		**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Estrada Hinojosa & Company, Inc.

Company Name

Adrian Galvan, Managing Director

Name and Title of Authorized Representative (Print or Type)

Signature

March 8, 2016

Date

ESTRADA HINOJOSA & COMPANY, INC.

FINANCIAL REPORT

DECEMBER 31, 2015

C O N T E N T S

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Securities and Exchange Commission 17

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors
Estrada Hinojosa & Company, Inc.
Dallas, Texas

We have audited the accompanying statement of financial condition of Estrada Hinojosa & Company, Inc. (the Company) as of December 31, 2015 and the related statements of income, changes in stockholders' equity and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Estrada Hinojosa & Company, Inc. as of December 31, 2015, and the results of its operations and its cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

The supplemental information on pages 16 through 17 has been subjected to audit procedures performed in conjunction with the audit of the Company's financial statements. The supplemental information is the responsibility of the entity's management. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the accompanying supplemental information. In forming our opinion on the supplemental information, we evaluated whether the accompanying supplemental information, including its form and content, is presented in conformity with 17 C.F.R. § 240.17a-5. In our opinion, the supplemental information on pages 16 through 17 is fairly stated, in all material respects, in relation to the financial statements as a whole.

Weaver and Tidwell, L.L.P.

WEAVER AND TIDWELL, L.L.P.

Fort Worth, Texas
February 25, 2016

ESTRADA HINOJOSA & COMPANY, INC.
STATEMENT OF FINANCIAL CONDITION
DECEMBER 31, 2015

Assets		
Cash	$	2,781,169
Cash deposits with clearing organization		1,022,401
Investments, at fair value		1,247,798
Due from shareholder		15,000
Trade receivables		899,644
Property and Equipment, Net		104,823
Prepaid expenses		60,690
Deferred tax asset		100,397
Other assets		
less accumulated amortization of $140,000		465,300
Total Assets	$	6,697,222
Liabilities and Stockholders' Equity		
Liabilities		
Accounts payable and accrued expenses	$	639,017
Federal and state taxes payable		76,261
Notes payable		406,632
Deferred tax liability		46,572
Total Liabilities		1,168,482
Stockholders' Equity		
Common stock, $.01 par value,		
1,000,000 shares authorized,		
11,951 shares issued and 11,526 outstanding		120
Additional paid-in capital		289,377
Treasury stock, 425 shares		(180,194)
Retained earnings		5,419,437
Total Stockholders' Equity		5,528,740
Total Liabilities and Stockholders' Equity	$	6,697,222

The Notes to Financial Statements are
an integral part of this statement.

ESTRADA HINOJOSA & COMPANY, INC.
STATEMENT OF INCOME
YEAR ENDED DECEMBER 31, 2015

Revenue	
Underwriting	$ 4,721,196
Financial advisory	8,478,968
Interest and other income	51,906
Total revenue	13,252,070
Operating expenses	
Commissions	4,922,560
Clearing costs	10,390
Employee compensation	4,895,874
Office rent	460,237
Depreciation	31,961
Amortization	20,000
Interest expense	35,377
Other operating expenses	2,517,568
Total operating expenses	12,893,967
Income before income taxes	358,103
Income tax expense	218,542
Net income	$ 139,561

The Notes to Financial Statements are
an integral part of this statement.

ESTRADA HINOJOSA & COMPANY, INC.
STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY
YEAR ENDED DECEMBER 31, 2015

	Common Stock $.01 Par Value	Additional Paid-in Capital	Treasury Stock	Retained Earnings	Total
Balance, December 31, 2014	$ 120	$ 289,377	$ (89,671)	$ 5,208,802	$ 5,408,628
Purchase of treasury stock from shareholder	-	-	(90,523)	-	(90,523)
Stock compensation expense	-	-	-	71,074	71,074
Net income	-	-	-	139,561	139,561
Balance, December 31, 2015	$ 120	$ 289,377	$ (180,194)	$ 5,419,437	$ 5,528,740

The Notes to Financial Statements are
an integral part of this statement.

ESTRADA HINOJOSA & COMPANY, INC.
STATEMENT OF CASH FLOWS
YEAR ENDED DECEMBER 31, 2015

Cash Provided by Operating Activities:		
Net income	$	139,561
Adjustments to reconcile net income to cash provided by operating activities		
Depreciation expense		31,961
Amortization expense		20,000
Stock compensation expense		71,074
Net change in investments and marketable securities		306,476
Deferred income taxes		33,516
(Increase)/decrease in assets		
Cash deposits with clearing organization		2,599
Receivable from brokers and dealers		602,522
Trade receivables		283,347
Other receivables		76,419
Prepaid expenses		53,142
Other assets		(8,806)
Increase/(decrease) in liabilities		
Accounts payable and accrued expenses		(554,567)
Federal and state taxes payable		(87,092)
Cash provided by operating activities		970,152
Cash Used in Investing Activities		
Purchases of property and equipment		(30,681)
Cash used in investing activities		(30,681)
Cash Used in Financing Activities		
Payments on notes payable		(5,971)
Purchase of treasury stock		(90,523)
Cash used in financing activities		(96,494)
Net Change in Cash		842,977
Cash at Beginning of Year		1,938,192
Cash at End of Year	$	2,781,169

Supplemental information:

Cash paid for interest	$	40,818
Cash paid for taxes	$	305,634

The Notes to Financial Statements are
an integral part of this statement.

ESTRADA HINOJOSA & COMPANY, INC.
NOTES TO FINANCIAL STATEMENTS

NOTE 1. ORGANIZATION AND NATURE OF BUSINESS

Estrada Hinojosa & Company, Inc. (the Company) is a municipal securities dealer registered with the Securities and Exchange Commission (SEC) and a member of the Financial Industry Regulatory Authority (FINRA). The Company is a Texas Corporation.

NOTE 2. SIGNIFICANT ACCOUNTING POLICIES

Concentration of Credit Risk

The Company maintains its cash at its clearing correspondent broker dealer and in bank deposit accounts which, at times, may exceed federally insured limits. The Company has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents.

Basis of Presentation

The Company is engaged in investment banking services which comprises several classes of services, including underwriting activities, financial advisory services, placement agent services, continuing disclosure submission services, and secondary market sales.

Use of Estimates in the Preparation of Financial Statements

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Accounts Receivable

Receivables from brokers and dealers and other receivables are reported in the statement of financial condition at outstanding principal adjusted for any charge offs. An allowance for doubtful accounts is recognized by management based upon a review of specific customer balances, historical losses (bad debts) incurred and general economic conditions. As of December 31, 2015, the Company had no accounts that management believes were doubtful of being collected.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation. Depreciation on property and equipment is provided in amounts sufficient to relate the cost of the assets to operations over their estimated service lives of seven years using the straight-line method.

NOTE 2. SIGNIFICANT ACCOUNTING POLICIES – CONTINUED

Property and Equipment (continued)

Major repairs or replacements which increase the useful lives of property and equipment are capitalized. Maintenance repairs and minor replacements are charged to operations as incurred. Property and equipment retirements are removed from the records at their cost and related accumulated depreciation and any resulting gain or loss is included in operations.

Other assets

Other assets include the purchase price of seat licenses for a professional sports team. The licenses are being amortized over a period of thirty years.

Revenue Recognition

Revenues from the Company's investment banking operations include fees for financial advisory services and underwriting activities and gains and losses on secondary market sales.

Financial advisory fees are recorded on the date of closing. In addition, the Company occasionally acts as a co-financial advisor in which a joint financial advisory relationship exists between the Company and a municipality, as well as between another financial advisor and the municipality to provide financial advisory services. Co-financial advisor fees are recorded when earned.

Underwriting fees, including management fees and fees for group or designated orders in connection with a specific bond issue are recorded on the date of closing, net of syndicate expenses arising from a bond issuance in which the Company participates as a syndicate member. In the instance where the Company is the designated senior-managing underwriter, underwriting fees in connection with a specific bond issue are recorded on trade date. In the normal course of business, the Company enters into underwriting commitments. Transactions related to such underwriting commitments that were open at December 31, 2015, and were subsequently settled, had no material effect on the financial statements as of that date.

Secondary market sales of municipal securities held arising from unsold balances in connection with a specific bond issue, including gains and losses resulting from such transactions, are recorded on trade date.

Fees for placement agent services, and continuing disclosure submission services are recorded when earned.

Income Taxes

Income taxes are provided for the tax effects of transactions reported in the financial statements and consist of taxes currently due plus deferred taxes related primarily to temporary or permanent differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases.

Deferred tax assets and liabilities, if any, represent the future tax return consequences of those differences, which will be taxable or deductible when the assets and liabilities are recovered or settled. The measurement of deferred tax assets is reduced by a valuation allowance if, based on available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. Management fully expects to utilize the deferred tax assets recorded and no allowance has been reflected in the financial statements.

The Company recognizes and measures any unrecognized tax benefits in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 740, “Income Taxes”. Under that guidance the Company assesses the likelihood, based on their technical merit, that tax positions will be sustained upon examination based on the facts, circumstances and information available at the end of each period.

The measurement of unrecognized tax benefits is adjusted when new information is available, or when an event occurs that requires a change.

As of December 31, 2015, the Company, using that guidance, has no uncertain tax positions that qualify for either recognition or disclosure in the financial statements. For federal and state taxes, as of December 31, 2015, the Company’s fiscal years 2012 through 2015 remain subject to examination.

Statement of Cash Flows

For purposes of the statement of cash flows, the Company has defined cash equivalents as highly liquid investments, with original maturities of less than three months that are not held for sale in the ordinary course of business.

NOTE 3. FAIR VALUE

Fair Value Measurement

Investments are recorded at fair value and investment transactions are recorded on the trade date. FASB ASC 820 “Fair Value Measurement”, defines fair value, establishes a framework for measuring fair value, and establishes a fair value hierarchy which prioritizes the inputs to valuation techniques. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

NOTE 3. FAIR VALUE - CONTINUED

Fair Value Measurement (continued)

A fair value measurement assumes that the transaction to sell the asset or transfer the liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market. Valuation techniques that are consistent with the market, income or cost approach, as specified by FASB ASC 820, are used to measure fair value.

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels:

Level 1 inputs: inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities the Company has the ability to access.

Level 2 inputs: inputs that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets in markets that are not active, and other observable inputs other than quoted market prices included within level 1.

Level 3 inputs: are significant unobservable inputs for the asset or liability and rely on management's own assumptions about the assumptions that market participants would use in pricing the asset.

At December 31, 2015, the Company's investments consist of mutual funds valued at $658 and certificates of deposit with maturities greater than 90 days valued at $1,247,140. Fair value of mutual funds is based on quoted market prices. Broker pricing is used for valuation of certificates of deposit, and is based on pricing of similar assets. For the year ended December 31, 2015, realized and unrealized losses were $40,928 and are included in interest and other income in the statement of income.

The following table presents the Company's fair value hierarchy for those assets measured at fair value on a recurring basis as of December 31, 2015.

NOTE 3. FAIR VALUE – CONTINUED

Fair Value Measurement – (continued)

Fair Value Measurements on a Recurring Basis
As of December 31, 2015

Assets	Level 1	Level 2	Level 3	Total
Short term bond fund	$ 658	$ -	$ -	$ 658
Certificates of deposit	-	1,247,140	-	1,247,140
TOTALS	$ 658	$ 1,247,140	$ -	$ 1,247,798

NOTE 4. RECEIVABLE FROM AND PAYABLE TO BROKER-DEALERS AND CLEARING ORGANIZATIONS

Amounts receivable from and payable to broker-dealers and clearing organizations at December 31, 2015, consist of the following:

	Receivable	Payable
Deposits for securities borrowed/loaned	$ 997,401	-
Receivables from and payables to broker-dealers and clearing organizations	-	-
Other	25,000	-
	$ 1,022,401	$ -

At December 31 2015, the above balance is included in cash deposits with clearing organization in the statement of financial condition.

The Company clears all customer transactions through another broker-dealer on a fully disclosed basis.

NOTE 5. PROPERTY AND EQUIPMENT, NET

Furniture, fixtures and equipment consists of the following at December 31, 2015:

Property and Equipment	
Computer equipment and software	$ 354,837
Furniture and fixtures	83,116
Leasehold improvements	62,083
	500,036
Accumulated depreciation	(395,213)
Property and Equipment, Net	$ 104,823

NOTE 6. LONG-TERM DEBT

Long-term debt at December 31, 2015 consists of the following:

Note payable to an entity in 30 equal annual payments of $40,000 including 8.15% interest beginning March, 1 2009 and ending January 1, 2039, secured by Dallas Cowboys seats Licenses.	$ 406,632

Future payments under long-term debt as of December 31, 2015 are as follows:

Year Ending December 31	
2016	$ 6,463
2017	6,996
2018	7,573
2019	8,198
2020	8,874
Thereafter	368,528
	$ 406,632

NOTE 7. COMMITMENTS AND CONTINGENCIES

The Company has obligations under operating leases with initial non-cancelable terms in excess of one year. Aggregate annual rentals for office space at December 31, 2015, are listed as follows:

Year Ended December,31	Total
2016	$ 291,843
2017	248,437
2018	205,070
2019	182,764
2020	186,450
Thereafter	78,328
	$ 1,192,892

Certain leases contain renewal options and escalation clauses. Rent expense for the year ended December 31, 2015, was $460,237 and is included in the office rent line on the statement of income.

NOTE 8. NET CAPITAL REQUIREMENTS

The Company is subject to the SEC Uniform Net Capital Rule (SEC Rule 15c3-1), which requires the maintenance of minimum net capital and requires that the ratio of aggregate indebtedness to net capital, both as defined, shall not exceed 15 to 1; and the rule of the “applicable” exchange also provides that equity capital may not be withdrawn or cash dividends paid if the resulting net capital ratio would exceed 10 to 1. At December 31, 2015, the Company had net capital of $4,000,944 which was $3,900,944 in excess of its required net capital of $100,000. The Company's net capital ratio was .26 to 1.

NOTE 9. INCOME TAX EXPENSE

Income tax expense consists of the following at December 31, 2015:

Income taxes		
Federal:		
Current	$	142,055
Deferred		33,516
State:		
Arizona		50
California		500
Florida		(535)
Illinois		4,906
New York		1,428
Texas		36,622
Total tax expense	$	218,542

Current income tax expense differs from the tax computed by applying the federal statutory rates to income before taxes principally because of state income taxes and non-deductible expenses for tax purposes, and differences between the book and tax basis of the assets and liabilities.

Components of the net deferred tax asset (liability) are as follows at December 31, 2015:

Deferred tax assets resulting from:		
Unrealized losses on securities	$	20,709
Deferred Rent		27,996
Reimbursable Expenses		51,692
Total deferred tax asset	$	100,397
Deferred tax liability resulting from:		
Stock compensation	$	(10,504)
Property and equipment		(36,068)
Total deferred tax liability	$	(46,572)

NOTE 10. RETIREMENT PLAN

Effective January 1, 2002, the Company adopted a 401(k) retirement plan that covers all employees that complete a minimum of six months of service. Eligible employees may contribute any amount to the plan, up to the statutory maximum permitted. Each year, the Company has the discretion to make a non-elective contribution to the accounts of each employee eligible to participate in the plan. The Company's contribution to the plan for 2015 was $174,605.

NOTE 11. RELATED PARTY TRANSACTIONS

The Company advanced $30,000 to a company partly owned by the majority shareholders. The purpose of the advance was to provide resources to support upcoming services. The funds will be returned to the Company upon the associated company receiving compensation for their services. As of December 31, 2015, $15,000 remains outstanding.

The Company rents a property in South Padre Island, Texas from an affiliate related through common ownership. Total included in rental expense was $90,000 for the year ended December 31, 2015.

During 2015, 200 shares of company stock were sold back to the Company by a former employee, who is now retired.

NOTE 12. STOCK REPURCHASE AGREEMENT

During 2011, the Company entered into a stock repurchase agreement with a current shareholder. The agreement includes three installments. The first installment was executed in December 2011 for 1,350 shares at $399 per share. The Company paid half of the agreed price prior to December 31, 2011, and the remainder subsequent to year-end. The second installment was executed on July 13, 2012, for 500 shares at $399 per share. The third installment was executed on December 14, 2012, for 300 shares at $399 per share.

The Company adopted an employee stock purchase plan in order to offer the 2,150 shares to various key employees. During 2011, 855 shares were purchased by employees at $199 per share for a total of $170,376. During 2012, 605 shares were purchased by employees at $199 per share for a total of $120,558. During 2013, 465 shares were purchased by employees at $199 per share for a total of $92,655. The employee stock purchase plan includes a provision that if employment is terminated within three years of the purchase date (vesting period), the stock must be sold back to the Company at the lesser of the price paid by the employee or the book value per share at the termination date. The compensation expense related to the sale of the 1925 shares at a discount will be amortized over the next three years for each installment. Expense of $71,074 was recognized during the year ended December 31, 2015. The expense of $30,901 remains to be amortized through December 31, 2016.

NOTE13 . SUBSEQUENT EVENTS

The Company has evaluated subsequent events through February 25, 2016, which is the date the financial statements were available to be issued, and determined that no events have occurred subsequent to December 31, 2015 that warrant disclosure or recognition.

2016-02-29 08:03AM EST
Status: Accepted

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

FORM X-17A-5

FOCUS REPORT
(FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT)
PART IIA [12]

(Please read instructions before preparing Form)

This report is being filed pursuant to (Check Applicable Block(s)):

1) Rule 17a-5(a) [16] 2) Rule 17a-5(b) [17] 3) Rule 17a-11 [18]
4) Special request by designated examining authority [19] 5) Other [26]

NAME OF BROKER-DEALER
ESTRADA HINOJOSA & COMPANY, INC. [13]

SEC. FILE NO.
8-37440 [14]

FIRM ID NO.
19299 [15]

ADDRESS OF PRINCIPAL PLACE OF BUSINESS (Do not use P.O. Box No.)
1717 MAIN STREET LB 47, SUITE 4700 [20]
(No. and Street)

DALLAS [21] (City) TX [22] (State) 75201-7361 [23] (Zip Code)

FOR PERIOD BEGINNING (MM/DD/YY)
01/01/16 [24]

AND ENDING (MM/DD/YY)
01/31/16 [25]

NAME AND TELEPHONE NUMBER OF PERSON TO CONTACT IN REGARD TO THIS REPORT(Area code) - Telephone No.
Scott Felt [30] (214) 743-1369 [31]

NAME(S) OF SUBSIDIARIES OR AFFILIATES CONSOLIDATED IN THIS REPORT

[32] [33]
[34] [35]
[36] [37]
[38] [39]

OFFICIAL USE

DOES RESPONDENT CARRY ITS OWN CUSTOMER ACCOUNTS ? YES [40] NO [41]

CHECK HERE IF RESPONDENT IS FILING AN AUDITED REPORT [42]

EXECUTION:
The registrant/broker or dealer submitting this Form and its attachments and the person(s) by whom it is executed represent hereby that all information contained therein is true, correct and complete. It is understood that all required items, statements, and schedules are considered integral parts of this Form and that the submisson of any amendment represents that all unamended items, statements and schedules remain true, correct and complete as previously submitted.

Dated the 24th day of February 20 16

Manual Signatures of:

1) R A Estrada
Principal Executive Officer or Managing Partner

2) Scott Felt
Principal Financial Officer or Partner

3)
Principal Operations Officer or Partner

ATTENTION - Intentional misstatements or omissions of facts constitute Federal Criminal Violations. (See 18 U.S.C. 1001 and 15 U.S.C. 78:f (a))

FINRA

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

2016-02-29 08:03AM EST
Status: Accepted

BROKER OR DEALER					
ESTRADA HINOJOSA & COMPANY, INC.	N	3			100

STATEMENT OF FINANCIAL CONDITION FOR NONCARRYING, NONCLEARING AND CERTAIN OTHER BROKERS OR DEALERS

as of (MM/DD/YY) 01/31/16 [99]
SEC FILE NO. 8-37440 [98]
Consolidated [ ] [198]
Unconsolidated [X] [199]

ASSETS	Allowable	Non-Allowable	Total
1. Cash	$ 4,397,267 [200]		$ 4,397,267 [750]
2. Receivables from brokers or dealers:			
A. Clearance account	25,000 [295]		
B. Other	51,923 [300]	$ 374,164 [550]	451,087 [810]
3. Receivables from non-customers	[355]	20,300 [600]	20,300 [830]
4. Securities and spot commodities owned, at market value:			
A. Exempted securities	0 [418]		
B. Debt securities	[419]		
C. Options	[420]		
D. Other securities	1,247,801 [424]		
E. Spot commodities	[430]		1,247,801 [850]
5. Securities and/or other investments not readily marketable:			
A. At cost $ [130]			
B. At estimated fair value	[440]	[610]	[860]
6. Securities borrowed under subordination agreements and partners' individual and capital securities accounts, at market value:	[460]	[630]	[880]
A. Exempted securities $ [150]			
B. Other securities $ [160]			
7. Secured demand notes:	[470]	[640]	[890]
Market value of collateral:			
A. Exempted securities $ [170]			
B. Other securities $ [180]			
8. Memberships in exchanges:			
A. Owned, at market $ [190]			
B. Owned, at cost		[650]	
C. Contributed for use of the company, at market value		[660]	[900]
9. Investment in and receivables from affiliates, subsidiaries and associated partnerships	[480]	[670]	[910]
10. Property, furniture, equipment, leasehold improvements and rights under lease agreements, at cost-net of accumulated depreciation and amortization.	[490]	102,017 [680]	102,017 [920]
11. Other assets	[535]	628,111 [735]	628,111 [930]
12. Total Assets	$ 5,721,991 [540]	$ 1,124,592 [740]	$ 6,846,583 [940]

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

2016-02-29 08:03AM EST
Status: Accepted

BROKER OR DEALER
ESTRADA HINOJOSA & COMPANY, INC. as of 01/31/16

STATEMENT OF FINANCIAL CONDITION FOR NONCARRYING, NONCLEARING AND CERTAIN OTHER BROKERS OR DEALERS

LIABILITIES AND OWNERSHIP EQUITY

Liabilities	A.I. Liabilities		Non-A.I. Liabilities		Total	
13. Bank loans payable	$	1045	$	1255	$	1470
14. Payable to brokers or dealers:						
A. Clearance account	0	1114		1315	0	1560
B. Other		1115		1305		1540
15. Payable to non-customers		1155		1355		1610
16. Securities sold not yet purchased, at market value				1360		1620
17. Accounts payable, accrued liabilities, expenses and other	1,287,906	1205	123,414	1385	1,411,320	1685
18. Notes and mortgages payable:						
A. Unsecured	406,633	1210			406,633	1690
B. Secured		1211		1390		1700
19. Liabilities subordinated to claims of general creditors:						
A. Cash borrowings:				1400		1710
1. from outsiders $ 970						
2. Includes equity subordination (15c3-1(d)) of $ 980						
B. Securities borrowings, at market value from outsiders $ 990				1410		1720
C. Pursuant to secured demand note collateral agreements				1420		1730
1. from outsiders $ 1000						
2. includes equity subordination (15c3-1(d)) of $ 1010						
D. Exchange memberships contributed for use of company, at market value				1430		1740
E. Accounts and other borrowings not qualified for net capital purposes		1220		1440		1750
20. TOTAL LIABILITIES	$ 1,694,539	1230	$ 123,414	1450	$ 1,817,953	1760

Ownership Equity

21. Sole proprietorship		$	1770
22. Partnership (limited partners)	$ 1020		1780
23. Corporation:			
A. Preferred stock			1791
B. Common stock		120	1792
C. Additional paid-in capital		289,377	1793
D. Retained earnings		4,919,327	1794
E. Total		5,208,824	1795
F. Less capital stock in treasury		(180,194)	1796
24. TOTAL OWNERSHIP EQUITY		$ 5,028,630	1800
25. TOTAL LIABILITIES AND OWNERSHIP EQUITY		$ 6,846,583	1810

OMIT PENNIES

2016-02-29 08:03AM EST
Status: Accepted

BROKER OR DEALER
ESTRADA HINOJOSA & COMPANY, INC. as of 01/31/16

COMPUTATION OF NET CAPITAL

1. Total ownership equity from Statement of Financial Condition			$ 5,028,630	3480
2. Deduct ownership equity not allowable for Net Capital			( )	3490
3. Total ownership equity qualified for Net Capital			5,028,630	3500
4. Add:				
A. Liabilities subordinated to claims of general creditors allowable in computation of net capital				3520
B. Other (deductions) or allowable credits (List)				3525
5. Total capital and allowable subordinated liabilities			$ 5,028,630	3530
6. Deductions and/or charges:				
A. Total non-allowable assets from Statement of Financial Condition (Notes B and C)	$ 1,124,592	3540		
B. Secured demand note deficiency		3590		
C. Commodity futures contracts and spot commodities-proprietary capital charges		3600		
D. Other deductions and/or charges		3610	(1,124,592)	3620
7. Other additions and/or allowable credits (List)				3630
8. Net Capital before haircuts on securities positions			$ 3,904,038	3640
9. Haircuts on securities (computed, where applicable, pursuant to 15c3-1(f)):				
A. Contractual securities commitments	$	3660		
B. Subordinated securities borrowings		3670		
C. Trading and investment securities:				
1. Exempted securities	0	3735		
2. Debt securities		3733		
3. Options		3730		
4. Other securities	112,302	3734		
D. Undue concentration		3650		
E. Other (List)		3736	(112,302)	3740
10. Net Capital			$ 3,791,736	3750

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

2016-02-29 08:03AM EST
Status: Accepted

BROKER OR DEALER

ESTRADA HINOJOSA & COMPANY, INC. as of 01/31/16

COMPUTATION OF BASIC NET CAPITAL REQUIREMENT

Part A

11. Minimum net capital required (6-2/3% of line 19)	$	112,969	3756
12. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)	$	100,000	3758
13. Net capital requirement (greater of line 11 or 12)	$	112,969	3760
14. Excess net capital (line 10 less 13)	$	3,678,767	3770
15. Net capital less greater of 10% of line 19 or 120% of line 12	$	3,622,282	3780

COMPUTATION OF AGGREGATE INDEBTEDNESS

16. Total A.I. liabilities from Statement of Financial Condition			$	1,694,539	3790
17. Add:					
A. Drafts for immediate credit	$	3800			
B. Market value of securities borrowed for which no equivalent value is paid or credited	$	3810			
C. Other unrecorded amounts (List)	$	3820	$		3830
19. Total aggregate indebtedness			$	1,694,539	3840
20. Percentage of aggregate indebtedness to net capital (line 19 divided by line 10)			%	44.69	3850
21. Percentage of debt to debt-equity total computed in accordance with Rule 15c-3-1(d)			%	0.00	3860

COMPUTATION OF ALTERNATE NET CAPITAL REQUIREMENT

Part B

22. 2% of combined aggregate debit items as shown in Formula for Reserve Requirements pursuant to Rule 15c3-3 prepared as of the date of net capital computation including both brokers or dealers and consolidated subsidiaries' debits	$		3870
23. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)	$		3880
24. Net capital requirement (greater of line 22 or 23)	$		3760
25. Excess net capital (line 10 less 24)	$		3910
26. Net capital in excess of the greater of: 5% of combined aggregate debit items or 120% of minimum net capital requirement	$		3920

NOTES:

(A) The minimum net capital requirement should be computed by adding the minimum dollar net capital requirement of the reporting broker dealer and, for each subsidiary to be consolidated, the greater of:

1. Minimum dollar net capital requirement, or

2. 6-2/3% of aggregate indebtedness or 4% of aggregate debits if alternative method is used.

(B) Do not deduct the value of securities borrowed under subordination agreements or secured demand notes covered by subordination agreements not in satisfactory form and the market values of the memberships in exchanges contributed for use of company (contra to item 1740) and partners' securities which were included in non-allowable assets.

(C) For reports filed pursuant to paragraph (d) of Rule 17a-5, respondent should provide a list of material non-allowable assets.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

ESTRADA HINOJOSA & COMPANY, INC.

For the period (MMDDYY) from 01/01/16 [3932] to 01/31/16 [3933]
Number of months included in this statement 1 [3931]

REVENUE — STATEMENT OF INCOME (LOSS)

1. Commissions:		
a. Commissions on transactions in exchange listed equity securities executed on an exchange	$	3935
b. Commissions on listed option transactions		3938
c. All other securities commissions		3939
d. Total securities commissions		3940
2. Gains or losses on firm securities trading accounts		
a. From market making in options on a national securities exchange		3945
b. From all other trading	0	3949
c. Total gain (loss)	0	3950
3. Gains or losses on firm securities investment accounts	0	3952
4. Profits (losses) from underwriting and selling groups	149,800	3955
5. Revenue from sale of investment company shares		3970
6. Commodities revenue		3990
7. Fees for account supervision, investment advisory and administrative services	258,388	3975
8. Other revenue	1,629	3995
9. Total revenue	$ 409,817	4030

EXPENSES

10. Salaries and other employment costs for general partners and voting stockholder officers	663,647	4120
11. Other employee compensation and benefits	97,624	4115
12. Commissions paid to other brokers-dealers	208	4140
13. Interest expense	2,836	4075
a. Includes interest on accounts subject to subordination agreements [4070]		
14. Regulatory fees and expenses	5,672	4195
15. Other expenses	142,513	4100
16. Total expenses	$ 912,500	4200

NET INCOME

17. Net Income (loss) before Federal income taxes and items below (Item 9 less Item 16)	$ (502,683)	4210
18. Provision for Federal income taxes (for parent only)		4220
19. Equity in earnings (losses) of unconsolidated subsidiaries not included above		4222
a. After Federal income taxes of [4238]		
20. Extraordinary gains (losses)		4224
a. After Federal income taxes of [4239]		
21. Cumulative effect of changes in accounting principles		4225
22. Net income (loss) after Federal income taxes and extraordinary items	$ (502,683)	4230

MONTHLY INCOME

23. Income (current month only) before provision for Federal Income taxes and extraordinary items	(502,683)	4211

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

ESTRADA HINOJOSA & COMPANY, INC.

For the period (MMDDYY) from 01/01/16 to 01/31/16

STATEMENT OF CHANGES IN OWNERSHIP EQUITY
(SOLE PROPRIETORSHIP, PARTNERSHIP OR CORPORATION)

1. Balance, beginning of period		$ 5,528,740	4240
A. Net income (loss)		(502,683)	4250
B. Additions (includes non-conforming capital of	$ 4262)	2,573	4260
C. Deductions (includes non-conforming capital of	$ 4272)		4270
2. Balance, end of period (from item 1800)		$ 5,028,630	4290

STATEMENT OF CHANGES IN LIABILITIES SUBORDINATED
TO CLAIMS OF GENERAL CREDITORS

3. Balance, beginning of period	$	4300
A. Increases		4310
B. Decreases		4320
4. Balance, end of period (from item 3520)	$	4330

OMIT PENNIES

2016-02-29 08:03AM EST
Status: Accepted

BROKER OR DEALER

ESTRADA HINOJOSA & COMPANY, INC. as of 01/31/16

Exemptive Provision Under Rule 15c3-3

25. If an exemption from Rule 15c3-3 is claimed, identify below the section upon which such exemption is based :

A. (k) (1) - Limited business (mutual funds and/or variable annuities only) $ _____ 4550

B. (k) (2) (i) - "Special Account for the Exclusive Benefit of customers" maintained ..... _____ 4560

C. (k) (2) (ii) - All customer transactions cleared through another broker-dealer on a fully disclosed basis.

Name(s) of Clearing Firm(s) - Please separate multiple names with a semi-colon

Hilltop Securities 4335 X 4570

D. (k) (3) - Exempted by order of the Commission ..... _____ 4580

Ownership Equity and Subordinated Liabilities maturing or proposed to be withdrawn within the next six months and accruals, (as defined below), which have not been deducted in the computation of Net Capital.

Type of Proposed Withdrawal or Accrual (See below for code to enter)	Name of Lender or Contributor	Insider or Outsider ? (In or Out)	Amount to be withdrawn (cash amount and/or Net Capital Value of Securities)	(MMDDYY) Withdrawal or Maturity Date	Expect to Renew (Yes or No)
4600	4601	4602	4603	4604	4605
4610	4611	4612	4613	4614	4615
4620	4621	4622	4623	4624	4625
4630	4631	4632	4633	4634	4635
4640	4641	4642	4643	4644	4645
4650	4651	4652	4653	4654	4655
4660	4661	4662	4663	4664	4665
4670	4671	4672	4673	4674	4675
4680	4681	4682	4683	4684	4685
4690	4691	4692	4693	4694	4695

TOTAL $ _____ 4699

OMIT PENNIES

Instructions: Detail listing must include the total of items maturing during the six month period following the report date, regardless of whether or not the capital contribution is expected to be renewed. The schedule must also include proposed capital withdrawals scheduled within the six month period following the report date including the proposed redemption of stock and payments of liabilities secured by fixed assets (which are considered allowable assets in the capital computation pursuant to Rule 15c3-1(c) (2) (iv)), which could be required by the lender on demand or in less than six months.

WITHDRAWAL CODE: DESCRIPTION

1. Equity Capital
2. Subordinated Liabilities
3. Accruals
4. 15c3-1(c) (2) (iv) Liabilities

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-100064

Date Filed:
08/16/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Estrada Hinojosa & Co., Inc.
Dallas, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Bond Underwriting Services (Bond Purchase Agreement)

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Gonzales, Donald	Dallas, TX United States	X	
Nolan, Thomas	Dallas, TX United States	X	
Garza, Jorge	Dallas, TX United States	X	
Estrada, Robert	Dallas, TX United States	X	
Hinojosa, Noe	Dallas, TX United States	X	

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

BELINDA ANN GARZA
MY COMMISSION EXPIRES
November 10, 2019

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Thomas B. Nolan, this the 16th day of August, 20 16, to certify which, witness my hand and seal of office.

Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath
	Belinda A. Garza	Office Manager

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Hilltop Securities Inc. ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Hilltop Securities Inc. having offices at 1201 Elm Street, Suite 3500, Dallas, TX 75270 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Hilltop Securities Inc. Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

HILLTOP SECURITIES INC.

Chris W. Allen
Printed Name of Authorized Person

Signature

Managing Director
Title:

8/12/16
Date:

CITY OF AUSTIN

Terry V. Nicholson
Printed Name of Authorized Person

Signature

Senior Buyer Supervisor
Title:

8/16/16
Date:

b. has not given a local government officer of the City one or more gifts, other than gifts of food, lodging, transportation, or entertainment accepted as a guest, that have an aggregate value of more than $250 in the twelve month period preceding the date the officer becomes aware of the execution of the Contract or that OWNER is considering doing business with the Offeror.

c. as required by Chapter 176 of the Texas Local Government Code, Offeror must file a Conflict of Interest Questionnaire with the Office of the City Clerk no later than 5:00 P.M. on the seventh (7th) business day after the commencement of contract discussions or negotiations with the City or the submission of an Offer, or other writing related to a potential Contract with the City. The questionnaire is available on line at the following website for the City Clerk:

http://www.austintexas.gov/department/conflict-interest-questionnaire

There are statutory penalties for failure to comply with Chapter 176.

If the Offeror cannot affirmatively swear and subscribe to the forgoing statements, the Offeror shall provide a detailed written explanation in the space provided below or, as necessary, on separate pages to be annexed hereto.

7. **Anti-Lobbying Ordinance.** As set forth in the Solicitation Instructions, Section 0200, paragraph 7N, between the date that the Solicitation was issued and the date of full execution of the Contract, Offeror has not made and will not make a representation to a City official or to a City employee, other than the Authorized Contact Person for the Solicitation, except as permitted by the Ordinance.

OFFEROR'S EXPLANATION:

Contractor's Name: Hilltop Securities Inc.

Printed Name: Brian Wittneben

Title Secretary, General Counsel

Signature of Officer or Authorized Representative:

Subscribed and sworn to before me this 7th day of March, 2016.

Jorja W. Williams
Notary Public

My Commission Expires Jan. 6, 2018

NOTARY PUBLIC STATE OF TEXAS
JORJA W. WILLIAMS
My Commission Expires
January 06, 2018

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. Questions:

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16

Terry V. Nicholson, Sr. Buyer Specialist
Purchasing Office, 512-974-2995

Date

ACKNOWLEDGED BY:
HilltopSecurities Inc.

Chris W. Allen, Mgr Director
Name

Authorized Signature

March 7, 2016
Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Hilltop Securities Inc.

Company Address: 1201 Elm Street, Suite 3500

City, State, Zip: Dallas, Texas 75270

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Chris W. Allen

Title: Managing Director

Signature of Officer or Authorized Representative:

Date: March 7, 2016

Email Address: Chris.Allen@hilltopsecurities.com

Phone Number: 512.481.2013

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

CITY OF AUSTIN
NON-COLLUSION,
NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING AFFIDAVIT

SOLICITATION NO. TVN0103REBID

FOR
Underwriting/Investment Banking Services

State of Texas

County of Travis

The undersigned "Affiant" is a duly authorized representative of the Offeror for the purpose of making this Affidavit, and, after being first duly sworn, has deposed and stated and hereby deposes and states, to the best of his or her personal knowledge and belief as follows:

The term **"Offeror"**, as used herein, includes the individual or business entity submitting the Offer and for the purpose of this Affidavit includes the directors, officers, partners, managers, members, principals, owners, agents, representatives, employees, other parties in interest of the Offeror, and anyone or any entity acting for or on behalf of the Offeror, including a subcontractor in connection with this Offer.

1. **Anti-Collusion Statement.** The Offeror has not in any way directly or indirectly:

   a. colluded, conspired, or agreed with any other person, firm, corporation, Offeror or potential Offeror to the amount of this Offer or the terms or conditions of this Offer.

   b. paid or agreed to pay any other person, firm, corporation Offeror or potential Offeror any money or anything of value in return for assistance in procuring or attempting to procure a contract or in return for establishing the prices in the attached Offer or the Offer of any other Offeror.

2. **Preparation of Solicitation and Contract Documents**. The Offeror has not received any compensation or a promise of compensation for participating in the preparation or development of the underlying Solicitation or Contract documents. In addition, the Offeror has not otherwise participated in the preparation or development of the underlying Solicitation or Contract documents, except to the extent of any comments or questions and responses in the solicitation process, which are available to all Offerors, so as to have an unfair advantage over other Offerors, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

3. **Participation in Decision Making Process.** The Offeror has not participated in the evaluation of Offers or other decision making process for this Solicitation, and, if Offeror is awarded a Contract hereunder, no individual, agent, representative, consultant, subcontractor, or subconsultant associated with Offeror, who may have been involved in the evaluation or other decision making process for this Solicitation, will have any direct or indirect financial interest in the Contract, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

4, **Present Knowledge.** Offeror is not presently aware of any potential or actual conflicts of interest regarding this Solicitation, which either enabled Offeror to obtain an advantage over other Offerors or would prevent Offeror from advancing the best interests of the City in the course of the performance of the Contract.

5. **City Code.** As provided in Sections 2-7-61 through 2-7-65 of the City Code, no individual with a substantial interest in Offeror is a City official or employee or is related to any City official or employee within the first or second degree of consanguinity or affinity.

6. **Chapter 176 Conflict of Interest Disclosure.** In accordance with Chapter 176 of the Texas Local Government Code, the Offeror:

   a. does not have an employment or other business relationship with any local government officer of the City or a family member of that officer that results in the officer or family member receiving taxable income;

MINORITY- AND WOMEN-OWNED BUSINESS ENTERPRISE (MBE/WBE)
PROCUREMENT PROGRAM
NO GOALS FORM

SOLICITATION NUMBER: TVN0103REBID

PROJECT NAME: Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though no goals have been established for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract; using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No X **If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope.**

Yes_____ **If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, subconsultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though no goals have been established, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Hilltop Securities Inc.
Company Name

Chris W. Allen, Managing Director
Name and Title of Authorized Representative (Print or Type)

Signature **Date** March 7, 2016

MINORITY- AND WOMEN-OWNED BUSINESS ENTERPRISE (MBE/WBE)
PROCUREMENT PROGRAM
NO GOALS UTILIZATION PLAN
(Please duplicate as needed)

SOLICITATION NUMBER: TVN0103REBID

PROJECT NAME: Underwriter/Investment Banking Services

PRIME CONTRACTOR/CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant	Hilltop Securities Inc.		
Address	1201 Elm Street, Suite 3500		
City, State Zip	Dallas, TX 75270		
Phone	214.953.4000	Fax Number	214.953.4050
Name of Contact Person	Vickie Hall 214.953.8874		
Is company City certified?	Yes ☐ No ☒ MBE ☐ WBE ☐ MBE/WBE Joint Venture ☐		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

Chris W. Allen, Managing Director
Name and Title of Authorized Representative (Print or Type)

Signature — March 7, 2016 **Date**

Provide a list of all proposed subcontractors/subconsultants/suppliers that will be used in the performance of this Contract. **Attach Good Faith Efforts documentation if non MBE/WBE firms will be used.**

Sub-Contractor/Consultant	N/A
City of Austin Certified	MBE ☐ WBE ☐ Ethnic/Gender Code: ☐NON-CERTIFIED
Vendor ID Code	
Contact Person	Phone Number:
Amount of Subcontract	$
List commodity codes & description of services	

Sub-Contractor/Consultant	N/A
City of Austin Certified	MBE ☐ WBE ☐ Ethnic/Gender Code: ☐NON-CERTIFIED
Vendor ID Code	
Contact Person	Phone Number:
Amount of Subcontract	$
List commodity codes & description of services	

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor _____**Date** _____ **Director/Deputy Director**_____**Date**_____

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-98808

Date Filed:
08/12/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Hilltop Securities Inc.
Dallas, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA7400PA160000048
Underwriting Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Leventhal, Laura	Dallas, TX United States	X	
Edge, J Michael	Dallas, TX United States	X	
Muschalek, John R.	Dallas, TX United States	X	
Peterson, Robert W.	Dallas, TX United States	X	
Feinberg , Hill A.	Dallas, TX United States	X	
Hilltop Securities Holdings LLC	Dallas, TX United States	X	

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

KELLY NICOLE BRAGG
Notary Public, State of Texas
My Commission Expires
September 10, 2016

Jorja Williams
Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Jorja Williams, this the 12th day of August, 2016, to certify which, witness my hand and seal of office.

Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath
Kelly Bragg	Kelly Bragg	Notary Public

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Hilltop Securities Inc.

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

Not Applicable

Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

Not Applicable

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7 Hilltop Securities Inc.

By Jaryn Williams

Signature of vendor doing business with the governmental entity

8/12/2016

Date

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Loop Capital Markets ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Loop Capital Markets having offices at 1201 Elm Street, Suite 3500, Dallas, TX 75270 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Loop Capital Markets Offer, dated 3/7/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

LOOP CAPITAL MARKETS	**CITY OF AUSTIN**
Curtis V Flowers	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
Managing Director	Senior Buyer Supervisor
Title:	Title:
07/07/2016	7/8/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Loop Capital Markets

Company Address: 111 W Jackson Blvd., Suite 1901

City, State, Zip: Chicago, Illinois 60604

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Curtis Flowers

Title: Managing Director

Signature of Officer or Authorized Representative:

Date: 02/29/2016

Email Address: curtis.flowers@loopcapital.com

Phone Number: 713.652.4979

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. **Questions:**

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16

Terry V. Nicholson, Sr. Buyer Specialist — Date

Purchasing Office, 512-974-2995

ACKNOWLEDGED BY:

Curtis Flowers		02/29/2016
Name	Authorized Signature	Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

City of Austin, Texas

Request for Qualification Statements (RFQS)

March 8, 2016

Loop Capital Markets
440 Louisiana, Suite 900
Houston, TX 77002

Primary Contacts:
Curtis Flowers
Managing Director
Phone: 713.652.4979
Fax: 713.652.4956
curtis.flowers@loopcapital.com

Loop Capital Markets

City of Austin, Texas

Request for Qualification Statements (RFQS)

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Loop Capital Markets is required to make certain regulatory disclosures as required by the Municipal Securities Rulemaking Board. In its capacity as an underwriter, Loop Capital Markets may provide advice concerning the structure, timing, terms, and other similar matters concerning this upcoming offering of municipal securities. These services are being provided in our role as an underwriter, not as a financial advisor. The primary role of Loop Capital Markets, as an underwriter, is to purchase securities, for resale to investors, in an arm's-length commercial transaction between you and Loop Capital Markets. Loop Capital Markets has financial and other interests that differ from those of the issuer. If you do not have and would like a municipal advisor that has legal fiduciary duties to the issuer, please feel free to retain one to serve that capacity.

Executive Summary

Loop Capital Markets LLC ("Loop Capital Markets" or the "Firm") is pleased to present its proposal to the City of Austin (the "City") to be appointed as an eligible senior manager for the proposed 36-month underwriting pool. Our firm is the largest privately-owned and minority controlled, full-service investment banking firm in the country. As such, the Firm is responding in the category of "Other". If not selected as senior manager, we welcome the opportunity to serve as co-book runner, co-senior or co-manager. Our response demonstrates: (1) an ability to provide innovative financing techniques and targeted marketing strategies to address the City's financing needs; (2) the banking team's high quality financing expertise; (3) extensive financing experience in Texas and transportation sectors; (4) solid firm capital position; and (5) an extensive fixed income distribution network.

Innovative Financing Techniques. Given the City's contemplated $250 million AMT financing for Austin-Bergstrom International Airport, Loop Capital Markets evaluated two financing cases – (1) Base Case: level debt service with principal repayment deferred until 2020 and (2) Alternative Case: level debt service with principal repayment deferred until 2026. Pushing out principal to 2026 will provide the City additional debt service coverage throughout 2016-2025, the years in which there is currently higher outstanding debt service. The Firm recommends the Alternative Case to the City, as this strategy will resonate well with both the rating agencies and investors alike.

Furthermore, the Firm provides two considerations for the City to increase flexibility through optional redemption, including (a) utilizing a make-whole call to advance refund bonds that would otherwise be considered ineligible (e.g. AMT bonds) and (b) the advantage of staggering call dates, positioning callable par in years with excess capacity and given minimal cost to establish a short-call over the generally accepted ten-year par call.

Financing Team Expertise. Our financing team has a great deal of knowledge and experience in Texas bond financings. Curtis Flowers, Managing Director, will serve as the lead day-to-day coverage banker. Bob Walsh, Managing Director and Head of Transportation, will serve as the City's transportation specialist. Deborah Knox, Senior Vice President, will serve as deal execution on the transaction. Between the three of them, Mr. Flowers, Ms. Knox and Mr. Walsh share over 65 years of high quality financing expertise. Key clients include City of Chicago, City of Dallas, City of Houston, City of Shreveport, City of Tallahassee, Dallas and Fort Worth Cities Airport, Metropolitan Washington Airports Authority, amongst others.

Texas Financing Experience. With two offices in the State of Texas – Dallas and Houston – Loop Capital Markets has a strong presence in Texas. The Firm has participated on $81.7 billion bond issuances in Texas throughout 2000-2016YTD. Since 2000, the Firm has been the most active co-managed underwriter in the State and the 5th most active senior underwriter. Most recently, Mr. Flowers and Ms. Knox represented the Firm on Missouri City, Texas' $73 million General Obligation Refunding Bonds, Series 2016, as sole manager on the City of Austin's $10 million Public Improvement Bonds, Taxable Series 2015; joint bookrunner on North Texas Tollway Authority's $764 million Revenue Refunding Bonds, Series 2015B; and senior manager on Marshall ISD's $82 million Unlimited Tax School Building Bonds, Series 2015. The Texas team has also been mandated on the City of Houston's $500 million Public Improvement Bonds which is expected to price in late March.

Transportation Financing Experience. Because our innovative financing techniques focus on the City's airport credit, the Firm would like to highlight its transportation sector experience. Since joining Loop Capital Markets in 2009, Mr. Walsh has represented the Firm as lead banker on over $101.3 billion of negotiated transportation financings, including $8.1 billion of senior managed transactions. Thus far in 2016, the Firm has served as co-senior manager on Dallas Area Rapid Transit's $482 million Senior Lien Sales Tax Revenue

Refunding Bonds, Series 2016A and co-senior manager on Pennsylvania Turnpike Commission's $361 million Turnpike Subordinate Revenue Refunding Bonds, Series A of 2016 – both financings priced in February. The Firm is currently mandated to serve on the State of Ohio's $250 million General Obligation Highway Capital Improvement Bonds, Series S with pricing anticipated in April. In February 2016, LAWA's Board approved the Firm as an eligible senior manager and Loop Capital Markets will serve as senior manager on the $300 million Los Angeles International Airport, 2016 Revenue Bonds with pricing anticipated in May. The Firm was also named to the senior underwriter pool for Port of Los Angeles in December 2015.

Solid Firm Capital. To mitigate the impact of adverse market conditions on a potential City financing, the Firm is willing to use its excess net capital to step in and take bonds into inventory thus providing the City with stability in an otherwise volatile environment.

Extensive Fixed Income Distribution. Our goal is to expand the City's investor base, increase liquidity, and drive down interest costs through our sales force of 49 veteran sales-traders, including 21 dedicated solely to tax-exempt securities. The Firm is well positioned to distribute the City's bonds. In addition to covering the largest municipal investors, the depth of our sales force allows us to access Tier-2 and Tier-3 investors more effectively, which will lower the City's cost of funds.

Thank you again for the opportunity to submit our proposal. Our relationship with the City is viewed as our highest priority and members of our team will continue to be dedicated to any City assignment. If you have questions or require additional information, please do not hesitate to contact the undersigned.

Curtis Flowers
Managing Director

A. Part I – Business Organization

State full name and address of your organization and identify parent company if you are a subsidiary. Specify the branch office or other subordinate element which will perform, or assist in performing, work herein. Indicate whether you operate as a partnership, corporation, or individual. Include the State in which incorporated or licensed to operate. This section should include at a minimum the following:

i. Management/Ownership: Provide any recent or proposed changes in the firm's management or ownership.

ii. Confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response.

iii. Confirm an understanding that the firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.

iv. Municipal sales offices in the United States.

v. Account Executives employed selling municipal bonds in the United States.

vi. Texas offices and locations, if any, along with the number Account Executives selling municipal bonds in each Texas office identified.

Firm Overview. Loop Capital Holdings LLC ("Loop Capital"), the parent company of Loop Capital Markets LLC ("Loop Capital Markets" or the "Firm"), is a well-capitalized, full-service investment bank, brokerage, and advisory firm that provides creative capital solutions for governmental, corporate, and institutional entities across the globe. The Firm maintains a staff of 151 professionals in 21 offices across the country. Loop Capital Financial Consulting Services LLC, an affiliate of Loop Capital Markets, provides various financial consulting services including valuation, forensic accounting, transaction due diligence, and restructuring. Loop Capital Markets provides a full suite of municipal investment banking, corporate investment banking, sales and trading, transition management, and analytical services. The below chart illustrates the breadth of Loop Capital's business.

Since commencing operations in September 1997, Loop Capital Markets has structured, marketed and financed some of the most innovative, dynamic, and challenging municipal bond transactions in the country. Loop Capital Markets will collaborate across all of its business units in order to serve the City of Austin (the "City") and its finance team with superior quantitative and analytical services, and seamless marketing, pricing and execution.

Ownership Structure. Loop Capital Markets is the largest privately-owned and minority-controlled, full-service investment banking firm and is recognized as one of the fastest growing investment banks in the country. Loop Capital Markets is organized under the laws of the State of Delaware as a limited liability company and is majority-owned and controlled by Loop Capital LLC. James Reynolds, Jr. and Sandra Reynolds indirectly own

69.1% of Loop Capital Markets LLC and 100% of Loop Capital LLC through their 100% ownership of Loop Capital Holdings, LLC. Loop Capital Markets has been certified as a Minority-owned Business Enterprise by many municipal jurisdictions throughout the United States. Our commitment to the participation of minorities in financial markets and in business in general is an integral part of our Firm's mission and the nucleus of our day-to-day business practices. Loop Capital Markets has not undergone any recent changes to its management or ownership material to its Public Finance business nor have any such changes been proposed to take place in the near future

Confirmations. The Firm confirms that it has completed the City's non-discrimination certificate and it is attached to the response. Loop Capital Markets also confirms that its officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the Firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.

Institutional Sales. Loop Capital Markets has one of the largest sales-trading forces on Wall Street with an institutional sales-trading force consisting of 49 professionals, including 21 professionals dedicated solely to municipal securities (sales and trading), located in Chicago, New York and Los Angeles.

Retail Distribution. The Firm has two offices in the State of Texas – Dallas and Houston. With the City's primary contact, Curtis Flowers, operating out of the Houston office. The Firm does not have municipal salesmen in the State of Texas. All of its sales-traders are in the Firm's Chicago, Los Angeles and New York offices.

Loop Capital Markets offers the City local retail distribution outlets through its agreements with UBS Financial Services Inc. ("UBS") and Deutsche Bank Securities ("DBS"). Through Loop Capital Markets' distribution relationship with UBS, the City will benefit from a distribution network of over 7,100 Financial Advisors located in 296 branch offices throughout the United States. UBS has 21 offices in the State of Texas, with an office located in the City of Austin. With the Firm's agreement with DBS, the City has access to 16 Private Bank offices throughout the country with 2 located in Texas – Dallas and Houston. Thus, combining one of the largest institutional sales forces (Loop Capital Markets) with one of the largest retail sales forces (UBS) and one of the largest Private Wealth Management platforms (DBS), the Firm has one of the most powerful distribution platforms for tax-exempt and taxable bonds across all investor bases and at every point on the yield curve.

B. Part II – Authorized Negotiator

Include name, address, and telephone number of person in your organization authorized to negotiate Contract terms and render binding decisions on Contract matters.

Authorized Negotiator	
Name	Curtis Flowers Managing Director
Address	440 Louisiana; Suite 900 Houston, TX 77002
Telephone	(713) 652-4979

C. Part III – Background and Prior Experience

Describe only relevant corporate experience and individual experience for personnel who will be actively engaged in the contract. Do not include corporate experience unless personnel assigned to this project actively participated. Do not include experience prior to 2000. Supply the project title, year, and reference

name, title, present address, and phone number of principal person for whom prior projects were accomplished. This section should include at a minimum the following:

i. Provide the year the firm was founded.
ii. Provide a brief history of the firm.
iii. Provide the location of the firm's headquarters and municipal trading desk(s).

Firm History. Founded in 1997 as a 6-member municipal bond firm, Loop Capital Markets has grown into a global investment bank and brokerage firm with 151 employees offering a diverse range of services across the country. Our public finance department employs 31 investment banking professionals, including dedicated senior level quantitative bankers capable of performing the most complex financial analyses. The Firm currently maintains its headquarters in Chicago, Illinois and has 3 municipal trading desks – Chicago, Los Angeles, and New York.

Municipal Experience. Since inception, Loop Capital Markets has underwritten over $1.0 trillion in municipal bond issuances. Since 2000, Loop Capital Markets has served on $81.7 billion of bond issuances in the State of Texas. The Firm has been the **most active co-managed underwriter in the State since 2000** and the **5th most active senior underwriter since 2000.** For a complete list of deals the Firm has done in the State of Texas, please refer to ***Appendix A.*** Curtis Flowers has been the Firm's primary point of contact in the Texas region. His contact information is contained in our answer to Question B.

D. Part IV – Personnel

Include names, titles, and qualifications of key professional personnel who will be assigned to this contract. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

Personnel Dedicated to the City. Loop Capital Markets has assembled an experienced and knowledgeable team to serve the City on its future financings. The Firm's dedicated team has structured, marketed and sold nearly every financing vehicle available and will work closely with the City to provide the lowest cost of funds and to meet all stated objectives. The Firm pledges that each participant of the City's financing team will dedicate 100% of their time to the successful completion of future financings.

Dedicated Loop Capital Markets Team		
City of Austin's Banking Team		
Name	**Role**	**Participation**
Curtis Flowers Managing Director	Lead Banker	100%
Bob Walsh Managing Director	Head of Transportation Group	100%
Deborah Knox Senior Vice President	Deal Execution	100%
Jonathan Yu Senior Vice President	Quantitative Analysis	100%
David Gellert Associate	Quantitative & Execution Support	100%
Anthony Kinsey Analyst	Quantitative & Execution Support	100%
Underwriting, Sales and Credit Research Teams		
Name	**Role**	**Participation**
Bill Evans Senior Vice President	Lead Long-Term Underwriter	100%
Mark Grimmig Managing Director	Head of Municipal Sales	100%
Chris Mier Managing Director	Credit Research Specialist	100%

Investment Banking. The financing team representing Loop Capital Markets will be led by **Curtis Flowers**, *Managing Director*, whom is based in the Firm's Houston office. Mr. Flowers will serve as the City's day-to-day contact and provide senior banking coverage, including assistance in the coordination of all underwriting, structuring and marketing related to the future financings. Mr. Flowers has over 24 years of experience in commercial / investment banking. Formerly, he served as the City of Houston's Director of Investment and Debt, an institutional fixed-income salesman with Coastal Securities and a Commercial/Corporate lending officer with Bank of America. Mr. Flowers' clients include the Texas Public

Finance Authority, City of Houston, Fort Bend County, Harris County, Houston Community College District, Houston ISD, North Texas Tollway Authority and TxDOT, among others. Most recently, Mr. Flowers represented the Firm as sole manager on the City of Austin's $10 million Public Improvement Bonds, Taxable Series 2015; joint bookrunner on North Texas Tollway Authority's $764 million Revenue Refunding Bonds, Series 2015B; and senior manager on Marshall ISD's $82 million Unlimited Tax School Building Bonds, Series 2015. Mr. Flowers received a B.A. in Finance from Clark College and an M.B.A. in Finance from Atlanta University. He also completed the Executive School of Government Program at Harvard University and holds the Series 7 and 63 licenses.

Deborah Knox, *Senior Vice President***,** will assist in the structuring and execution of the issuance of the City's bonds. Ms. Knox is based in Chicago and will be available to answer all inquiries and resolve any problems throughout the engagement. Ms. Knox has over 18 years of experience in public finance and has served as the lead, execution, or quantitative banker on over $20 billion of municipal transactions throughout the country and in all sectors. She has senior managed financings for large and small issuers in California, Florida, Illinois, and Texas. Ms. Knox has worked with Cities across the country including: Austin, Dallas, Houston, Tallahassee, Miami Gardens, and Missouri City. Ms. Knox holds a B.S. in Business Administration and an M.B.A. in Finance from DePaul University. She holds the FINRA Series 7 and Series 63 licenses.

Mr. Flowers and Ms. Knox will be supported by **David Gellert**, *Associate* and **Anthony Kinsey**, *Analyst*, who will assist in performing quantitative and banking support activities from the Firm's Chicago office. Mr. Gellert and Mr. Kinsey have served on deals for Texas, Midwest and nationwide Transportation clients. Mr. Gellert received a B.S. in Finance from Pennsylvania State University and holds Series 52, 63 and 72 licenses. Mr. Kinsey received a Bachelor of Arts in Business Administration with a concentration in Finance and a minor in Leadership Studies with honors from Morehouse College in Atlanta, GA. He holds the FINRA Series 52 and 63 licenses.

Bob Walsh, *Managing Director and Head of Transportation*, will serve as the City's transportation specialist providing his considerable knowledge of the unique issues and challenges faced by transportation issuers throughout the nation, particularly airports. He is a recognized expert in the industry and will apply his insight of innovative transportation financing structures to provide the lowest cost of capital and strongest distribution of the City's transportation financings. Mr. Walsh has been with Loop Capital Markets as a Managing Director for 7 years and has more than 25 years of municipal finance experience. Since joining the Firm in 2009, Mr. Walsh has represented the Firm as lead banker on over $101.3 billion of negotiated transportation financings, including $8.1 billion of senior managed transactions. In 2015, the Firm ranked nationally as the #8 senior manager (True Economics to Bookrunner) and the #1 co-manager (Equal to Each Co-Manager) for transportation issues.

In 2015, Mr. Walsh represented the Firm as (i) joint book-running senior manager on Chicago O'Hare International Airport's $1.9 billion Revenue and Revenue Refunding Bonds, Series 2015ABCD in October; (ii) sole manager on the City of Shreveport's $34.9 million Airport Revenue Bonds, Series 2015AB in October; (iii) joint book-running senior manager on North Texas Tollway Authority's $764.1 million System First Tier System Revenue Refunding Bonds, Series 2015B in September (following a co-senior role on a $862.9 million issue in April); (iv) senior manager on Triborough Bridge and Tunnel Authority's $156.1 million General Revenue Bonds, Series 2015B / Subseries 2008B-3 in November; (v) senior manager on Triborough Bridge and Tunnel Authority's $225 million General Revenue Bonds, Series 2015A in May; (vi) senior manager on Pennsylvania Turnpike Commission's $500.7 million Turnpike Revenue Bonds in May; and (vii) senior manager on Miami-Dade County's $197.5 million Transit System Sales Surtax Revenue Refunding Bonds, Series 2015 in May, among others.

Below are brief case studies of the City of Chicago O'Hare and Shreveport Airport System financings.

Joint Book-running Senior Manager on Chicago O'Hare International Airport's $1.9 billion Revenue and Revenue Refunding Bonds, Series 2015ABCD

- AMT and Non-AMT, New Money and Refunding
- Proceeds were used to pay the costs of the 2015 Airport Projects at O'Hare, including retiring the City's outstanding CP notes and refunding certain outstanding Airport Obligations
- Collaborated with financing team to produce electronic roadshow viewed by 45 investors
- Worked diligently to craft numerous vital documents including the Feasibility Study, rating agency presentation and offering documents

Sole Manager on the City of Shreveport's $34.9 million Revenue Bonds, Series 2015AB

- Taxable Refunding and Restructuring
- Allowed the City to achieve a more manageable debt service structure eliminating debt service spikes in certain years while accounting for a projected decline in PFC revenues
- Developed a New Resolution for the Airport
- Utilized insurance and a surety policy to increase financing efficiency

Thus far in 2016, the Firm has served as co-senior manager on Dallas Area Rapid Transit's $482 million Senior Lien Sales Tax Revenue Refunding Bonds, Series 2016A and co-senior manager on Pennsylvania Turnpike Commission's $361 million Turnpike Subordinate Revenue Refunding Bonds, Series A of 2016 – both financings priced in February. The Firm is currently mandated to serve on the State of Ohio's $250 million General Obligation Highway Capital Improvement Bonds, Series S with pricing anticipated in April. In February 2016, LAWA's Board approved the Firm as an eligible senior manager and Loop Capital Markets will serve as senior manager on the $300 million Los Angeles International Airport, 2016 Revenue Bonds with pricing anticipated in May. The Firm was also named to the senior underwriter pool for Port of Los Angeles in December 2015.

Quantitative Analysis. Jonathan Yu, *Senior Vice President*, is located in the Firm's Chicago office and will lead Loop Capital Markets' quantitative efforts and transaction execution for the City. He is responsible for developing financing, refunding, and restructuring strategies as well as customized optimization models for clients across the Firm including the states of Alabama, Georgia, Illinois, Michigan, Mississippi, Texas and Wisconsin. Prior to joining Loop Capital Markets in 2008, Mr. Yu worked for JP Morgan. Mr. Yu is experienced in structuring transactions for a variety of credits, including tax-backed, revenue, lease, and tax-increment financings. Mr. Yu graduated from the University of Chicago with a B.S. in Chemistry and holds Series 7 and 63 licenses.

Long-Term Underwriting. Bill Evans, *Senior Vice President*, has more than 12 years of municipal underwriting experience. He will serve as the lead underwriter responsible for pricing the City's future financings and has been responsible for supporting the Firm's underwriting and syndicate activities from New York since joining the Firm in 2013. He is acutely experienced with all of the fixed-rate products which enhance an issuer's debt structure, maximize investor sponsorship and generate the lowest financing cost. Since joining Loop Capital Markets, he has served as underwriter on financings for issuers throughout the country, including Texas clients such as the City of Austin, City of Houston, Houston ISD, Marshall ISD, North Texas Tollway Authority and TxDOT, among others. Prior to joining the Firm, Mr. Evans spent over three years at Morgan Stanley as Vice President of Competitive Underwriting and seven years at UBS as Associate Director on the National Syndicate Desk. Mr. Evans graduated with a B.S.B.A in both Finance and Accounting from Northeastern University and earned an Executive M.B.A. from Fordham University. He holds the Series 3, 7 and 63 licenses.

Institutional Sales. Mark Grimmig, *Managing Director and Head of Municipal Sales*, joined Loop Capital Markets in 2015 to oversee Municipal Sales for Firm from the New York office. Mark will be responsible for leading the Municipal Sales team in the Chicago and New York offices. Over his 34 year career, he served four years as Managing Director / Institutional Sales Manager at Janney Montgomery Scott. Prior to joining Janney Montgomery Scott, he spent two years at TD Bank; two years at MR Beal; six years at JP Morgan; and twelve years at Bear Stearns. Mr. Grimmig's duties at the Firm include generating revenue for the Firm by engaging the sales team to foster relationships with institutional clients, managing the institutional sales team, interfacing with banking, providing issuer clients with a connection to investor clients and collaborating with internal divisions for organic growth opportunities. He has significant experience selling transportation debt, having previously distributed bonds on behalf of the Pennsylvania Turnpike Commission and Miami International Airport, among others. Mr. Grimmig holds Series 7, 53 and 63 licenses.

Analytical Services Division. Chris Mier, *Managing Director and Head of the Analytical Services Division*, won the top honor as the #1 Sell Side Strategist, a ranking determined by over 2,000 votes from buy-side firms. Mr. Mier was awarded 1st Team Municipal Strategist and 2nd Team Research Director, among a survey of 1,000 institutional buy-side accounts conducted by independent research firm Smith's Research and Gradings, for the "Municipal All Star Program." Through communications with the five-member dedicated analytics group, Loop Capital Markets can aid the City in garnering up-to-date buy-side and sell-side information to better assess issuance timing, pricing, and investor base analysis.

Through the Analytical Services Division, the Firm conducts analysis, credit, and sales reports that are distributed to our sales team to effectively educate them about various credits in the industry. The reports are effective in broadening the depth of distribution of a credit. Loop Capital Markets is one of a small number of broker-dealers that provides published research and analytics to investor and issuer clients.

E. Part V – Innovative Financing Techniques

Provide two innovative financing techniques, suggestions or ideas which would be relevant, or of interest to, the City of Austin. This can also include derivatives, debt restructuring, and self-liquidity ideas. If the idea(s) was (were) used in actual transaction(s), this section should include the following:

i. Indicate the individuals referenced in Part IV above who were involved in the transaction.

ii. Provide the name, title, organization, address and telephone number of the issuer.

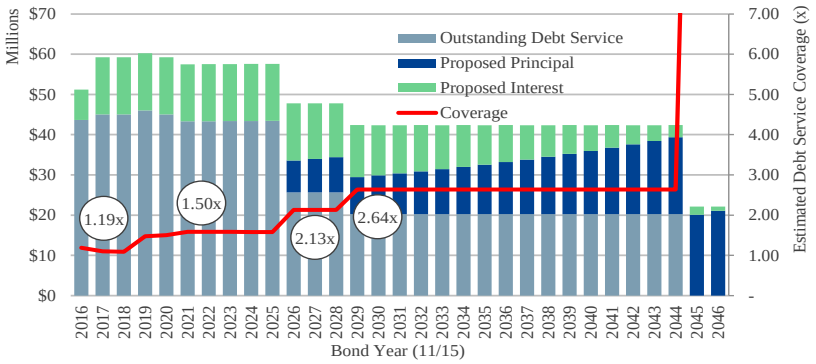
The Firm demonstrates a strong commitment to Public Finance through the continued investment of hiring multiple quantitative experts to provide state-of-the-art modeling capabilities using complex computational methods – linear programming, Monte Carlo simulation, data mining, etc. – to develop creative solutions. In conjunction with the Firm's Analytical Services Division – which compiles credit and quantitative research including the Multiple Optionality Report ("MOR") that evaluates redemption features as discussed below – these specialists stand ready to provide the highest quality solutions for the City's future financings. The Firm subsequently provides two innovative solutions for the City's debt portfolio – (i) an optimal structure for the proposed new money airport financing expected to maximize debt service coverage and (ii) optional redemption considerations to increase flexibility.

(i) Deferred Principal Structure for Proposed Airport Financing. As we understand, based on discussions with City and Austin–Bergstrom International Airport ("Airport") staff (most recently in October 2015), the City is contemplating a $250 million AMT financing to fund the capital improvement program structured with capitalized interest for 3.7 years – similar duration to the Series 2014 Bonds – and a debt service reserve fund funded at the standard three-prong requirement. The Firm encourages that the City issue 30-year

bonds continuing to defer principal repayment until Bond Year ("BY") 2026 (defined as year-end November 15th) given the steeply declining debt service contour (e.g. 2025 debt service of $43.4 million as compared to 2026 debt service of $25.6 million (hereinafter referred to as Alternative Case).

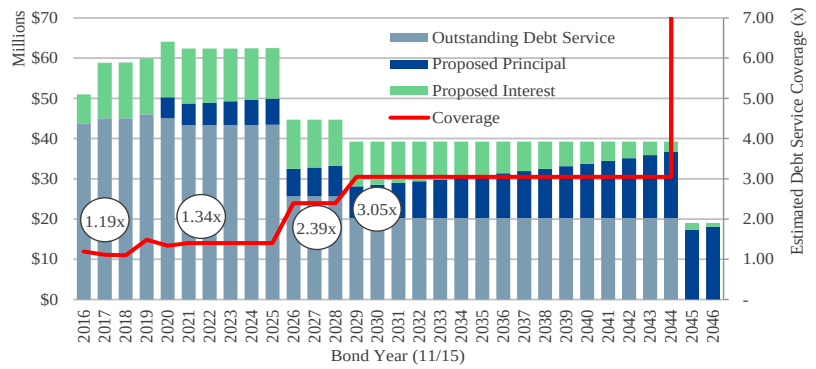
Alternative Case: Financing Summary	
Principal Amount	$283,715,000
Premium	$42,201,380
Deposit to Project Fund	$249,867,429
Deposit to Reserve Fund	$22,131,250
Deposit to Capitalized Interest Fund	$52,298,221
Principal Amortization (Bond Year 11/15)	2026-2046
Total Debt Service	$599,900,828
Arbitrage Yield	3.315%
All-In TIC	4.004%
Average Life (Years)	22.289
Aggregate Average Annual Debt Service	$46,522,241
Aggregate Maximum Annual Debt Service	$60,228,083

Alternative Case: Principal Deferred Until November 2026



Base Case: Financing Summary	
Principal Amount	$278,900,000
Premium	$42,621,991
Deposit to Project Fund	$249,867,429
Deposit to Reserve Fund	$19,038,950
Deposit to Capitalized Interest Fund	$51,019,682
Principal Amortization (Bond Year 11/15)	2020-2046
Total Debt Service	$562,836,832
Arbitrage Yield	3.195%
All-In TIC	3.895%
Average Life (Years)	20.400
Aggregate Average Annual Debt Service	$45,326,628
Aggregate Maximum Annual Debt Service	$64,084,668

Base Case: Principal Deferred Until Capitalized Interest Ends in January 2020



Note: November Interp. AAA MMD as of Feb. 26, 2016 – analysis assumes today's rates remain constant through proposed pricing in Spring of 2016; Underwriters' Discount of $5 / Bond and COI of $200,000; Assumes project draw of $250 million on Nov. 15, 2016 with an investment rate of 10 bps; Capitalized Interest through Jan. 14, 2020 – Similar length (3.7 years) to the Series 2014 Bonds – with an investment rate of 10 bps; Debt Service Reserve Fund Deposit based on 3-Prong Funding Requirement – with an investment rate of 10 bps; Financing structure aligned to the Principal Due Date of Nov. 15th; Estimated debt service coverage based on FY 2015 – FY 2021 projected Net Revenue and PFC Revenue applied to debt service as per the Report of the Airport Consultant dated Dec. 2014; FY Net Revenue and PFC Revenue applied to debt service aligned with bond year following FYE of Sept. 30th; Net Revenue and PFC Revenue applied to debt service from Nov. 2022 to Nov. 2046 assumes constant FY 2021 values.

As the City is aware, rating agencies heavily weigh debt service coverage when analyzing credit and assigning ratings. As compared to the Base Case (level debt service with principal repayment deferred until 2020 following capitalized interest –comparison purposes only), the Alternative Case achieves lower coverage from 2029 through 2044 of 2.64x versus 3.05x for the Base Case. However, the Alternative Case mitigates the debt service challenge present from 2016 through 2025 when the City's coverage is thin due to higher outstanding debt service. As highlighted in the accompanying graphic, the Alternative Case defers principal repayment until 2026 following a drop-off in outstanding debt service to achieve stronger coverage evenly throughout. For example, in 2020, the Alternative Case generates coverage of 1.50x compared to 1.34x in the Base Case. Although the Alternative Case is more costly than the Base Case (e.g. All-In TIC of 4.0% versus 3.9%) due to a longer average life (e.g. 22.3 years as compared to 20.4 years), preserving coverage during years with lower debt service coverage ultimately strengthens the underlying credit profile more than compensating for additional cost (estimated at 11 basis points on an All-In TIC basis) associated with the Alternative Case structure.

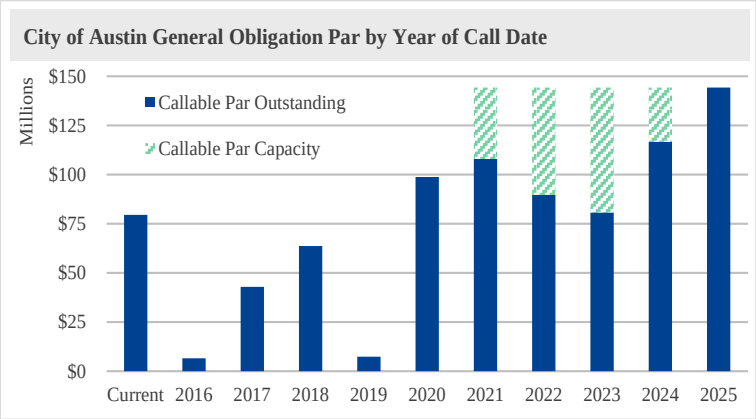
The Firm's ability to structure debt service to achieve an airport issuer's goals and objectives is best exemplified by the sole managed $34.9 million City of Shreveport Airport System financing in October 2015 with Mr. Walsh as the lead banker representing the Firm. Loop Capital Markets worked with the City, its financial advisor and bond counsel to restructure the City's existing Airport Revenue debt, adjust restrictive rate covenants and generate $1.4 million in new money project proceeds. Further, the Firm worked with the Airport's consultant to

develop a financing structure that met specific cost per enplanement objectives through the first ten years with level debt service thereafter. Through the restructuring, the City was able to achieve a more manageable debt service structure and eliminate debt service spikes in certain years while accounting for a projected decline in PFC revenues after fiscal year 2019. Please reference the accompanying table for the issuer's contact information.

Name	Charles Madden
Title	Director of Finance
Organization	City of Shreveport
Address	505 Travis Street, Suite 200 Shreveport, LA 71101
Telephone	318.673.5404

(ii) Optional Redemption Considerations. The Firm provides two considerations for the City to increase flexibility through optional redemption, including (a) utilizing a make-whole call to advance refund bonds that would otherwise be considered ineligible (e.g. AMT bonds) and (b) the advantage of staggering call dates, positioning callable par in years with excess capacity and given minimal cost to establish a short-call over the generally accepted ten-year par call.

(a) Advance Refund Ineligible Bonds via Make-Whole Call. With respect to the City's upcoming AMT Airport financing – as discussed in our response to Question E – the City can make the non-advance refundable AMT bonds effectively "advance refundable" through a make-whole provision. The make-whole provision allows the City to current refund non-advance refundable bonds prior to the traditional optional call date for present value savings. Most recently in February 2016, the New York Metropolitan Transportation Authority ("MTA") priced tax-exempt refunding bonds with this make-whole provision. The bonds due after the call date are subject to an optional make whole call at any time prior to the 10-year par call date, at a price that is the greater of: (i) 102% of the accreted value and (ii) the present value of the remaining cash flows on the bond to the par call date, using a discount rate of MMD-flat for the period of time from the make-whole call to the par call date. Investors did not warrant a higher yield for these bonds than they would for bonds with the standard ten-year par call.



The City should <u>not</u> put the make-whole call provisions on bonds that are already advance refundable. Given the "first call" tax rule that requires an issuer of tax-exempt advance refunding bonds to call the refunded bonds on the first date that would provide for positive (greater than $0) present value savings on the refunding, issuers could be forced to implement this make-whole call (if available) even if it were more expensive than the cost of an escrow for a typically structured advance refunding. If the City is issuing a multipurpose issue, it would be very important to identify upfront which bonds would be considered non-advance refundable and to get sign-off from tax counsel on this determination before selling any of the bonds with these make-whole call provisions.

(b) Advantage of Staggering Call Dates. As the City issues additional obligations in the coming years, the Firm encourages staggering call dates to "fill-in" gaps where no debt is callable. This approach maximizes optionality and distributes callable par more evenly than continuously utilizing a ten-year par call when issuing on an imperfect schedule (e.g. the City does not issue bonds every 12 months). This allows the City to capitalize on refunding opportunities on an annual basis to generate additional funds should market conditions permit

such a financing. For example, as shown in the adjacent graph depicting the City's General Obligation callable par, the City may want to consider issuing bonds with a short par call in 2021, 2022, 2023 and 2024 in addition to a 10-year par call in 2026 to more evenly distribute callable debt. The accompanying graphic determines "Callable Par Capacity" as the difference between the largest amount of callable debt outstanding (in this case, $144.3 million in FY 2025) and the current amount of callable par in each year from 2021 (equivalent to a five-year call) to FY 2024 (equivalent to a nine-year call). We have only examined short calls between five- and nine-years due to the significant decline in marketability for short par call bonds within five years.

Establishing a short-call in the current market is economical as quantified by the MOR developed by the Firm's Analytical Services Division. For example, as depicted in the following table, based on a 5% coupon with a 25-year final maturity, a nine-year call would only be an additional seven basis points in terms of additional yield-to-maturity. This Report provides a theoretical benchmark to use in evaluating new issue call shortening proposals from underwriters, showing issuers the cost of shortening the call from the standard ten-year call in terms of foregone proceeds, yield-to-call ("YTC"), and yield-to-maturity ("YTM"). The MOR methodology relies on Option Adjusted Spread ("OAS") analysis using the Firm's unique approach to quantifying volatility in the municipal marketplace. Unlike other broker-dealers, Loop Capital Markets does not rely on a methodology that translates taxable volatility to municipal volatility. Rather, the MOR uses a wholly municipal volatility calculation methodology that looks at the implied volatilities resulting from a comparison of the MMD callable and non-callable benchmark yield curves. Please refer to ***Appendix B*** for the complete report.

Par Call Statistics									Difference Between Short Call and 10-Yr Call			
Coupon	Call	Maturity	Price Callable	Call Value	Price Non-Callable	Non-Callable YTM	Callable Bond YTC	Callable Bond YTM	Price	Call Value	YTC (bps)	YTM (bps)
5.00%	10	25	118.88	12.96	131.85	3.15%	2.82%	3.82%	--	--	--	--
5.00%	9	25	117.78	14.07	131.85	3.15%	2.76%	3.88%	(1.11)	1.11	(6)	6
5.00%	8	25	116.68	15.17	131.84	3.15%	2.67%	3.95%	(2.20)	2.20	(15)	12
5.00%	7	25	115.53	16.31	131.85	3.15%	2.56%	4.01%	(3.35)	3.35	(26)	19
5.00%	6	25	114.31	17.54	131.84	3.15%	2.42%	4.08%	(4.57)	4.57	(40)	26
5.00%	5	25	112.95	18.90	131.84	3.15%	2.25%	4.16%	(5.94)	5.94	(57)	34

Most recently, the Firm, with Mr. Flowers and Mr. Walsh as co-lead bankers, marketed bonds with a short-call while serving as joint book-running senior manager on North Texas Tollway Authority's $764.1 million System First Tier System Revenue Refunding Bonds, Series 2015B in September. The Bonds were structured as $354.9 million with an eight-year par call and $409.2 million with a ten-year par call. This approach helped fill-in a gap in 2023 where the Authority had minimal callable par providing additional flexibility in the future. Please reference the accompanying table for the issuer's contact information.

Name	Horatio Porter
Title	Chief Financial Officer
Organization	North Texas Tollway Authority
Address	5900W. Plano Pkwy, Suite 100 Plano, TX 75093
Telephone	214.224.2247

F. Part VI – Financial Viability

Provide the most recent audited annual Audit Report and most recent interim financial report as an attachment or appendix item. Hard copies must be included in the original submittal.

i. Provide the current equity capital positions (total equity capital, net equity capital and excess net equity capital) in accordance with GAAP, or corresponding equity information if a bank. ***Do not refer to the annual audit as a response to this question.***

Please reference ***Appendix C*** for a copy of the Firm's most recent audited annual Audit Report and most recent interim financial report. Please note the adjacent table that includes the Firm's capital position as of January 31, 2016.

Capital Position as of 1/31/2016	
Equity Capital	$21,541,837
Net Capital	$13,574,893
Excess Net Capital	$12,675,824

G. Part VII – Austin Bond Experience

In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

Beginning in 2004 and through 2016 year-to-date, Loop Capital Markets has participated on 14 financings for the City, summing to $1.0 billion. Most recently in September 2015, the Firm served as sole manager of the City's $10 million Taxable Public Improvement Bonds. Loop Capital Markets looks forward to the opportunity to serve as a Senior Manager on the City's next financing.

H. Part VIII – References

Provide exactly three (3) government client references, at least two of which are covered by individuals listed in Part IV above. For each reference, provide a name, title, and organization, address and telephone number. In addition to the list provided, the City may independently solicit other references.

The Firm has considerable experience serving each of the following issuers as senior manager. Each of the provided contacts can attest to the Firm's ability to structure, price, distribute, and market bonds on behalf of Texas-domiciled and airport issuers.

Name	Michael Phemister	Charisse Mosely	Michael Higgins
Title	Vice President	Deputy City Controller	Interim Finance Director
Organization	Dallas / Fort Worth International Airport	City of Houston	City of Missouri City
Address	3200 E. Airfield Drive DFW Airport, TX 75261-9428	901 Bagby,10th Floor Houston, TX 77002	1522 Texas Parkway Missouri City, Texas 77489
Telephone	972.973.5447	832.393.3529	281.403.8614

Other Items

Please refer to ***Appendix D*** for the following executed documents:

- Section 800
- Section 810
- Section 900
- Addendum No. 1

APPENDIX

A. Texas Financings (2000-2016YTD)

Loop Capital Markets

Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
2/24/2016	8.86	Gregg Co (Spring Hill) ISD	Unlimited Tax Refunding Bonds	Series 2016	CO-MGR
2/23/2016	72.67	Missouri City-Texas	GO Refunding Bonds	Series 2016	LEAD
2/22/2016	24.34	Medina Co (Hondo) ISD	Unltd Tax School Building Bonds	Series 2016	CO-MGR
2/22/2016	1.34	Northwest Freeway MUD	Unlimited Tax Bonds	Series 2016	CO-MGR
2/16/2016	4.20	Duncanville City-Texas	GO Refunding Bonds	Series 2016	CO-MGR
2/10/2016	64.10	Brazos Co (College Station) ISD	Unlimited Tax School Bldg Bonds	Series 2016	CO-MGR
2/4/2016	482.53	Dallas Area Rapid Transit Auth	Sr Lien Sales Tax Rev Ref Bonds	Series 2016 A	CO-MGR
2/3/2016	3.80	Harris Co Water Ctl Imp Dt #132	Unlimited Tax Bonds	Series 2016	CO-MGR
2/2/2016	28.53	Tarrant Regional Water Dt	Water System Revenue Bonds	Series 2016	CO-MGR
2/2/2016	7.68	Waller Co (Hempstead) ISD	Unlimited Tax Refunding Bonds	Series 2016	CO-MGR
1/28/2016	29.47	Waco City-Texas	GO Refunding Bonds	Series 2016	CO-MGR
1/28/2016	82.69	Waco City-Texas	Comb Tax & Rev Cert Oblig Bonds	Series 2016	CO-MGR
1/27/2016	2.06	Dallam Co (Texline) ISD	Unltd Tax School Building Bonds	Series 2016	CO-MGR
1/21/2016	58.88	Henderson Co (Athens) ISD	Unltd Tax School Building Bonds	Series 2016	CO-MGR
1/20/2016	15.73	Generation Park Management Dt	Unlimited Tax Bonds	Series 2016	CO-MGR
1/20/2016	266.84	Harris Co (Aldine) ISD	Unltd Tax School Bldg & Ref Bonds	Series 2016	CO-MGR
1/19/2016	4.43	Seguin City-Texas	Utility System Revenue Bonds	Series 2016	CO-MGR
1/12/2016	9.59	Kerrville City-Texas	Comb Tax & Rev Certs of Oblig	Series 2016	CO-MGR
1/11/2016	16.36	Brazoria-Fort Bend Co MUD #1	Unlimited Tax Bonds	Series 2016	CO-MGR
1/6/2016	0.19	Montague Co (Bowie) ISD	Unlimited Tax Refunding Bonds	Series 2016	CO-MGR
1/6/2016	7.79	Montague Co (Bowie) ISD	Unlimited Tax Refunding Bonds	Series 2016	CO-MGR
12/15/2015	8.41	Collin Co (Community) ISD	Unlimited Tax Refunding Bonds	Series 2016	CO-MGR
12/15/2015	9.66	Little Elm Town-Texas	Comb Tax & Ltd Pledge Rev Certs	Series 2015	CO-MGR
12/15/2015	3.56	Navarro Co (Mildred) ISD	Unlimited Tax Refunding Bonds	Series 2015	CO-MGR
12/2/2015	8.82	Wise Co (Chico) ISD	Unlimited Tax Refunding Bonds	Series 2015	CO-MGR
12/1/2015	117.27	Univ of Texas Sys Bd of Regents	Permanent University Fund Bonds	Series 2016 A	CO-MGR
12/1/2015	126.02	Univ of Texas Sys Bd of Regents	Permanent University Fund Bonds	Series 2015 C	CO-MGR
11/17/2015	9.63	Washington Co Jr College Dt	Combined Fee Revenue Bonds	Series 2015	CO-MGR
11/10/2015	16.05	Fort Bend Co MUD #58	Unlimited Tax Road Bonds	Series 2015 A	CO-MGR
11/9/2015	8.68	Harris Co MUD #391	Unlimited Tax Bonds	Series 2015 A	CO-MGR
11/4/2015	15.88	Harris Co MUD #500	Contract Revenue Bonds	Series 2015	CO-MGR
10/29/2015	11.80	Fort Bend Co MUD #133	Unlimited Tax Bonds	Series 2015	CO-MGR
10/26/2015	4.19	Wolfforth City-Texas	GO Refunding Bonds	Series 2015	CO-MGR
10/22/2015	77.02	Harris Co Flood Control Dt	Contract Tax & Imp Ref Bonds	Series 2015 A & B	CO-MGR
10/22/2015	50.10	Harris Co-Texas	Permanent Improvement Ref Bonds	Series 2015 B	CO-MGR
10/22/2015	202.68	Harris Co-Texas	Unltd Tax Road Refunding Bonds	Series 2015 A	CO-MGR
10/21/2015	3.10	East Cedar Creek Fresh Wtr Dt	Utility System Revenue Bonds	New Series 2015	CO-MGR
10/21/2015	24.91	Montgomery Co MUD #113	Unlimited Tax Bonds	Series 2015	CO-MGR
10/15/2015	11.00	Denton Co Fresh Wtr Sup #10	Unlimited Tax Bonds	Series 2015	CO-MGR
10/14/2015	1.91	Harris Co MUD #64	Unlimited Tax Bonds	Series 2015 B	CO-MGR
10/7/2015	11.96	Texas Water Development Board	St Wtr Implementation Rev Bonds	Series 2015 B	CO-MGR
10/7/2015	798.45	Texas Water Development Board	St Wtr Implementation Rev Bonds	Series 2015 A	CO-MGR
10/5/2015	12.58	Montgomery Co MUD #119	Unlimited Tax Bonds	Series 2015 A	CO-MGR
9/30/2015	7.03	Harris Co MUD #501	Unlimited Tax Bonds	Series 2015	CO-MGR
9/30/2015	73.04	Univ of No Texas Bd of Regents	Revenue Financing Sys Ref Bonds	Series 2015 B	CO-MGR
9/28/2015	20.25	Fort Bend Co Levee Imp Dt #15	Unlimited Tax Levee Imp Bonds	Series 2015	CO-MGR
9/28/2015	7.77	La Porte City-Texas	Certificates of Obligation	Series 2015	CO-MGR
9/18/2015	354.88	North Texas Tollway Auth (NTTA)	System 1st Tier Revenue Ref Bonds	Series 2015 B	LEAD
9/18/2015	409.21	North Texas Tollway Auth (NTTA)	System 1st Tier Revenue Ref Bonds	Series 2015 B	LEAD
9/16/2015	911.36	Texas Transportation Commission	GO Mobility Fund Refunding Bonds	Series 2015 A	CO-MGR
9/10/2015	10.00	Austin City-Texas	Public Improvement Bonds	Series 2015	SOLE
9/3/2015	25.06	Sienna Plantation MUD #12	Unlimited Tax Bonds	Series 2015	CO-MGR
8/27/2015	4.75	Williamson Co MUD # 15	Unlimited Tax Bonds	Series 2015	CO-MGR
8/25/2015	6.41	Bridgestone MUD	Wtr Swr Sys Comb Tax & Rev Bonds	Series 2015	CO-MGR
8/24/2015	19.34	Chambers Co-Texas	Pass Thru Toll Rev&Ltd Tax Bonds	Series 2015	CO-MGR
8/24/2015	5.00	El Campo City-Texas	General Obligation Bonds	Series 2015	CO-MGR
8/24/2015	4.86	Pearland City-Texas	Certificates of Obligation	Series 2015	CO-MGR
8/24/2015	8.50	Pearland City-Texas	Permanent Improvement Bonds	Series 2015	CO-MGR
8/20/2015	2.75	Matagorda Co-Texas	Certificates of Obligation	Series 2015	CO-MGR
8/19/2015	15.49	Comal Co-Texas	GO Refunding Bonds	Series 2015	CO-MGR

Loop Capital Markets

Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
8/19/2015	10.20	Harris Co MUD #167	Unlimited Tax Bonds	Series 2015	CO-MGR
8/18/2015	2.40	Brazoria Co MUD #16	Unlimited Tax Bonds	Series 2015	CO-MGR
8/13/2015	4.93	Ponder Town-Texas	Comb Tax & Revenue Certs of Oblig	Series 2015	CO-MGR
8/10/2015	3.00	Plantation MUD	Unlimited Tax Bonds	Series 2015	CO-MGR
8/6/2015	25.72	Harris Co MUD #165	Unlimited Tax Bonds	Series 2015	CO-MGR
8/4/2015	8.10	Copperas Cove City-Texas	Comb Tax & Rev Certs of Oblig	Series 2015	CO-MGR
7/29/2015	2.24	Harris Co MUD #64	Unlimited Tax Bonds	Series 2015 A	CO-MGR
7/29/2015	191.37	Harris Co-Texas	Permanent Improvement & Ref Bonds	Series 2015 A	CO-MGR
7/29/2015	8.15	Williamson Co (Thrall) ISD	Unltd Tax School Building Bonds	Series 2015	CO-MGR
7/28/2015	127.73	Fort Worth City-Texas	Gen Purpose Ref & Imp Bonds	Series 2015 A	CO-MGR
7/28/2015	43.82	San Antonio City-Texas	Comb Tax & Rev Certs of Oblig	Series 2015	CO-MGR
7/28/2015	275.65	San Antonio City-Texas	Gen Imp Ref & Comb Tax Rev Certs	Series 2015	CO-MGR
7/23/2015	109.24	Love Field Airport Modernization Corp	General Airport Revenue Bonds	Series 2015	CO-MGR
7/21/2015	23.04	Liberty Co ISD	Unltd Tax School Building Bonds	Series 2015	CO-MGR
7/20/2015	82.07	Harrison Co (Marshall) ISD	Unltd Tax School Building Bonds	Series 2015	LEAD
7/15/2015	100.00	Houston City-Texas	GO Commercial Paper Notes	Series E-2	CO-MGR
7/15/2015	100.00	Houston City-Texas	GO Commercial Paper Notes	Series E-1	CO-MGR
7/13/2015	3.48	Alvarado-Texas	Comb Tax & Rev Certs of Oblig	Series 2015	CO-MGR
7/13/2015	7.00	Runnels Co (Miles) ISD	Unltd Tax School Building Bonds	Series 2015	CO-MGR
7/9/2015	4.80	Sagemeadow Utility Dt	Unlimited Tax Bonds	Series 2015	CO-MGR
6/30/2015	67.25	Texas A&M University System	Revenue Financinng System Bonds	Series 2015 D	CO-MGR
6/18/2015	2.00	Lucas-Texas	Comb Tax & Pledge Rev Certs Oblig	Series 2015	CO-MGR
6/18/2015	15.00	Trinity River Authority	Extendable CP Bonds	Series A	CO-MGR
6/11/2015	14.85	Burnet Co-Texas	Comb Tax & Rev Certs of Oblig	Series 2015	CO-MGR
6/9/2015	3.95	Hardin Co (Silsbee) ISD	Unlimited Tax School Bldg Bonds	Series 2015	CO-MGR
6/4/2015	22.77	Irving City-Texas	GO Refunding & Improvement Bonds	Series 2015	CO-MGR
6/2/2015	3.76	Texas Public Finance Auth (TPFA)	Revenue Fin System Ref Bonds	Series 2015 B	CO-MGR
6/2/2015	53.34	Texas Public Finance Auth (TPFA)	Revenue Fin System & Ref Bonds	Series 2015 A	CO-MGR
5/28/2015	11.42	Texas Water Development Board	Water Financial Assistance Bonds	Series 2015 G	CO-MGR
5/28/2015	81.51	Texas Water Development Board	Water Financial Assistance Bonds	Series 2015 E & F	CO-MGR
5/26/2015	32.01	Arlington City-Texas	Permanent Improvement Bonds	Series 2015 A	CO-MGR
5/6/2015	60.52	Williamson Co (Round Rock) ISD	Unlimited Tax Refunding Bonds	Series 2015	CO-MGR
4/28/2015	27.26	Harris Co (Humble) ISD	Unlimited Tax Refunding Bonds	Series 2015 B	CO-MGR
4/21/2015	7.87	Travis Co-Texas	Limited Tax State Highway Bonds	Series 2015	CO-MGR
4/21/2015	8.24	Travis Co-Texas	Limited Tax Permanent Imp Bonds	Series 2015	CO-MGR
4/21/2015	27.77	Travis Co-Texas	Unlimited Tax Road Bonds	Series 2015	CO-MGR
4/21/2015	42.70	Travis Co-Texas	Certificates of Obligation	Series 2015	CO-MGR
4/16/2015	862.92	North Texas Tollway Auth (NTTA)	System 2nd Tier Rev Ref Bonds	Series 2015 A	CO-MGR
4/15/2015	6.15	Texas Public Finance Auth (TPFA)	Revenue Refunding Bonds	Series 2015 E	CO-MGR
4/15/2015	8.64	Texas Public Finance Auth (TPFA)	Revenue Refunding Bonds	Series 2015 B	CO-MGR
4/15/2015	11.15	Texas Public Finance Auth (TPFA)	Revenue Refunding Bonds	Series 2015 D	CO-MGR
4/15/2015	18.71	Texas Public Finance Auth (TPFA)	Revenue Refunding Bonds	Series 2015 C	CO-MGR
4/15/2015	34.42	Texas Public Finance Auth (TPFA)	Revenue Refunding Bonds	Series 2015 A	CO-MGR
4/14/2015	145.59	Fort Bend Co-Texas	Unlimited Tax Road & Ref Bonds	Series 2015 A & B	CO-MGR
4/8/2015	3.02	Flower Mound Town-Texas	Certificates of Obligation	Series 2015	CO-MGR
3/26/2015	67.79	Trinity River Authority	Revenue Refunding Bonds	Series 2015	CO-MGR
3/19/2015	9.37	Runnels Co (Jim Ned) CISD	Unltd Tax School Building Bonds	Series 2015	CO-MGR
3/17/2015	0.41	Wilson Co (La Vernia) ISD	Unlimited Tax Refunding CABs	Series 2015	CO-MGR
3/17/2015	8.93	Wilson Co (La Vernia) ISD	Unlimited Tax Refunding Bonds	Series 2015	CO-MGR
3/16/2015	4.16	Haslet City-Texas	Comb Tax & Rev Certs of Oblig	Series 2015	CO-MGR
3/10/2015	67.76	Harris Co (La Porte) ISD	Unlimited Tax Refunding Bonds	Series 2015	CO-MGR
3/5/2015	112.51	Harris Co (Goose Creek) CISD	School Building & Refunding Bonds	Series 2015	CO-MGR
3/2/2015	43.51	Brazos Co (Bryan) ISD	Unltd Tax School Building Bonds	Series 2015 A	CO-MGR
2/23/2015	5.00	Katy City-Texas	Permanent Improvement Bonds	Series 2015	CO-MGR
2/20/2015	200.00	Houston City-Texas	GO Commercial Paper Notes	Series G-1 & 2	LEAD
2/18/2015	197.97	Univ of Texas Sys Bd of Regents	Permanent Univ Fund Ref Bonds	Series 2015 A	CO-MGR
2/17/2015	50.00	Harris Co (Aldine) ISD	Unlimited Tax School Bldg Bonds	Series 2015	CO-MGR
1/27/2015	2.10	Melissa City-Texas	General Obligation Bonds	Series 2015	CO-MGR
1/20/2015	22.49	Garland City-Texas	GO Refunding Bonds	Series 2015 B	CO-MGR
1/20/2015	9.50	Wharton Co (El Campo) ISD	Unltd Tax School Building Bonds	Series 2015	CO-MGR

Loop Capital Markets

Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
1/6/2015	64.67	Texas A&M University System	Revenue Financing System Bonds	Series 2015 A	CO-MGR
1/6/2015	142.16	Texas A&M University System	Revenue Financing System Bonds	Series 2015 B	CO-MGR
12/16/2014	3.87	Keller City-Texas	Comb Tax & Rev Certs of Oblig	Series 2015	CO-MGR
12/11/2014	81.65	Houston ISD Pub Fac Corp	Lease Revenue Bonds	Series 2014	LEAD
12/11/2014	223.90	North Texas Tollway Auth (NTTA)	System 1st Tier Rev Ref Bonds	Series 2014 C	CO-MGR
12/10/2014	529.37	Dallas City-Texas	GO Refunding & Improvement Bonds	Series 2014	CO-MGR
12/10/2014	47.44	Harris Co-Houston Sports Auth	Senior Lien Revenue Ref Bonds	Series 2014 B	CO-MGR
12/10/2014	75.88	Harris Co-Houston Sports Auth	Second Lien Revenue Ref Bonds	Series 2014 C	CO-MGR
12/10/2014	90.42	Harris Co-Houston Sports Auth	Senior Lien Revenue Ref Bonds	Series 2014 A	CO-MGR
12/10/2014	344.78	Harris Co-Houston Sports Auth	Senior Lien Revenue Ref Bonds	Series 2014 A	CO-MGR
12/9/2014	244.50	Austin City-Texas	Airport System Revenue Bonds	Series 2014	CO-MGR
12/2/2014	21.41	Seguin City-Texas	Utility System Revenue Bonds	Series 2014	CO-MGR
12/1/2014	379.48	Dallas Area Rapid Transit Auth	Sr Lien Sales Tax Rev Ref Bonds	Series 2014 A	CO-MGR
11/6/2014	9.56	Boerne City-Texas	GO Refunding Bonds	Series 2014	CO-MGR
11/4/2014	26.13	Grand Prairie City-Texas	Comb Tax & Rev Certs of Oblig	Series 2014	CO-MGR
11/4/2014	27.13	Sugar Land City-Texas	Comb Tax & Rev Certs of Oblig	Series 2014 A	CO-MGR
10/29/2014	9.24	Harris Co (Channelview) ISD	Unlimited Tax Refunding Bonds	Series 2014	CO-MGR
10/16/2014	93.95	Trinity River Authority	Reg Wastewater Sys Rev Ref Bonds	Series 2014	CO-MGR
10/2/2014	1260.00	Texas Transportation Commission	Highway Improvement GO Bonds	Series 2014	CO-MGR
9/8/2014	1.36	Princeton City-Texas	Comb Tax Rev Certs Of Oblig	Series 2014	CO-MGR
9/3/2014	349.74	Harris Co (Houston) ISD	Limited Tax Schoolhouse Bonds	Series 2014 A	CO-MGR
8/25/2014	25.16	Panola College Dt	General Obligation Bonds	Series 2014	CO-MGR
7/31/2014	54.82	Travis Co (Austin) ISD	Unlimited Tax Refunding Bonds	Series 2014 A	CO-MGR
7/31/2014	89.60	Travis Co (Austin) ISD	Unlimited Tax Refunding Bonds	Series 2014 B	CO-MGR
7/30/2014	233.25	San Antonio City-Texas	Tax Notes & Gen Imp & Ref Bonds	Series 2014 & B	CO-MGR
7/24/2014	4.00	Burleson Co-Texas	Certificates of Obligation	Series 2014	CO-MGR
7/22/2014	32.93	Via Metro Transit Adv Transport Dt	Sales Tax Rev Imp & Ref Bonds	Series 2014	LEAD
7/14/2014	2.85	El Campo City-Texas	Tax & Revenue Cert of Obligation	Series 2014	CO-MGR
6/24/2014	76.87	Harris Co (Spring) ISD	Unlimited Tax Refunding Bonds	Series 2014	LEAD
6/23/2014	13.00	Mont Belvieu City-Texas	Tax & Rev Certs of Obligation	Series 2014	CO-MGR
6/17/2014	3.00	Sinton City-Texas	Comb Tax & Ltd Rev Certs of Oblig	Series 2014	CO-MGR
6/10/2014	7.98	Arlington City-Texas	Water & Wstwtr Sys Rev Ref Bonds	Series 2014 B	CO-MGR
6/9/2014	0.16	Williamson Co (Jarrell) ISD	Unlimited Tax Sch & Ref Bonds	Series 2014	CO-MGR
6/9/2014	8.87	Williamson Co (Jarrell) ISD	Unltd Tax Sch Bldg & Ref Bonds	Series 2014	CO-MGR
6/6/2014	275.00	Harris Co Metro Trans Auth	Sales & Use Tax CP Notes	Subseries A-1 & A-3	CO-MGR
5/29/2014	145.01	Harris Co Cult Ed Facs Fin Corp	Hospital Revenue Bonds	Series 2014 A	CO-MGR
5/27/2014	9.25	Bryan City-Texas	GO Refunding Bonds	Series 2014	CO-MGR
5/27/2014	42.62	Bryan City-Texas	Comb Tax & Rev Certs of Oblig	Series 2014	CO-MGR
5/21/2014	222.91	Dallas & Fort Worth Cities-Texas	Joint Revenue Improvement Bonds	Series 2014 B	CO-MGR
5/21/2014	2.84	Rollingwood City-Texas	General Obligation Bonds	Series 2014	CO-MGR
5/15/2014	71.73	Fort Bend ISD	Unlimited Tax Refunding Bonds	Series 2014	CO-MGR
5/9/2014	36.59	Harris Co Flood Control Dt	District Improvement Ref Bonds	Series 2014	CO-MGR
5/9/2014	60.10	Harris Co Flood Control Dt	Districtt Contract Tax Ref Bonds	Series 2014	CO-MGR
5/9/2014	73.67	Harris Co Flood Control Dt	Contract Tax Refunding Bonds	Series 2014 B	CO-MGR
5/6/2014	8.78	Southlake City-Texas	Tax & Wtrwrks Swr Rev Crt Oblig	Series 2014	CO-MGR
4/24/2014	212.15	Texas Public Finance Auth (TPFA)	Unemploy Comp Oblig Assess Bonds	Series 2014 A	CO-MGR
4/24/2014	497.64	Texas Public Finance Auth (TPFA)	Unemploy Comp Oblig Assess Bonds	Series 2014 B	CO-MGR
4/23/2014	7.33	Denton City-Texas	GO Refunding & Imp Bonds	Series 2014	CO-MGR
4/22/2014	2.88	Cibolo City-Texas	General Obligation Bonds	Series 2014	CO-MGR
4/22/2014	4.80	Georgetown City-Texas	General Obligation Bonds	Series 2014	CO-MGR
4/21/2014	6.08	Jefferson Co (Nederland) ISD	Unlimited Tax Schoolhouse Bonds	Series 2014	CO-MGR
4/14/2014	2.96	McGregor City-Texas	Comb Tax & Rev Certs of Oblig	Series 2014	CO-MGR
4/8/2014	6.18	Hardin Co (Silsbee) ISD	Unltd Tax Qualified Sch Con Bonds	Series 2014 Q	CO-MGR
4/8/2014	103.93	San Antonio City-Texas	Water Sys Jr Lien Rev & Ref Bonds	Series 2014 A	CO-MGR
4/2/2014	22.00	Harris Co (Aldine) ISD	Unlimited Tax School Bldg Bonds	Series 2014	CO-MGR
3/18/2014	8.59	Cedar Park City-Texas	General Obligation Bonds	Series 2014	CO-MGR
3/13/2014	605.20	Houston City-Texas	First Lien Revenue Ref Bonds	Series 2014 B	CO-MGR
3/7/2014	300.00	Texas Transportation Commission	State Highway Fund Rev Bonds	Series 2014-B	CO-MGR
3/7/2014	1157.80	Texas Transportation Commission	State Highway Fd Rev & Ref Bonds	Series 2014-A	CO-MGR
3/4/2014	18.90	Fort Bend Co-Texas	Unlimited Tax Road Ref Bonds	Series 2014	LEAD

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Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
3/3/2014	6.00	Ennis City-Texas	Comb Tax & Rev Certs of Oblig	Series 2014	CO-MGR
2/20/2014	221.58	Univ of Texas Sys Bd of Regents	Permanent University Fund Bonds	Series 2014 B	CO-MGR
1/30/2014	40.67	Alamo Community College Dt	Maintenance Tax Ref Bonds	Series 2014	CO-MGR
1/29/2014	24.66	Irving City-Texas	Hotel Occupancy Tax Rev Ref Bonds	Series 2014 A	CO-MGR
1/29/2014	39.66	Irving City-Texas	Hotel Occupancy Tax Rev Bonds	Series 2014 B	CO-MGR
1/29/2014	41.39	Tyler Junior College Dt	Combined Fee Revenue Bonds	Series 2014	CO-MGR
1/13/2014	70.13	Calhoun Co ISD	Unltd Tax Sch Bldg & Ref Bonds	Series 2014	CO-MGR
12/5/2013	143.34	Dallas ISD	Ltd Tax Qualified Sch Cons Notes	Series 2013	LEAD
12/3/2013	15.10	Texas	Water Fin Assistance Ref Bonds	Series 2013 E	CO-MGR
12/3/2013	20.00	Texas	Water Fin Assistance Ref Bonds	Series 2013 D	CO-MGR
12/3/2013	27.30	Texas	Water Fin Assistance Ref Bonds	Series 2013 F	CO-MGR
12/3/2013	73.47	Texas	Water Fin Assistance Ref Bonds	Series 2013 G	CO-MGR
11/26/2013	38.25	Dallas Co Hospital Dt	Limited Tax & Revenue Bonds	Series 2013	CO-MGR
11/19/2013	3.49	Marble Falls City-Texas	Comb Tax & Ltd Rev Certs of Oblig	Series 2013	CO-MGR
11/19/2013	7.91	Rowlett City-Texas	GO Refunding Bonds	Series 2013	CO-MGR
11/14/2013	33.01	Harris Co (Spring) ISD	Unlimited Tax Refunding Bonds	Series 2013 A	LEAD
11/14/2013	23.17	Longview City-Texas	General Obligation Bonds	Series 2013	CO-MGR
11/5/2013	15.77	Sugar Land City-Texas	Waterworks & Sewer Sys Rev Bonds	Series 2013	CO-MGR
10/28/2013	20.95	North Richland Hills City-Texas	GO Ref & Improvement Bonds	Series 2013	CO-MGR
10/17/2013	32.93	Via Metro Transit Adv Transport Dt	Sales Tax Rev Imp & Ref Bonds	Series 2013	LEAD
10/16/2013	45.63	Harris Co (Aldine) ISD	Unltd Tax School Bldg & Ref Bonds	Series 2013	CO-MGR
10/15/2013	2.22	Grand Prairie City-Texas	General Obligation Bonds	Series 2013 A	CO-MGR
10/10/2013	55.67	El Paso Co (Socorro) ISD	Unlimited Tax Refunding Bonds	Series 2013 A	CO-MGR
10/1/2013	7.20	Sugar Land Development Corp	Sales Tax Revenue Bonds	Series 2013	CO-MGR
9/20/2013	43.25	Austin City-Texas	Public Improvement Ref Bonds	Series 2013 A	CO-MGR
9/20/2013	71.46	Austin City-Texas	Public Improvement Ref Bonds	Series 2013 B	CO-MGR
8/29/2013	25.36	Austin City-Texas	Certificates of Obligation	Series 2013	CO-MGR
8/20/2013	5.52	Kyle City-Texas	General Obligation Bonds	Series 2013	CO-MGR
8/19/2013	39.47	Hockley Co (Levelland) ISD	Unltd Tax School Building Bonds	Series 2013	CO-MGR
8/15/2013	47.95	Nueces Co (Flour Bluff) ISD	Unlimited Tax School Bldg Bonds	Series 2013	CO-MGR
8/13/2013	6.49	Rusk Co (Henderson) ISD	Unltd Tax Qualified Sch Con Bonds	Series 2013	CO-MGR
8/12/2013	2.75	Pearland City-Texas	Certificates of Obligation	Series 2013	CO-MGR
8/12/2013	9.32	Pearland City-Texas	Permanent Improvement Bonds	Series 2013	CO-MGR
8/8/2013	62.36	Texas Public Finance Auth (TPFA)	Revenue Financing Sys Ref Bonds	Series 2013	CO-MGR
7/31/2013	106.89	Grand Parkway Transport Corp	Sub Tier Toll Rev Tender Bonds	Series 2013 D	CO-MGR
7/31/2013	836.44	Grand Parkway Transport Corp	Sub Tier Toll Rev Tender Bonds	Series 2013 C	CO-MGR
7/23/2013	5.60	Bryan City-Texas	Comb Tax & Rev Certs of Oblig	Series 2013	CO-MGR
7/23/2013	27.69	Bryan City-Texas	GO Refunding Bonds	Series 2013	CO-MGR
7/23/2013	9.47	Carrollton City-Texas	GO Improvement Bonds	Series 2013	CO-MGR
7/19/2013	331.73	Bexar Co-Texas	Comb Tax & Rev Certs of Oblig	Series 2013 B	LEAD
7/18/2013	5.71	Temple City-Texas	Limited Tax Notes	Series 2013	CO-MGR
7/18/2013	25.26	Temple City-Texas	Comb Tax & Rev Certs of Oblig	Series 2013	CO-MGR
7/17/2013	277.00	Grand Parkway Transport Corp	Sub Tier Toll Rev Convert CABs	Series 2013 B	CO-MGR
7/17/2013	361.81	Grand Parkway Transport Corp	Subordinated Tier Toll Rev Bonds	Series 2013 E	CO-MGR
7/17/2013	1337.94	Grand Parkway Transport Corp	First & Sub Tier Toll Rev Bonds	Series 2013 A & B	CO-MGR
7/17/2013	38.11	Harris Co (Spring) ISD	Unlimited Tax Refunding Bonds	Series 2013	LEAD
7/16/2013	32.30	Plemons-Stinnett-Phillips CISD	Unltd Tax School Building Bonds	Series 2013	CO-MGR
7/15/2013	30.43	Tarrant Co (Everman) ISD	Unlimited Tax Sch Building Bonds	Series 2013	CO-MGR
7/11/2013	11.76	Bexar Co (Judson) ISD	Unlimited Tax Refunding Bonds	Series 2013 A	CO-MGR
7/11/2013	78.25	Bexar Co (Judson) ISD	Unlimited Tax Sch Building Bonds	Series 2013	CO-MGR
7/11/2013	416.32	Dallas & Fort Worth Cities-Texas	Joint Revenue Refunding Bonds	Series 2013 D	LEAD
7/11/2013	2.66	Irving City-Texas	Municipal Utility Sys Rev Bonds	Series 2013	CO-MGR
7/11/2013	17.84	Irving City-Texas	General Obligation Bonds	Series 2013	CO-MGR
7/9/2013	42.62	Dallas City-Texas	GO Refunding Bonds	Series 2013 B	CO-MGR
7/9/2013	194.47	Dallas City-Texas	GO Refunding & Improvement Bonds	Series 2013 A	CO-MGR
7/2/2013	1.20	Universal City-Texas	General Obligation Bonds	Series 2013	CO-MGR
6/4/2013	20.89	San Antonio City-Texas	Contract Revenue Refunding Bonds	Series 2013	LEAD
6/4/2013	265.41	Texas A&M University System	Revenue Financing System Bonds	Series 2013 B	CO-MGR
5/23/2013	150.00	Dallas Area Rapid Transit Auth	Revenue Commercial Paper Notes	Series I	LEAD
5/16/2013	450.00	Dallas & Fort Worth Cities-Texas	Joint Revenue Improvement Bonds	Series 2013 B	CO-MGR

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Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
5/15/2013	30.00	Ctl Texas Reg Mobility Au (CTRMA)	Senior Ln Revenue Refunding Bonds	Series 2013 B	SOLERA
5/13/2013	1.09	Red Oak City-Texas	Comb Tax & Revenue Certs Oblig	Series 2013	CO-MGR
5/13/2013	10.38	Red Oak City-Texas	GO Refunding Bonds	Series 2013	CO-MGR
5/7/2013	164.40	Houston City-Texas	Comb Utility Sys Rev & Ref Bonds	Series 2013 B	LEAD
4/24/2013	70.69	San Antonio City-Texas	Muni Drain Util Sys Rev Ref Bonds	Series 2013	CO-MGR
4/23/2013	103.96	Ctl Texas Reg Mobility Au (CTRMA)	Subordinate Lien Rev Ref Bonds	Series 2013	CO-MGR
4/23/2013	155.81	Ctl Texas Reg Mobility Au (CTRMA)	Senior Lien Revenue Ref Bonds	Series 2013 A	CO-MGR
4/23/2013	9.50	Georgetown City-Texas	General Obligation Bonds	Series 2013	CO-MGR
4/23/2013	33.22	Travis Co-Texas	Unlimited Tax Road Bonds	Series 2013	CO-MGR
4/22/2013	15.20	Williamson Co (Jarrell) ISD	Unltd Tax School Building Bonds	Series 2013	CO-MGR
4/19/2013	115.04	Bexar Co-Texas	Comb Tax & Rev Certs of Oblig	Series 2013 A	LEAD
4/3/2013	3.07	Harlingen City-Texas	Comb Tax & Rev Certs of Oblig	Series 2013	CO-MGR
3/26/2013	16.50	Baytown City-Texas	Comb Tax & Rev Certs of Oblig	Series 2013	CO-MGR
3/19/2013	11.65	Grand Prairie City-Texas	Comb Tax & Rev Certs of Oblig	Series 2013	CO-MGR
3/19/2013	14.05	Grand Prairie City-Texas	Wtr & Wstwtr Sys Rev Ref Bonds	New Series 2013	CO-MGR
3/6/2013	32.20	Harris Co (Humble) ISD	Unlimited Tax Refunding Bonds	Series 2013 A & B	CO-MGR
3/5/2013	43.59	Bexar Co (Alamo Heights) ISD	Unltd Tax School Bldg & Ref Bonds	Series 2013	CO-MGR
3/5/2013	311.46	Lower Colorado River Authority (LCRA)	Transmit Contract Ref Rev Bonds	Series 2013	CO-MGR
2/28/2013	78.56	Denton Co (Lewisville) ISD	Unlimited Tax School Bldg Bonds	Series 2013 D	CO-MGR
2/26/2013	398.78	Houston Community College (HCC)	Ltd Tax General Obligation Bonds	Series 2013	CO-MGR
2/7/2013	147.13	Harris Co (Houston) ISD	Var Rte Ltd Tax Schoolhouse Bonds	Series 2013 B	CO-MGR
2/1/2013	83.96	Bexar Co-Texas	Combined Tax & Rev Certs of Oblig	Series 2013	CO-MGR
1/23/2013	42.47	Texas	Water Financial Assistance Bonds	Series 2013 A	CO-MGR
1/22/2013	2.11	Upshur Co (Gilmer) ISD	Maintenance Tax Notes	Series 2013	CO-MGR
12/13/2012	155.66	Corpus Christi City-Texas	Util Sys Jr Lien Rev & Ref Bonds	Series 2012	LEAD
12/12/2012	23.49	Bexar Co (Harlandale) ISD	Unlimited Tax Refunding Bonds	Series 2012	SOLE
12/11/2012	18.82	Bexar Co (So San Antonio) ISD	Unlimited Tax Refunding Bonds	Series 2013	SOLE
12/11/2012	3.76	Montgomery City-Texas	Tax & Revenue Certs of Obligation	Series 2012	CO-MGR
12/6/2012	3.02	Comal Co-Texas	GO Refunding Bonds	Series 2012	CO-MGR
12/4/2012	818.64	Texas Transportation Commission	General Obligation Bonds	Series 2012 A	CO-MGR
11/26/2012	1.76	Seminole City-Texas	Wtrwrks & Swr Sys Rev Certs Oblig	Series 2012	CO-MGR
11/26/2012	225.00	Texas Transportation Commission	First Tier Revenue Ref Bonds	Series 2012-B	CO-MGR
11/19/2012	3.13	Oak Ridge North-Texas	Comb Tax & Revenue Certs of Oblig	Series 2012	CO-MGR
11/15/2012	585.33	Texas Transportation Commission	First Tier Revenue Ref Bonds	Series 2012-A	CO-MGR
11/14/2012	43.20	Harris Co-Texas	Permanent Improvement Ref Bonds	Series 2012 B	CO-MGR
11/14/2012	52.82	Harris Co-Texas	Unlimited Tx Road Refunding Bonds	Series 2012 B	CO-MGR
11/14/2012	66.43	Harris Co-Texas	Unlimited Tx Road Refunding Bonds	Series 2012 A	CO-MGR
11/14/2012	77.15	Harris Co-Texas	Permanent Improvement Ref Bonds	Series 2012 A	CO-MGR
11/9/2012	46.83	Dallas ISD	Unlimited Tax Refunding Bonds	Series 2012 A	LEAD
11/8/2012	127.78	Dallas Area Rapid Transit Auth	Senior Lien Sales Tax Rev Bonds	Series 2012	LEAD
11/1/2012	9.42	Temple City-Texas	Comb Tax & Rev Certs of Oblig	Series 2012	CO-MGR
10/23/2012	8.81	Euless City-Texas	GO Refunding Bonds	Series 2012 A	CO-MGR
10/15/2012	7.32	Jefferson Co (Nederland) ISD	Unltd Tax Qualified Sch Con Bond	Series 2012	CO-MGR
10/11/2012	3.15	Luling-Texas	Comb Tax &Rev Certs of Obligation	Series 2012	CO-MGR
10/11/2012	550.37	San Antonio Public Facilities Corp	Improvement & Ref Lease Rev Bonds	Series 2012	CO-MGR
10/10/2012	52.81	Galveston Co (Clear Creek) ISD	Unlimited Tax Refunding Bonds	Series 2012 B	CO-MGR
10/10/2012	81.95	Galveston Co (Clear Creek) ISD	Unlimited Tax Refunding Bonds	Series 2012 A	CO-MGR
10/3/2012	98.01	Harris Co-Texas	Toll Road Sr Lien Rev Ref Bonds	Series 2012 D	CO-MGR
10/3/2012	252.85	Harris Co-Texas	Toll Road Sr Lien Rev Ref Bonds	Series 2012 C	CO-MGR
9/26/2012	29.06	Bexar Co (So San Antonio) ISD	Unlimited Tax Refunding Bonds	Series 2012 A & B	SOLE
9/7/2012	163.44	San Antonio City-Texas	Water System Revenue & Ref Bonds	Series 2012 A	CO-MGR
8/30/2012	25.89	Tarrant Co Hospital Dt	Senior Lien Revenue Ref Bonds	Series 2012	CO-MGR
8/23/2012	6.64	Austin City-Texas	Public Improvement Bonds	Series 2012 B	CO-MGR
8/23/2012	135.49	Fort Worth City-Texas	General Purpose Ref & Imp Bonds	Series 2012	LEAD
8/23/2012	16.74	Mueller Local Govt Corp	Tax Increment Contract Rev Bonds	Series 2012	CO-MGR
8/22/2012	106.72	Dallas City-Texas	Wtrwks & Swr Sys Rev Ref Bonds	Series 2012 B	CO-MGR
8/22/2012	259.42	Dallas City-Texas	Wtrwks & Swr Sys Rev Ref Bonds	Series 2012 A	CO-MGR
8/22/2012	25.00	Tyler Junior College Dt	General Obligation Bonds	Series 2012	CO-MGR
8/16/2012	6.08	Dallas Co (Lancaster) ISD	Maintenance Tax Notes	Series 2012	CO-MGR
8/14/2012	85.79	Fort Worth City-Texas	Comb Tax & Rev Certs of Oblig	Series 2012	CO-MGR

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Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
8/7/2012	9.97	Southlake City-Texas	GO Refunding Bonds	Series 2012	CO-MGR
7/27/2012	180.61	Bexar Co (North East) ISD	School Building & Refunding Bonds	Series 2012	CO-MGR
7/25/2012	56.87	Brazoria Co (Brazosport) ISD	Unltd Tax Sch Bldg & Ref Bonds	Series 2012 A	CO-MGR
7/24/2012	155.09	Fort Bend Grand Parkway Toll Road Auth	Contract Tax Sub Ln Toll Rd Bonds	Series 2012	CO-MGR
7/18/2012	21.41	Harris Co (Spring) ISD	Unlimited Tax Refunding Bonds	Series 2012	CO-MGR
7/16/2012	50.53	Matagorda Co (Tidehaven) ISD	Unltd Tax School Building Bonds	Series 2012	CO-MGR
7/12/2012	2.91	Rollingwood City-Texas	General Obligation Bonds	Series 2012 A	CO-MGR
7/10/2012	55.00	Montgomery Co (New Caney) ISD	Unltd Tax School Building Bonds	Series 2012	CO-MGR
6/26/2012	98.96	El Paso Co-Texas	Certificates of Obligation	Series 2012	CO-MGR
6/26/2012	70.68	Texas A&M University System	Permanent University Fund Bonds	Series 2012 A	CO-MGR
6/26/2012	125.75	Texas A&M University System	Permanent University Fund Bonds	Series 2012 B	CO-MGR
6/20/2012	125.00	Houston City-Texas	Comb Util Sys 1st Lien Ref Bonds	Series 2012 A	SOLERA
6/12/2012	17.80	El Paso Co (Socorro) ISD	Unlimited Tax Refunding Bonds	Series 2012	LEAD
6/5/2012	21.93	Dallas City-Texas	Comb Tax & Rev Cert of Oblig	Series 2012	CO-MGR
6/5/2012	116.94	Fort Bend Co-Texas	Sub Lien Toll Road Rev Ref Bonds	Series 2012	LEAD
5/31/2012	146.26	Love Field Airport Modernization Corp	Special Facilities Revenue Bonds	Series 2012	CO-MGR
5/30/2012	182.08	Harris Co (Houston) ISD	Var Rate Ltd Tax Refunding Bonds	Series 2012	CO-MGR
5/17/2012	21.42	Lone Star College System	Limited Tax GO Refunding Bonds	Series 2012	CO-MGR
5/14/2012	2.75	Colorado Co-Texas	Comb Tax & Revenue Certs of Oblig	Series 2012	CO-MGR
5/2/2012	10.61	Clear Lake Water Authority	Wtrwks Swr Sys Comb Tax Rev Bonds	Series 2012	CO-MGR
5/1/2012	6.00	Little Elm Town-Texas	Comb Tax & Ltd Pledge Rev Oblig	Series 2012	CO-MGR
5/1/2012	15.73	Texas Water Development Board	Water Financial Assist Ref Bonds	Series 2012 D	CO-MGR
5/1/2012	22.22	Texas Water Development Board	Water Financial Assist Ref Bonds	Series 2012 E	CO-MGR
5/1/2012	19.19	Trinity River Authority	Contract Revenue Bonds	Series 2012	CO-MGR
4/26/2012	274.93	Dallas & Fort Worth Cities-Texas	Joint Revenue Ref & Imp Bonds	Series 2012 C	LEAD
4/26/2012	82.76	Galveston Co (Clear Creek) ISD	Unlimited Tax Refunding Bonds	Series 2012 B	CO-MGR
4/25/2012	101.59	Houston City-Texas	Public Improvement Ref Bonds	Series 2012 B	CO-MGR
4/25/2012	268.62	Houston City-Texas	Public Improvement Ref Bonds	Series 2012 A	CO-MGR
4/9/2012	8.04	Mitchell Co-Texas	General Obligation Bonds	Series 2012	CO-MGR
4/4/2012	8.69	Alvin Community College Dt	Limited Tax Refunding Bonds	Series 2012	CO-MGR
3/27/2012	3.65	Orange Co (Vidor) ISD	Unlimited Tax Refunding Bonds	Series 2012	CO-MGR
2/22/2012	238.14	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	Series 2012 B	CO-MGR
2/16/2012	433.77	Dallas & Fort Worth Cities-Texas	Joint Revenue Refunding Bonds	Series 2012 B	CO-MGR
1/13/2012	44.70	Corpus Christi City-Texas	General Improvement Bonds	Series 2012	CO-MGR
12/13/2011	34.10	Bexar Co-Texas	Comb Flood Ctrl Tax Certs Oblig	Series 2011	LEAD
12/13/2011	51.30	Bexar Co-Texas	Comb Tax & Rev Certs of Oblig	Series 2011 A	LEAD
12/6/2011	11.32	El Paso Co-Texas	GO Refunding Bonds	Series 2011	LEAD
12/6/2011	21.31	Univ of Houston Sys Bd of Regents	Consolidated Rev & Ref Bonds	Series 2011 B	CO-MGR
11/30/2011	197.94	Dallas ISD	Unlimited Tax Refunding Bonds	Series 2011	CO-MGR
11/29/2011	200.00	Houston City-Texas	General Obligation CP Notes	Series G- 1 & 2	LEADRA
11/15/2011	3.40	Seguin City-Texas	Tax & Pledge Rev Certs Of Oblig	Series 2011	CO-MGR
11/1/2011	47.13	Houston City-Texas	First Lien Revenue Ref Bonds	Series 2011 F	CO-MGR
10/18/2011	28.39	Harris Co (Cypress-Fairbanks) ISD	Unlimited Tax Refunding Bonds	Series 2011	CO-MGR
9/27/2011	78.33	Fort Worth City-Texas	Drainage Utility System Rev Bonds	Series 2011	CO-MGR
9/21/2011	19.59	Houston Community College (HCC)	Maintenance Tax Notes	Series 2011 A	SOLE
9/14/2011	92.26	Texas	GO Water Financial Assist Bonds	Series 2011B	CO-MGR
9/9/2011	510.42	Harris Co Metro Trans Auth	Sales & Use Tax Contractual Oblig	Series 2011A & B	CO-MGR
9/7/2011	87.15	Texas A&M University System	Permanent University Fund Bonds	Series 2011	CO-MGR
8/24/2011	61.12	Bexar Co (San Antonio) ISD	Unltd Tax Qual Sch Constr Bonds	Series 2011	CO-MGR
8/24/2011	166.66	Houston City-Texas	Comb Util Sys First Lien Rev Ref	Series 2011E	CO-MGR
8/23/2011	48.61	Collin Co (McKinney) ISD	School Building Unltd Tax Bonds	Series 2011	CO-MGR
8/16/2011	41.70	Brazos Co (College Station) ISD	Unltd Tax School Building Bonds	Series 2011	CO-MGR
8/16/2011	35.00	Harris Co (Channelview) ISD	Unltd Tax School Building Bonds	Series 2011	CO-MGR
8/11/2011	151.16	Fort Worth City-Texas	Wtr & Swr Sys Rev Ref & Imp Bonds	Series 2011	CO-MGR
8/3/2011	54.80	Alamo Community College Dt	Maintenance Tax Notes	Series 2011	LEAD
7/25/2011	18.56	Woodlands Road Utility Dt #1	Unlimited Tax Road Bonds	Series 2011	CO-MGR
7/19/2011	60.97	Harris Co (Spring) ISD	Unlimited Tax Refunding Bonds	Series 2011	CO-MGR
7/14/2011	45.00	Dallas Co (Grand Prairie) ISD	Unltd Tax School Building Bonds	Series 2011	CO-MGR
7/12/2011	139.27	San Antonio City-Texas	Gen Imp & Comb Tax Rev Cert Oblig	Series 2011	CO-MGR
6/2/2011	5.75	Lucas-Texas	Comb Tax & Ltd Pledge Rev Certs	Series 2011	CO-MGR

Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
4/21/2011	418.41	North Texas Tollway Auth (NTTA)	BANs	Series 2011 A & B	CO-MGR
4/21/2011	672.83	North Texas Tollway Auth (NTTA)	Special Projects System Rev Bonds	Series 2011A-C	CO-MGR
4/6/2011	46.56	San Antonio City-Texas	Water System Revenue Ref Bonds	Series 2011	CO-MGR
3/30/2011	99.09	Bexar Co (San Antonio) ISD	Unlimited Tax Refunding Bonds	Series 2011	LEAD
3/21/2011	76.86	Williamson Co-Texas	Unlimited Tax Road Bonds	Series 2011	CO-MGR
3/3/2011	4.62	Upper Trinity Regional Water Dt	Reg Wstwtr Treatment Sys Bonds	Series 2011	CO-MGR
1/24/2011	21.40	Plano City-Texas	General Obligation Bonds	Series 2011	CO-MGR
12/20/2010	1.50	Nueces Co (Corpus Christi) ISD	Unltd Tax School Building Bonds	Series 2010-A	LEAD
12/20/2010	98.50	Nueces Co (Corpus Christi) ISD	Unltd Tax School Building Bonds	Series 2010-B	LEAD
12/16/2010	11.82	Bexar Metropolitan Water Dt	Waterworks System Rev Ref Bonds	Series 2010-A	CO-MGR
12/16/2010	23.39	Bexar Metropolitan Water Dt	Waterworks Sys Sr Lien Rev Bonds	Series 2010	CO-MGR
12/15/2010	151.45	Bexar Co (San Antonio) ISD	Unltd Tax School Building Bonds	Series 2010 B	CO-MGR
12/7/2010	849.47	Texas Public Finance Auth (TPFA)	Unemploy Comp Oblig Assess Bonds	Series 2010 B & C	CO-MGR
11/23/2010	332.23	North Texas Tollway Auth (NTTA)	System First Tier Rev Ref Bonds	Series 2010	CO-MGR
11/18/2010	1110.42	Texas Public Finance Auth (TPFA)	Unemployment Compensation Oblig	Series 2010 A	CO-MGR
11/10/2010	17.57	Dallas City-Texas	Equipment Acq Contractual Obliga	Series 2010	LEAD
11/10/2010	77.67	Dallas City-Texas	GO Refunding Bonds	Series 2010	LEAD
11/10/2010	142.04	Dallas City-Texas	GO Refunding Bonds	Series 2010 C	LEAD
10/28/2010	21.58	Arlington City-Texas	Permanent Improvement Ref Bonds	Series 2010 A	CO-MGR
10/28/2010	200.00	San Antonio City-Texas	Elec & Gas Sys Rev Ref Bonds	Series 2010 B	CO-MGR
10/28/2010	300.00	San Antonio City-Texas	Elec & Gas Sys Jr Ln Rev Bonds	Series 2010 A	CO-MGR
10/27/2010	304.40	Dallas & Fort Worth Cities-Texas	Joint Revenue Improvement Bonds	Series 2010 A	CO-MGR
10/26/2010	9.33	Brazoria Co (Brazosport) ISD	Maintenance Tax Notes	Series 2010 Q	CO-MGR
10/22/2010	37.55	Bexar Co (North East) ISD	Maintenance Tax Notes	Series 2010	LEAD
9/28/2010	95.24	Dallas Area Rapid Transit Auth	Senior Ln Sales Tax Rev Ref Bonds	Series 2010 A	CO-MGR
9/28/2010	729.39	Dallas Area Rapid Transit Auth	Senior Ln Sales Tax Revenue Bonds	Series 2010 B	CO-MGR
9/22/2010	162.39	Texas Transportation Commission	Highway Improvement GO Bonds	Series 2010 B	CO-MGR
9/22/2010	815.42	Texas Transportation Commission	Highway Improvement GO Bonds	Series 2010 A	CO-MGR
9/14/2010	33.00	Dallas Co Park Cities MUD	Water System Revenue Bonds	Series 2010	CO-MGR
9/14/2010	20.59	Fort Worth City-Texas	General Purpose Bonds	Series 2010	CO-MGR
9/14/2010	39.79	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	Series 2010 E	CO-MGR
9/14/2010	604.31	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	Series 2010 C	CO-MGR
8/26/2010	16.45	Austin City-Texas	Pub Property Fin Contractual	Series 2010	CO-MGR
8/26/2010	26.40	Austin City-Texas	Public Improvement Bonds	Series 2010 B	CO-MGR
8/26/2010	204.89	Bexar Co Hospital Dt	Certificates of Obligation	Series 2010 B	CO-MGR
8/11/2010	104.44	Harris Co Hospital Dt	Senior Lien Refunding Rev Bonds	Series 2010	SOLERA
8/4/2010	30.33	Bexar Co-Texas	Comb Tax & Rev Certs of Oblig	Series 2010 B	LEAD
8/4/2010	121.48	Bexar Co-Texas	GO Comb Tax & Rev Certs of Oblig	Series 2010 A	LEAD
8/4/2010	6.90	Guadalupe-Blanco River (GBRA)	Reg Raw Wtr Delivery Sys Contract	Series 2010	CO-MGR
8/3/2010	9.79	Bexar Co (So San Antonio) ISD	School Building Bonds	Series 2010	SOLE
8/3/2010	22.12	Bexar Co (So San Antonio) ISD	Unlimited Tax Sch Bldg Bonds	Series 2010	SOLE
8/3/2010	26.10	Bexar Co (So San Antonio) ISD	School Building Bonds	Series 2010	SOLE
8/2/2010	2.12	Tomball City-Texas	GO Ltd Tax Refunding Bonds	Series 2010	CO-MGR
7/14/2010	27.25	Houston Community College (HCC)	Senior Lien Student Fee Rev Bonds	Series 2010	LEAD
6/30/2010	3.00	Corpus Christi City-Texas	Comb Tax & Rev Certs of Oblig	Series 2010	CO-MGR
6/30/2010	13.69	Corpus Christi City-Texas	General Improvement Bonds	Series 2010	CO-MGR
6/22/2010	34.48	Arlington City-Texas	Permanent Improvement & Ref Bonds	Series 2010	CO-MGR
6/22/2010	333.54	Texas Public Finance Auth (TPFA)	GO Refunding Bonds	Series 2010 A & B	CO-MGR
6/22/2010	516.25	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	Series 2010 D	CO-MGR
6/16/2010	8.80	San Antonio City-Texas	General Improvement Bonds	Series 2010 A	CO-MGR
6/16/2010	38.38	San Antonio City-Texas	Comb Tax & Rev Certs of Oblig	Series 2010	CO-MGR
6/16/2010	191.55	San Antonio City-Texas	General Improvement Bonds	Series 2010 B	CO-MGR
6/11/2010	177.71	Harris Co-Texas	Road & Permanent Imp Ref Bonds	Series 2010 A & B	CO-MGR
5/11/2010	12.00	Allen City-Texas	General Obligation Bonds	Series 2010	CO-MGR
4/19/2010	16.07	Houston ISD Pub Fac Corp	Lease Revenue Bonds	Series 2010 A	CO-MGR
4/19/2010	38.43	Houston ISD Pub Fac Corp	Lease Revenue Bonds	Series 2010 B	CO-MGR
4/13/2010	4.09	La Porte Area Water Authority	Contract Revenue Refunding Bonds	Series 2010	CO-MGR
4/12/2010	4.30	La Porte City-Texas	GO Refunding Bonds	Series 2010	CO-MGR
3/31/2010	23.48	Bexar Co (So San Antonio) ISD	Refunding Bonds	Series 2010	SOLE
3/24/2010	385.38	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Ref Bonds	Series 2010 B	CO-MGR

Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
3/10/2010	380.00	San Antonio City-Texas	Electric & Gas Systems Rev Bonds	New Series 2010 A	CO-MGR
2/26/2010	94.88	Ctl Texas Reg Mobility Au (CTRMA)	Senior Lien Revenue Bonds	Series 2010	CO-MGR
1/26/2010	27.67	Williamson Co (Round Rock) ISD	Unltd Tax School Building Bonds	Series 2010 A	CO-MGR
1/26/2010	61.76	Williamson Co (Round Rock) ISD	Unltd Tax School Building Bonds	Series 2010 B	CO-MGR
12/10/2009	35.05	Harris Co Metro Trans Auth	Sales & Use Tax Contractual Oblig	Series 2009 D	CO-MGR
12/9/2009	250.00	Harris Co-Texas	Toll Road Senior Lien Rev Bonds	Series 2009 C	CO-MGR
11/19/2009	14.83	Temple City-Texas	GO Refunding Bonds	Series 2009	CO-MGR
11/18/2009	125.94	Texas Water Development Board	GO Wtr Financial Assistance Bonds	Series 2009 E & F	CO-MGR
10/27/2009	67.22	Bexar Metropolitan Water Dt	Waterworks System Rev Ref Bonds	Series 2009	CO-MGR
10/14/2009	54.24	Texas A&M University System	Revenue Financing System Bonds	Series 2009 C	CO-MGR
10/7/2009	42.26	Uptown Development Authority	Tax Increment Contract Rev Bonds	Series 2009	CO-MGR
9/23/2009	24.50	Tyler Junior College Dt	Maintenance Tax Notes	Series 2009	CO-MGR
9/22/2009	2.32	Belton City-Texas	GO Refunding Bonds	Series 2009	CO-MGR
9/22/2009	45.19	Fort Worth City-Texas	Drainage Utility System Rev Bonds	Series 2009	CO-MGR
8/27/2009	24.77	Dallas Co Hospital Dt	Limited Tax Bonds	Series 2009 A	CO-MGR
8/27/2009	680.23	Dallas Co Hospital Dt	Limited Tax Bonds	Series 2009 B & C	CO-MGR
8/20/2009	76.83	Houston City-Texas	Public Improvement Ref Bonds	Series 2009 B	LEAD
8/20/2009	430.85	Houston City-Texas	Public Improvement Ref Bonds	Series 2009 A	LEAD
8/19/2009	1208.50	Texas Transportation Commission	GO Mobility Fund Bonds	Series 2009 A	CO-MGR
8/18/2009	2.51	Copperas Cove City-Texas	Limited Tax Notes	Series 2009	CO-MGR
8/13/2009	50.62	Bexar Co-Texas	Flood Ctrl Tax & Certs of Oblig	Series 2009 B	LEAD
8/13/2009	103.69	Bexar Co-Texas	Flood Ctrl Tax & Rev Certs Oblig	Series 2009 A	LEAD
8/11/2009	181.78	Texas Public Finance Auth (TPFA)	General Obligation Bonds	Series 2009 B	CO-MGR
8/11/2009	270.92	Texas Public Finance Auth (TPFA)	GO Refunding Bonds	Series 2009 A	CO-MGR
8/6/2009	165.00	North Texas Tollway Auth (NTTA)	First Tier System Revenue Bonds	Series 2009 B	CO-MGR
8/6/2009	660.00	North Texas Tollway Auth (NTTA)	First Tier System Revenue Bonds	Series 2009 B	CO-MGR
7/31/2009	22.61	Texas Dept of Hsg & Comm Affairs	Residential Mortgage Rev Bonds	Series 2009 B	CO-MGR
7/31/2009	80.00	Texas Dept of Hsg & Comm Affairs	Residential Mortgage Rev Bonds	Series 2009 A	CO-MGR
7/30/2009	449.66	Houston City-Texas	Airport System Rev & Ref Bonds	Series 2009 A	CO-MGR
7/28/2009	8.73	Bryan City-Texas	Comb Tax & Rev Certs of Oblig	Series 2009	CO-MGR
7/23/2009	11.25	Longview City-Texas	General Obligation Bonds	Series 2009	CO-MGR
7/23/2009	15.09	Upton Co (McCamey) ISD	Unltd Tax School Building Bonds	Series 2009	CO-MGR
7/9/2009	31.32	College Station City-Texas	Certificates of Obligation	Series 2009	CO-MGR
6/25/2009	260.01	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	Series 2009 D	CO-MGR
6/23/2009	48.94	Fort Bend Co-Texas	Unlimited Tax Road Bonds	Series 2009	CO-MGR
6/16/2009	170.39	Dallas Area Rapid Transit Auth	Sr Lien Sales Tax Revenue Bonds	Series 2009 A	CO-MGR
6/16/2009	829.62	Dallas Area Rapid Transit Auth	Sr Lien Sales Tax Revenue Bonds	Series 2009 B	CO-MGR
6/10/2009	86.75	Texas St Univ Sys Bd of Regents	Revenue Financing Sys Rev Bonds	Series 2009	CO-MGR
6/10/2009	330.55	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	Series 2009 B	CO-MGR
5/28/2009	82.56	Harris Co Metro Trans Auth	Sales & Use Tax Bonds	Series 2009 C	CO-MGR
5/28/2009	94.47	Harris Co Metro Trans Auth	Sales & Use Tax Bonds	Series 2009 A	CO-MGR
5/12/2009	15.40	Allen City-Texas	General Obligation Bonds	Series 2009	CO-MGR
5/5/2009	157.24	Texas Water Development Board	Water Financial Assistance Bonds	Ser 2009 Subser 09-B	CO-MGR
4/23/2009	53.21	North Texas Municipal Water Dt	Wstwtr Interceptor Sys Rev Bonds	Series 2009	CO-MGR
4/22/2009	215.46	Harris Co-Texas	Toll Road Senior Lien Rev Bonds	Series 2009 A	CO-MGR
4/14/2009	73.43	Fort Bend Co-Texas	Limited Tax & Refunding Bonds	Series 2009	LEAD
4/14/2009	116.57	Jefferson Co (Beaumont) ISD	Unlimited Tax School Bldg Bonds	Series 2009	CO-MGR
3/25/2009	476.05	Houston City-Texas	Combined Util Sys Rev & Ref Bonds	Series 2009 A	CO-MGR
2/27/2009	442.01	San Antonio City-Texas	Electric & Gas Sys Rev Ref Bonds	New Series 2009 A	CO-MGR
2/13/2009	78.09	Texas A&M University System	Revenue Financing System Bonds	Series 2009 B	CO-MGR
2/3/2009	145.00	Texas	Water Financial Assistance Bonds	Ser 09 Sub Ser 09-A	CO-MGR
1/26/2009	6.36	Plano City-Texas	Tax Notes	Series 2009	CO-MGR
1/26/2009	35.33	Plano City-Texas	GO Refunding & Improvement Bonds	Series 2009	CO-MGR
1/22/2009	163.76	San Antonio City-Texas	Wtr System Rev & Refunding Bonds	Series 2009	CO-MGR
1/13/2009	108.40	Univ of Houston Sys Bd of Regents	Consolidated Rev & Ref Bonds	Series 2009	CO-MGR
1/6/2009	94.14	Harris Co (Spring) ISD	Schoolhouse Bonds	Series 2009	CO-MGR
12/11/2008	76.24	Harris Co-Texas	Toll Rd Sub Lien Rev Ref Bonds	Series 2008	CO-MGR
12/9/2008	256.74	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	Series 2008 A	CO-MGR
12/4/2008	60.75	Texas	GO Water Refunding Bonds	Series 2008 B & C	LEAD
12/3/2008	393.33	Dallas ISD	Ultd Tx School Building Bonds	Series 2008	CO-MGR

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Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
10/29/2008	324.03	Houston City-Texas	Public Improvement Ref Bonds	Series 2008 A	CO-MGR
10/22/2008	200.50	Harris Co-Texas	Permanent Improvement Ref Bonds	Series 2008 C	LEAD
10/22/2008	10.12	San Antonio City-Texas	General Improvement Ref Bonds	Series 2008	CO-MGR
9/15/2008	23.42	Rockwall City-Texas	Comb Tax & Rev Certs of Oblig	Series 2008	CO-MGR
8/28/2008	10.70	Austin City-Texas	Certificates of Obligation	Series 2008	CO-MGR
8/28/2008	26.72	Austin City-Texas	Pub Prop Fin Contractual Oblig	Series 2008	CO-MGR
8/20/2008	15.29	Denton City-Texas	Utility System Revenue Bonds	Series 2008	CO-MGR
8/20/2008	65.00	Jefferson Co (Beaumont) ISD	Unlimited Tax School Bldg Bonds	Series 2008 A	CO-MGR
8/8/2008	79.33	Harris Co-Texas	Permanent Improvement Ref Bonds	Series 2008 B	LEAD
7/23/2008	324.48	Harris Co-Texas	Toll Road Revenue & Ref Bonds	Series 2008 B	CO-MGR
7/23/2008	9.82	Jefferson Co (Beaumont) ISD	Unlimited Tax Refunding Bonds	Series 2008	CO-MGR
6/19/2008	25.00	Moore Co (Dumas) ISD	Unltd Tax School Building Bonds	Series 2008	CO-MGR
6/18/2008	175.03	Univ of Houston Sys Bd of Regents	Consolidated Rev & Ref Bonds	Series 2008	CO-MGR
6/17/2008	38.30	Texas Public Finance Auth (TPFA)	Financing System Rev Bonds	Series 2008	CO-MGR
6/12/2008	731.42	Dallas Area Rapid Transit Auth	Sr Lien Sales Tax Revenue Bonds	Series 2008	CO-MGR
6/5/2008	287.94	San Antonio City-Texas	Elc & Gas Sys Revenue Bonds	New Series 2008	CO-MGR
6/3/2008	39.88	Arlington City-Texas	Permanent Imp & Refunding Bonds	Series 2008	CO-MGR
5/14/2008	100.00	Harris Co Health Facs Dev Corp	Revenue Refunding Bonds	Series 2008 A	CO-MGR
5/14/2008	100.00	Harris Co Health Facs Dev Corp	Revenue Refunding Bonds	Series 2008 B	CO-MGR
5/13/2008	55.00	Brazos Co-Texas	Limited Tax Bonds	Series 2008	CO-MGR
4/15/2008	17.40	Harris Co (Sheldon) ISD	Unltd Tax School Building Bonds	Series 2008	CO-MGR
4/14/2008	220.68	Fort Bend ISD	Unltd School Bldg & Ref Bonds	Series 2008	CO-MGR
4/3/2008	71.32	Bexar Co (Judson) ISD	Unltd Tax School Building Bonds	Series 2008	CO-MGR
4/1/2008	72.00	Hidalgo Co Drainage Dt #1	Unlimited Tax Improvement Bonds	Series 2008	CO-MGR
3/26/2008	25.70	Fort Bend Co Wtr Ctl & Imp Dt #2	Unlimited Tax Bonds	Series 2008	CO-MGR
3/25/2008	120.27	Matagorda Co Navigation Dt #1	Pollution Control Rev Ref Bonds	Series 2008	CO-MGR
2/21/2008	89.80	Jefferson Co (Beaumont) ISD	Unltd Tax School Building Bonds	Series 2008	CO-MGR
2/12/2008	54.98	Houston Community College (HCC)	Maintenance Tax Notes	Series 2008	CO-MGR
2/12/2008	64.73	Jefferson Co (Port Arthur) ISD	Unltd Tax School Building Bonds	Series 2008	CO-MGR
2/12/2008	119.13	Williamson Co (Round Rock) ISD	Unltd Tax School Building Bonds	Series 2008	CO-MGR
2/11/2008	14.95	Pearland City-Texas	Water & Sewer Sys Revenue Bonds	Series 2008	CO-MGR
1/24/2008	1100.00	Texas Transportation Commission	GO Mobility Fund Bonds	Series 2008	CO-MGR
1/23/2008	224.51	Texas Public Finance Auth (TPFA)	State of Texas GO Refunding Bonds	Series 2008	CO-MGR
1/9/2008	142.29	Harris Co (Spring) ISD	Schoolhouse and Refunding Bonds	Series 2008 A	CO-MGR
11/29/2007	106.76	San Antonio City-Texas	Comb Tax & Rev Cert of Obligation	Series 2007	CO-MGR
11/29/2007	121.22	San Antonio City-Texas	General Improvement & Ref Bonds	Series 2007	CO-MGR
11/8/2007	228.24	Houston City-Texas	Cert of Oblig & Pub Imp Ref Bonds	Sereis 2007 A & B	LEAD
8/10/2007	118.47	Texas	GO Wtr Fin Assistance Ref Bonds	Series 2007 A	CO-MGR
8/2/2007	13.41	No Harris Montgomery Comm Coll Dt	Limited Tax Refunding Bonds	Series 2007	CO-MGR
7/26/2007	298.67	Houston City-Texas	Airport Sub Lien Rev Ref Bonds	Series 2007 B	CO-MGR
7/19/2007	102.46	Dallas-Fort Worth Intl Airport	Joint Revenue Refunding Bonds	Series 2007	LEAD
7/17/2007	63.49	Alamo Community College Dt	Limited Tax Bonds	Series 2007 A	CO-MGR
6/26/2007	123.56	Houston City-Texas	Combined Util Sys Rev Ref Bonds	Series 2007 B	CO-MGR
6/14/2007	644.26	SA Energy Acquis Pub Fac Corp	Gas Supply Revenue Bonds	Series 2007	CO-MGR
6/7/2007	1006.33	Texas Transportation Commission	General Obligation Bonds	Series 2007	CO-MGR
6/5/2007	126.68	Fort Bend Co-Texas	Limited Tax Bonds	Series 2007	CO-MGR
5/30/2007	63.30	Red River Authority	Pollurion Control Rev Ref Bonds	Series 2007	CO-MGR
4/17/2007	211.62	Texas Water Development Board	Subordinate Lien Rev Ref Bonds	Series 2007 B	CO-MGR
3/13/2007	26.00	Fort Bend Co-Texas	Unlimited Tax Road Bonds	Series 2007	LEAD
2/22/2007	10.16	Texas Public Finance Auth (TPFA)	State of Texas GO Bonds	Series 2007 A-2	CO-MGR
2/22/2007	28.62	Texas Public Finance Auth (TPFA)	State of Texas GO Bonds	Series 2007 B	CO-MGR
2/21/2007	50.00	Texas	General Obligation Bonds	Fund II Series 2007A	CO-MGR
2/8/2007	10.82	Texas Public Finance Auth (TPFA)	General Obligation Bonds	Series 2007 A-1	CO-MGR
2/7/2007	63.80	Houston City-Texas	Pension Obligation Bonds	Series 2007 A	CO-MGR
1/10/2007	128.85	San Antonio City-Texas	Electric & Gas Sys Rev Ref Bonds	Series 2006 B	CO-MGR
12/15/2006	34.34	Jefferson Co (Port Arthur) ISD	School Building Bonds	Series 2007	LEAD
12/7/2006	89.60	Harris Co Flood Control Dt	Improvement Bonds	Series 2007	CO-MGR
11/30/2006	231.10	Univ of Texas Sys Bd of Regents	Rev Financing Sys Ref Bonds	Series 2006 C & E	CO-MGR
11/29/2006	202.79	Texas Public Finance Auth (TPFA)	GO Refunding Bonds	Series 2006 A & B	CO-MGR
11/14/2006	41.05	Texas	GO Veterans Land Ref Bonds	Series 2006 C	CO-MGR

Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
11/9/2006	243.94	San Antonio City-Texas	Cert of Oblig & Ref Imp Bonds	Series 1& 2	CO-MGR
11/3/2006	228.34	Houston City-Texas	Public Improvement Ref Bonds	Series 2006 D to G	CO-MGR
10/27/2006	96.20	Texas Dept of Hsg & Comm Affairs	Single Family Mtg Rev & Ref Bonds	2006 Series F & G	CO-MGR
10/24/2006	28.10	Harris Co (Houston) ISD	Limited Tax Refunding Bonds	Series 2006 A	CO-MGR
10/24/2006	72.82	Houston Community College (HCC)	Student Fee Rev & Ref Bonds	Series 2006	CO-MGR
10/19/2006	137.80	Austin City-Texas	Electric Util Sys Rev Ref Bonds	Series 2006 A	CO-MGR
10/5/2006	1040.28	Texas Transportation Commission	GO Mobility Fund Bonds	Series 2006-A	CO-MGR
6/1/2006	750.00	Texas Transportation Commission	GO Mobility Fund Bonds	Series 2006	CO-MGR
5/3/2006	22.33	Texas	General Obligation Bonds	Series 2006 A	CO-MGR
4/20/2006	560.89	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	Series 2006 A & B	CO-MGR
3/24/2006	23.41	Harris Co (North Forest) ISD	Schoolhouse Refunding Bonds	Series 2006 A	CO-MGR
3/24/2006	36.56	Harris Co (North Forest) ISD	Schoolhouse Refunding Bonds	Series 2006 B	LEAD
3/23/2006	60.71	Alamo Community College Dt	Limited Tax Bonds	Series 2006	CO-MGR
2/22/2006	310.31	Dallas & Fort Worth Cities-Texas	Joint Revenue Refunding Bonds	Series 2006 A	CO-MGR
2/16/2006	28.09	Harris Co-Texas	Road Forward Refunding Bonds	Series 2006 A	CO-MGR
12/6/2005	30.25	Fort Bend Co-Texas	Unlimited Tax Road Bonds	Series 2006	CO-MGR
10/19/2005	53.45	Houston City-Texas	Certificates of Obligation	Series 2005 D	CO-MGR
10/19/2005	95.74	Houston City-Texas	Public Improvement Ref Bonds	Series 2005 E	CO-MGR
9/15/2005	47.65	No Harris Montgomery Comm Coll Dt	Ltd Tax Refunding Bonds	Series 2005A	CO-MGR
8/31/2005	164.27	Arlington City-Texas	Special Oblig Special Tax Bonds	Series 2005 B	CO-MGR
8/25/2005	173.14	Harris Co (Houston) ISD	Ltd Tax Refunding Bonds	Series 2005 B	CO-MGR
7/15/2005	20.08	Arlington City-Texas	Special Oblig Special Tax Bonds	Series 2005 C	CO-MGR
7/15/2005	113.65	Arlington City-Texas	Special Oblig Special Tax Bonds	Series 2005 A	CO-MGR
6/22/2005	15.00	Texas	Water Financial Assiss GO Bonds	Series 2005 B	CO-MGR
6/22/2005	55.68	Texas	Water Fin Assiss & Ref GO Bonds	Series 2005 A	CO-MGR
6/3/2005	275.76	Texas A&M University System	Revenue Finance System Bonds	Series 2005 B	CO-MGR
5/19/2005	198.49	Austin City-Texas	Wtr Wstwtr Sys Ref Rev Bonds	Series 2005	CO-MGR
5/18/2005	34.42	Harris Co-Texas	Refunding Bonds	Series 2005 A	LEAD
5/2/2005	61.25	Harris Co (Houston) ISD	Ltd Tax Refunding Bonds	Series 2005	CO-MGR
4/19/2005	100.00	Texas Dept of Hsg & Comm Affairs	Single Fam Var Rate Mtg Rev Ref	2005 Series A	CO-MGR
4/13/2005	80.00	Harris Co (Pasadena) ISD	Unltd Tax School Bldg Bonds	Series 2005-B	CO-MGR
4/7/2005	6.92	No Harris Montgomery Comm Coll Dt	Limited Tax Refunding Bonds	Series 2005	CO-MGR
3/24/2005	43.73	Jefferson Co (Port Arthur) ISD	School Building Bonds	Series 2005	LEAD
3/17/2005	51.29	Houston Community College (HCC)	Revenue Refunding Bonds	Series 2005	LEAD
3/11/2005	100.35	Univ of Texas Sys Bd of Regents	Permanent Univ Fund Ref Bonds	Series 2005 A	CO-MGR
3/11/2005	124.63	Univ of Texas Sys Bd of Regents	Permanent University Fund Bonds	Series 2005B	CO-MGR
3/8/2005	69.85	Harris Co-Texas	Permanent Imp Ref Bonds	Series 2005A	LEAD
3/8/2005	57.17	Houston City-Texas	GO Pension Bonds	Series 2005	CO-MGR
2/22/2005	6.37	Harris Co (Pasadena) ISD	Limited Tax Refunding Bonds	Series 2005	CO-MGR
2/22/2005	14.61	Harris Co (Pasadena) ISD	Refunding Bonds	Series 2005-A	CO-MGR
2/16/2005	52.74	Fort Bend Co (Katy) ISD	Refunding Bonds	Series 2005 A & B	CO-MGR
1/19/2005	399.35	Dallas City-Texas	GO Pension Bonds	Series 2005 ABC	CO-MGR
12/21/2004	120.40	Fort Worth City-Texas	Water & Sewer Rev Ref & Imp Bonds	Series 2005	CO-MGR
12/16/2004	34.17	Smith Co (Tyler) ISD	School Building Bonds	Series 2005	CO-MGR
12/14/2004	36.06	Harris Co (Pasadena) ISD	School Building & Refunding Bonds	Series 2005	CO-MGR
11/4/2004	218.61	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	Series 2004C	CO-MGR
10/27/2004	192.73	Texas Public Finance Auth (TPFA)	Revenue Refunding Bonds	Series 2004 A,B,C &D	CO-MGR
9/30/2004	165.15	Austin City-Texas	Water Wstwtr Sys Rev Ref Bonds	Series 2004 A	CO-MGR
8/23/2004	139.87	Harris Co Flood Control Dt	Contract Tax & Refunding Bonds	Series 2004A	CO-MGR
8/23/2004	118.54	Harris Co-Texas	Permanent Improvement Ref Bonds	Series 2004A	CO-MGR
8/23/2004	144.89	Harris Co-Texas	Road & Refunding Bonds	Series 2004B	CO-MGR
7/22/2004	29.82	Jefferson Co (Port Arthur) ISD	School Building & Ref Bonds	Series 2004	CO-MGR
5/19/2004	1652.22	Houston City-Texas	Comb Utility Sys Rev Ref Bonds	Series 2004 A	CO-MGR
5/13/2004	19.55	Texas	GO Taxable Refunding Bonds	Fund I Series 2004	CO-MGR
4/29/2004	71.53	Texas	GO Wtr Fin Assistance Ref Bonds	Series 2004B	CO-MGR
4/27/2004	72.20	Fort Bend Co-Texas	Unltd Tax Toll Road Revenue Bonds	Series 2004	CO-MGR
3/24/2004	60.67	Univ of Texas Sys Bd of Regents	Permanent Univ Fund Ref Bonds	Series 2004A	CO-MGR
2/24/2004	56.06	Harris Co-Texas	Unltd Tax Road Refunding Bonds	Series 2004A	CO-MGR
2/24/2004	63.52	Harris Co-Texas	Criminal Justice Center Ref Bonds	Series 2004	CO-MGR
2/12/2004	52.72	Austin City-Texas	Hotel Tax Rev Ref Bonds	Series 2004	CO-MGR

Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
1/28/2004	137.92	Univ of Texas Sys Bd of Regents	Revenue Financing Sys Bonds	Series 2004 A	CO-MGR
12/11/2003	144.16	Houston Community College (HCC)	Limited Tax Bonds	Series 2003	CO-MGR
12/3/2003	16.49	Univ of Houston Sys Bd of Regents	Revenue Refunding Bonds	Series 2003	CO-MGR
11/21/2003	348.00	Harris Co-Texas	Refunding Bonds	Series 2003-B	CO-MGR
11/18/2003	50.37	Fort Worth City-Texas	Water and Sewer Revenue Bonds	Series 2003A	CO-MGR
11/6/2003	10.39	No Harris Montgomery Comm Coll Dt	Revenue Financing Sys Imp Bonds	Series 2003	CO-MGR
11/6/2003	36.47	No Harris Montgomery Comm Coll Dt	GO Building and Refunding Bonds	Series 2003	CO-MGR
10/22/2003	198.38	Houston City-Texas	Public Imp & Refunding Bonds	Series 2003 A-1-2 &B	LEAD
9/9/2003	50.00	Texas Public Finance Auth (TPFA)	Revenue Demand Rate Bonds	Series 2003 C-5	SOLERA
8/4/2003	75.13	Harris Co-Texas	Permanent Imp & Road Ref Bonds	Series 2003A	CO-MGR
7/22/2003	321.50	Harris Co-Texas	Toll Road Unltd Tax Rev Bonds	Series 2003	CO-MGR
7/15/2003	25.29	Fort Bend Co-Texas	Permanent Improvement Bonds	Series 2003	CO-MGR
6/16/2003	75.00	Austin Community College Dt	Limited Tax Bonds	Series 2003	CO-MGR
6/4/2003	182.49	Texas Public Finance Auth (TPFA)	GO & Refunding Bonds	Series 2003A	CO-MGR
5/13/2003	63.70	Fort Bend Co-Texas	Unltd Tax & Subor Toll Road Bonds	Series 2003	CO-MGR
3/10/2003	19.40	Houston Housing Finance Corp	Multi-Family Hsg Rev Ref Bonds	Series 2003 A	CO-MGR
2/26/2003	102.65	Texas A&M University System	Permanent Univ Fund Ref Bonds	Series 2003	CO-MGR
1/9/2003	112.04	Univ of Texas Sys Bd of Regents	Revenue Financing System Bonds	Series 2003A	CO-MGR
1/8/2003	86.50	Fort Worth City-Texas	Wtr & Swr Sys Rev Ref Imp Bonds	Series 2003	CO-MGR
12/17/2002	331.43	Tarrant Regional Water Dt	Water Rev Ref & Imp Bonds	Series 2002	CO-MGR
11/25/2002	31.55	Corpus Christi City-Texas	Tax & Hotel Tax Certs of Oblig	Series 2002	CO-MGR
11/21/2002	247.29	Houston City-Texas	Public Improvement Ref Bonds	Series 2002	CO-MGR
11/14/2002	172.81	Fort Bend Co (Katy) ISD	School Building & Refunding Bonds	Series 2002 & 2002A	CO-MGR
10/30/2002	22.61	Texas	Veterans Housing Assist Program	Series 2002	CO-MGR
10/22/2002	42.26	Harris Co-Texas	Toll Road Unltd Tax Sub Rev Bonds	Series 2002	CO-MGR
10/22/2002	397.52	Harris Co-Texas	Toll Road Sr Lien Rev & Ref Bonds	Series 2002	CO-MGR
7/24/2002	200.05	Houston City-Texas	Airport System Sub Lien Rev Bonds	Series 2002A	CO-MGR
7/24/2002	274.46	Houston City-Texas	Airport System Sub Lien Rev Bonds	Series 2002B	CO-MGR
7/19/2002	99.69	No Harris Montgomery Comm Coll Dt	Limited Tax GO Bldg & Ref Bonds	Series 2002	CO-MGR
4/30/2002	44.50	Harris Co Flood Control Dt	Refunding Bonds	Series 2002	LEAD
4/10/2002	48.07	Texas Public Property Fin Corp	Revenue Financing Sys Bonds	Series 2002	CO-MGR
2/13/2002	309.11	Houston City-Texas	Junior Lien Rev Fwd Ref Bonds	Series 2002B	CO-MGR
2/13/2002	425.03	Houston City-Texas	Junior Lien Rev Refunding Bonds	Series 2002A	CO-MGR
12/14/2001	12.79	Main Street Market Sq Redev Auth	Tax Increment Contract Rev Bonds	Series 2002A	CO-MGR
12/10/2001	49.13	Fort Worth City-Texas	Water & Sewer Sys Rev Bonds	Series 2001	CO-MGR
10/30/2001	68.75	Houston Community College (HCC)	Student Fee Rev and Ref Bonds	Series 2001A	CO-MGR
9/11/2001	195.68	Harris Co-Texas	GO Road Refunding Bonds	Series 2001	CO-MGR
9/7/2001	84.59	Univ of Texas Sys Bd of Regents	Revenue Finance System Bonds	Series 2001C	CO-MGR
8/31/2001	8.20	Old Spanish Trail/Almeda Redev Au	Tax Increment Contract Rev Bons	Series 2001	CO-MGR
8/15/2001	3.97	Houston City-Texas	Certificates of Obligation	Series 2001C	CO-MGR
8/15/2001	149.39	Houston City-Texas	Public Improv Forward Ref Bonds	Series 2001B	CO-MGR
8/15/2001	277.14	Houston City-Texas	Public Improv & Ref Bonds	Series 2001A	CO-MGR
7/26/2001	400.00	Dallas Area Rapid Transit Auth	Senior Lien Sales Tax Rev Bonds	Series 2001	CO-MGR
7/17/2001	232.44	Houston City-Texas	Water & Sewer Jr Lien Ref Bonds	Series 2001A	CO-MGR
4/19/2001	75.00	Houston City-Texas	Hotel Tax and Spec Rev Bonds	Series 2001C	CO-MGR
4/19/2001	75.00	Houston City-Texas	Hotel Tax and Spec Rev Bonds	Series 2001C	CO-MGR
4/19/2001	97.78	Houston City-Texas	Hotel Tax and Spec Rev Ref Bonds	Series 2001A & B	CO-MGR
4/19/2001	97.78	Houston City-Texas	Hotel Tax and Spec Rev Ref Bonds	Series 2001A & B	CO-MGR
4/4/2001	318.92	Texas Public Property Fin Corp	GO Refunding Bonds	Series 2001A	CO-MGR
3/29/2001	29.00	Fort Bend Co-Texas	Unlimited Tax Road Bonds	Series 2001	LEAD
3/29/2001	140.50	Houston City-Texas	Hotel Occupancy Tax Rev Ref Bonds	Series 2001 A&B	CO-MGR
3/29/2001	140.50	Houston City-Texas	Hotel Occupancy Tax Rev Ref Bonds	Series 2001 A&B	CO-MGR
3/19/2001	11.34	Corpus Christi City-Texas	General Improv Ref Bonds	Series 2001	CO-MGR
3/19/2001	39.15	Corpus Christi City-Texas	General Improv & Ref Bonds	Series 2001	CO-MGR
1/31/2001	8.41	Houston Community College (HCC)	Student Fee Revenue Bonds	Series 2001	CO-MGR
1/24/2001	12.20	Houston City-Texas	Tax & Rev Certs of Obligations	Series 2001 A	CO-MGR
12/6/2000	75.00	Texas	General Obligation Bonds	Series 2000 A	CO-MGR
11/3/2000	26.17	Texas	Veterans Hsg Assist Prog Bonds	Series 2000D&E	CO-MGR
10/25/2000	50.00	Houston City-Texas	Airport Sys Subor Lien Rev Bonds	Series 2000P-1	CO-MGR
10/25/2000	50.00	Houston City-Texas	Airport Sys Subor Lien Rev Bonds	Series 2000P-2	CO-MGR

Sale Date	Par ($MM)	Issuer	Issue Description	Series	Role
10/25/2000	269.24	Houston City-Texas	Airport Sys Subor Lien Rev Bonds	Series 2000B	CO-MGR
10/25/2000	327.23	Houston City-Texas	Airport Sys Subor Lien Rev Bonds	Series 2000A	CO-MGR
7/19/2000	292.15	Houston City-Texas	Wtr and Swr Junior Rev Ref Bonds	Series 2000B	CO-MGR
5/10/2000	25.48	Texas Public Property Fin Corp	Building Revenue Bonds	Series 2000 A	CO-MGR
5/5/2000	80.00	Texas Veterans Land Board	Veterans Mtg Rev Bonds	Series 2000B	CO-MGR
5/2/2000	60.00	Texas	Water Fin Assist & Ref Bonds	Series 2000	CO-MGR

APPENDIX

B. Multiple Optionality Report

Multiple Optionality Report (MOR)

- Gives issuers a theoretical benchmark to use in evaluating new issue call shortening proposals from underwriters
- Shows issuers the cost of shortening the call from the standard 10-year call in terms of foregone proceeds, yield to call, and yield to maturity
- The MOR methodology relies on OAS analysis using Loop's unique approach to quantifying volatility in the municipal marketplace
- Unlike other broker/dealers, Loop does not rely on a methodology that translates taxable volatility to municipal volatility
- MOR uses a wholly municipal volatility calculation methodology that looks at the implied volatilities resulting from a comparison of the MMD callable and non-callable benchmark yield curves

(See disclosure at end of report)

25 YEAR MATURITY

10 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM
4.75%	10	25	115.81	11.50	127.31	3.16%	2.92%	3.77%
5.00%	10	25	118.88	12.96	131.85	3.15%	2.82%	3.82%
5.25%	10	25	121.94	14.44	136.38	3.14%	2.73%	3.87%
5.50%	10	25	124.97	15.94	140.91	3.13%	2.64%	3.92%

9 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (9 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	9	25	114.84	12.47	127.31	3.16%	2.87%	3.82%	(0.97)	0.97	(5)	6
5.00%	9	25	117.78	14.07	131.85	3.15%	2.76%	3.88%	(1.11)	1.11	(6)	6
5.25%	9	25	120.70	15.68	136.38	3.14%	2.65%	3.94%	(1.24)	1.24	(8)	7
5.50%	9	25	123.55	17.36	140.91	3.13%	2.55%	4.00%	(1.42)	1.42	(9)	8

8 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (8 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	8	25	113.89	13.42	127.31	3.16%	2.80%	3.88%	(1.92)	1.92	(12)	11
5.00%	8	25	116.68	15.17	131.84	3.15%	2.67%	3.95%	(2.20)	2.20	(15)	12
5.25%	8	25	119.44	16.94	136.38	3.14%	2.55%	4.01%	(2.50)	2.50	(18)	14
5.50%	8	25	122.11	18.79	140.91	3.13%	2.44%	4.08%	(2.86)	2.86	(20)	16

7 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (7 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	7	25	112.89	14.42	127.31	3.16%	2.72%	3.94%	(2.92)	2.92	(20)	17
5.00%	7	25	115.53	16.31	131.85	3.15%	2.56%	4.01%	(3.35)	3.35	(26)	19
5.25%	7	25	118.09	18.28	136.38	3.14%	2.42%	4.09%	(3.85)	3.85	(31)	22
5.50%	7	25	120.59	20.32	140.91	3.13%	2.30%	4.17%	(4.38)	4.38	(34)	24

6 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (6 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	6	25	111.85	15.46	127.31	3.16%	2.60%	4.00%	(3.96)	3.96	(31)	23
5.00%	6	25	114.31	17.54	131.84	3.15%	2.42%	4.08%	(4.57)	4.57	(40)	26
5.25%	6	25	116.67	19.71	136.38	3.14%	2.26%	4.17%	(5.27)	5.27	(47)	30
5.50%	6	25	118.96	21.95	140.91	3.13%	2.12%	4.26%	(6.01)	6.01	(52)	34

5 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (5 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	5	25	110.72	16.59	127.31	3.16%	2.46%	4.06%	(5.09)	5.09	(46)	30
5.00%	5	25	112.95	18.90	131.84	3.15%	2.25%	4.16%	(5.94)	5.94	(57)	34
5.25%	5	25	115.10	21.28	136.38	3.14%	2.06%	4.26%	(6.83)	6.84	(67)	39
5.50%	5	25	117.03	23.88	140.91	3.13%	1.91%	4.37%	(7.95)	7.95	(73)	45

20 YEAR MATURITY

10 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM
4.75%	10	20	118.03	9.35	127.38	2.93%	2.68%	3.49%
5.00%	10	20	120.92	10.42	131.34	2.92%	2.61%	3.53%
5.25%	10	20	123.75	11.55	135.30	2.91%	2.55%	3.58%
5.50%	10	20	126.58	12.68	139.26	2.90%	2.48%	3.62%

9 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (9 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	9	20	116.91	10.47	127.38	2.93%	2.63%	3.56%	(1.12)	1.12	(5)	7
5.00%	9	20	119.64	11.71	131.34	2.92%	2.55%	3.61%	(1.28)	1.28	(7)	8
5.25%	9	20	122.33	12.98	135.30	2.91%	2.47%	3.67%	(1.43)	1.43	(8)	9
5.50%	9	20	125.00	14.26	139.26	2.90%	2.40%	3.72%	(1.58)	1.58	(9)	10

8 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (8 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	8	20	115.79	11.59	127.38	2.93%	2.56%	3.63%	(2.24)	2.24	(13)	14
5.00%	8	20	118.35	12.99	131.34	2.92%	2.46%	3.69%	(2.56)	2.56	(15)	16
5.25%	8	20	120.89	14.42	135.30	2.91%	2.37%	3.76%	(2.87)	2.87	(18)	18
5.50%	8	20	123.36	15.90	139.26	2.90%	2.29%	3.82%	(3.22)	3.22	(19)	20

7 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (7 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	7	20	114.62	12.77	127.38	2.93%	2.46%	3.71%	(3.41)	3.41	(22)	22
5.00%	7	20	117.01	14.33	131.34	2.92%	2.35%	3.78%	(3.91)	3.91	(26)	25
5.25%	7	20	119.38	15.92	135.30	2.91%	2.24%	3.85%	(4.37)	4.37	(30)	27
5.50%	7	20	121.61	17.65	139.26	2.90%	2.16%	3.93%	(4.97)	4.97	(33)	31

6 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (6 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	6	20	113.39	13.99	127.38	2.93%	2.35%	3.79%	(4.64)	4.64	(34)	30
5.00%	6	20	115.61	15.73	131.34	2.92%	2.21%	3.87%	(5.31)	5.31	(40)	34
5.25%	6	20	117.74	17.56	135.30	2.91%	2.09%	3.96%	(6.01)	6.01	(46)	38
5.50%	6	20	119.75	19.51	139.26	2.90%	1.99%	4.05%	(6.83)	6.83	(49)	43

5 YR CALL

Coupon	Call	Maturity	Price Callable	Call Value	Price Non-callable	Non-callable YTM	Callable Bond YTC	Callable Bond YTM	DIFFERENCE (5 YR vs. 10 YR CALL) Price	Call Value	YTC (BPS)	YTM (BPS)
4.75%	5	20	112.05	15.33	127.38	2.93%	2.19%	3.88%	(5.98)	5.98	(49)	39
5.00%	5	20	114.05	17.29	131.34	2.92%	2.03%	3.98%	(6.87)	6.87	(58)	44
5.25%	5	20	115.88	19.42	135.30	2.91%	1.91%	4.08%	(7.87)	7.87	(64)	50
5.50%	5	20	117.66	21.60	139.26	2.90%	1.79%	4.19%	(8.92)	8.92	(69)	57

The information in this report has been prepared from sources believed to be reliable, but is not guaranteed by Loop Capital Markets LLC. It is not a complete summary of all available data. Opinions expressed are subject to change without notice. Investors should regard the information as just one of many factors in making an investment decision. Loop Capital Markets LLC is a Delaware limited liability company.

APPENDIX

C. Financials

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

FORM X-17A-5

FOCUS REPORT
(FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT)
PART IIA 12

(Please read instructions before preparing Form)

This report is being filed pursuant to (Check Applicable Block(s)):

1) Rule 17a-5(a) 16 2) Rule 17a-5(b) 17 3) Rule 17a-11 18

4) Special request by designated examining authority 19 5) Other 26

NAME OF BROKER-DEALER

LOOP CAPITAL MARKETS LLC 13

ADDRESS OF PRINCIPAL PLACE OF BUSINESS (Do not use P.O. Box No.)

111 WEST JACKSON BOULEVARD, SUITE 1901 20
(No. and Street)

CHICAGO 21 (City) IL 22 (State) 60604 23 (Zip Code)

SEC. FILE NO.
8-50140 14

FIRM ID NO.
43098 15

FOR PERIOD BEGINNING (MM/DD/YY)
10/01/15 24

AND ENDING (MM/DD/YY)
12/31/15 25

NAME AND TELEPHONE NUMBER OF PERSON TO CONTACT IN REGARD TO THIS REPORT

Tasha Henderson 30

(Area code) - Telephone No.
(312) 913-4912 31

NAME(S) OF SUBSIDIARIES OR AFFILIATES CONSOLIDATED IN THIS REPORT

32 33
34 35
36 37
38 39

OFFICIAL USE

DOES RESPONDENT CARRY ITS OWN CUSTOMER ACCOUNTS ? YES 40 NO X 41

CHECK HERE IF RESPONDENT IS FILING AN AUDITED REPORT 42

EXECUTION:
The registrant/broker or dealer submitting this Form and its attachments and the person(s) by whom it is executed represent hereby that all information contained therein is true, correct and complete. It is understood that all required items, statements, and schedules are considered integral parts of this Form and that the submisson of any amendment represents that all unamended items, statements and schedules remain true, correct and complete as previously submitted.

Dated the _____ day of _____ 20 _____

Manual Signatures of:

1) _____
Principal Executive Officer or Managing Partner

2) _____
Principal Financial Officer or Partner

3) _____
Principal Operations Officer or Partner

ATTENTION - Intentional misstatements or omissions of facts constitute Federal Criminal Violations. (See 18 U.S.C. 1001 and 15 U.S.C. 78:f (a))

FINRA

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER					
LOOP CAPITAL MARKETS LLC	N	3			100

STATEMENT OF FINANCIAL CONDITION FOR NONCARRYING, NONCLEARING AND CERTAIN OTHER BROKERS OR DEALERS

as of (MM/DD/YY) 12/31/15 [99]

SEC FILE NO. 8-50140 [98]

Consolidated [ ] [198]

Unconsolidated [X] [199]

ASSETS	Allowable		Non-Allowable		Total	
1. Cash	$ 6,089,446	200			$ 6,089,446	750
2. Receivables from brokers or dealers:						
A. Clearance account	300,000	295				
B. Other	22,213,238	300	$ 2,798,254	550	25,311,492	810
3. Receivables from non-customers		355	661,639	600	661,639	830
4. Securities and spot commodities owned, at market value:						
A. Exempted securities		418				
B. Debt securities	15,795,698	419				
C. Options		420				
D. Other securities		424				
E. Spot commodities		430			15,795,698	850
5. Securities and/or other investments not readily marketable:						
A. At cost $		130				
B. At estimated fair value		440		610		860
6. Securities borrowed under subordination agreements and partners' individual and capital securities accounts, at market value:		460		630		880
A. Exempted securities $		150				
B. Other securities $		160				
7. Secured demand notes:		470		640		890
Market value of collateral:						
A. Exempted securities $		170				
B. Other securities $		180				
8. Memberships in exchanges:						
A. Owned, at market $		190				
B. Owned, at cost				650		
C. Contributed for use of the company, at market value				660		900
9. Investment in and receivables from affiliates, subsidiaries and associated partnerships		480		670		910
10. Property, furniture, equipment, leasehold improvements and rights under lease agreements, at cost-net of accumulated depreciation and amortization.		490	1,290,916	680	1,290,916	920
11. Other assets		535	2,390,588	735	2,390,588	930
12. Total Assets	$ 44,398,382	540	$ 7,141,397	740	$ 51,539,779	940

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

LOOP CAPITAL MARKETS LLC

as of 12/31/15

STATEMENT OF FINANCIAL CONDITION FOR NONCARRYING, NONCLEARING AND CERTAIN OTHER BROKERS OR DEALERS

LIABILITIES AND OWNERSHIP EQUITY

Liabilities	A.I. Liabilities		Non-A.I. Liabilities		Total	
13. Bank loans payable	$	1045	$	1255	$	1470
14. Payable to brokers or dealers:						
A. Clearance account		1114	10,760,312	1315	10,760,312	1560
B. Other		1115		1305		1540
15. Payable to non-customers		1155		1355		1610
16. Securities sold not yet purchased, at market value			5,013,152	1360	5,013,152	1620
17. Accounts payable, accrued liabilities, expenses and other	13,590,354	1205		1385	13,590,354	1685
18. Notes and mortgages payable:						
A. Unsecured		1210				1690
B. Secured		1211		1390		1700
19. Liabilities subordinated to claims of general creditors:						
A. Cash borrowings:			2,323,544	1400	2,323,544	1710
1. from outsiders $ 970						
2. Includes equity subordination (15c3-1(d)) of $ 980						
B. Securities borrowings, at market value from outsiders $ 990				1410		1720
C. Pursuant to secured demand note collateral agreements				1420		1730
1. from outsiders $ 1000						
2. includes equity subordination (15c3-1(d)) of $ 1010						
D. Exchange memberships contributed for use of company, at market value				1430		1740
E. Accounts and other borrowings not qualified for net capital purposes		1220		1440		1750
20. TOTAL LIABILITIES	$ 13,590,354	1230	$ 18,097,008	1450	$ 31,687,362	1760

Ownership Equity

21. Sole proprietorship		$	1770
22. Partnership (limited partners)	$ 1020		1780
23. Corporation:			
A. Preferred stock			1791
B. Common stock			1792
C. Additional paid-in capital		5,844,228	1793
D. Retained earnings		14,008,189	1794
E. Total		19,852,417	1795
F. Less capital stock in treasury		( )	1796
24. TOTAL OWNERSHIP EQUITY		$ 19,852,417	1800
25. TOTAL LIABILITIES AND OWNERSHIP EQUITY		$ 51,539,779	1810

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

LOOP CAPITAL MARKETS LLC as of 12/31/15

COMPUTATION OF NET CAPITAL

1. Total ownership equity from Statement of Financial Condition			$ 19,852,417	3480
2. Deduct ownership equity not allowable for Net Capital			( )	3490
3. Total ownership equity qualified for Net Capital			19,852,417	3500
4. Add:				
A. Liabilities subordinated to claims of general creditors allowable in computation of net capital			2,323,544	3520
B. Other (deductions) or allowable credits (List)				3525
5. Total capital and allowable subordinated liabilities			$ 22,175,961	3530
6. Deductions and/or charges:				
A. Total non-allowable assets from Statement of Financial Condition (Notes B and C)	$ 7,141,397	3540		
B. Secured demand note deficiency		3590		
C. Commodity futures contracts and spot commodities-proprietary capital charges		3600		
D. Other deductions and/or charges		3610	(7,141,397)	3620
7. Other additions and/or allowable credits (List)				3630
8. Net Capital before haircuts on securities positions			$ 15,034,564	3640
9. Haircuts on securities (computed, where appliicable, pursuant to 15c3-1(f)) :				
A. Contractual securities commitments	$	3660		
B. Subordinated securities borrowings		3670		
C. Trading and investment securities:				
1. Exempted securities		3735		
2. Debt securities	770,678	3733		
3. Options		3730		
4. Other securities		3734		
D. Undue concentration	209,900	3650		
E. Other (List)		3736	(980,578)	3740
10. Net Capital			$ 14,053,986	3750

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

LOOP CAPITAL MARKETS LLC as of 12/31/15

COMPUTATION OF BASIC NET CAPITAL REQUIREMENT

Part A

11. Minimum net capital required (6-2/3% of line 19)	$	906,024	3756
12. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)	$	250,000	3758
13. Net capital requirement (greater of line 11 or 12)	$	906,024	3760
14. Excess net capital (line 10 less 13)	$	13,147,962	3770
15. Net capital less greater of 10% of line 19 or 120% of line 12	$	12,694,951	3780

COMPUTATION OF AGGREGATE INDEBTEDNESS

16. Total A.I. liabilities from Statement of Financial Condition			$	13,590,354	3790
17. Add:					
A. Drafts for immediate credit	$	3800			
B. Market value of securities borrowed for which no equivalent value is paid or credited	$	3810			
C. Other unrecorded amounts (List)	$	3820	$		3830
19. Total aggregate indebtedness			$	13,590,354	3840
20. Percentage of aggregate indebtedness to net capital (line 19 divided by line 10)			%	96.70	3850
21. Percentage of debt to debt-equity total computed in accordance with Rule 15c-3-1(d)			%	10.48	3860

COMPUTATION OF ALTERNATE NET CAPITAL REQUIREMENT

Part B

22. 2% of combined aggregate debit items as shown in Formula for Reserve Requirements pursuant to Rule 15c3-3 prepared as of the date of net capital computation including both brokers or dealers and consolidated subsidiaries' debits	$		3870
23. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)	$		3880
24. Net capital requirement (greater of line 22 or 23)	$		3760
25. Excess net capital (line 10 less 24)	$		3910
26. Net capital in excess of the greater of: 5% of combined aggregate debit items or 120% of minimum net capital requirement	$		3920

NOTES:

(A) The minimum net capital requirement should be computed by adding the minimum dollar net capital requirement of the reporting broker dealer and, for each subsidiary to be consolidated, the greater of:

1. Minimum dollar net capital requirement, or

2. 6-2/3% of aggregate indebtedness or 4% of aggregate debits if alternative method is used.

(B) Do not deduct the value of securities borrowed under subordination agreements or secured demand notes covered by subordination agreements not in satisfactory form and the market values of the memberships in exchanges contributed for use of company (contra to item 1740) and partners' securities which were included in non-allowable assets.

(C) For reports filed pursuant to paragraph (d) of Rule 17a-5, respondent should provide a list of material non-allowable assets.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

LOOP CAPITAL MARKETS LLC

For the period (MMDDYY) from 10/01/15 to 12/31/15

STATEMENT OF CHANGES IN OWNERSHIP EQUITY
(SOLE PROPRIETORSHIP, PARTNERSHIP OR CORPORATION)

1. Balance, beginning of period			$ 21,476,262	4240
A. Net income (loss)			(1,631,636)	4250
B. Additions (includes non-conforming capital of	$	4262)	7,791	4260
C. Deductions (includes non-conforming capital of	$	4272)		4270
2. Balance, end of period (from item 1800)			$ 19,852,417	4290

STATEMENT OF CHANGES IN LIABILITIES SUBORDINATED
TO CLAIMS OF GENERAL CREDITORS

3. Balance, beginning of period	$ 2,323,544	4300
A. Increases		4310
B. Decreases		4320
4. Balance, end of period (from item 3520)	$ 2,323,544	4330

OMIT PENNIES

BROKER OR DEALER

LOOP CAPITAL MARKETS LLC as of 12/31/15

Exemptive Provision Under Rule 15c3-3

25. If an exemption from Rule 15c3-3 is claimed, identify below the section upon which such exemption is based :

A. (k) (1) - Limited business (mutual funds and/or variable annuities only) $ _____ 4550

B. (k) (2) (i) - "Special Account for the Exclusive Benefit of customers" maintained . . . . . X 4560

C. (k) (2) (ii) - All customer transactions cleared through another broker-dealer on a fully disclosed basis.

Name(s) of Clearing Firm(s) - Please separate multiple names with a semi-colon

Convergex and Pershing 4335 X 4570

D. (k) (3) - Exempted by order of the Commission 4580

Ownership Equity and Subordinated Liabilities maturing or proposed to be withdrawn within the next six months and accruals, (as defined below), which have not been deducted in the computation of Net Capital.

Type of Proposed Withdrawal or Accrual (See below for code to enter)		Name of Lender or Contributor		Insider or Outsider ? (In or Out)		Amount to be withdrawn (cash amount and/or Net Capital Value of Securities)		(MMDDYY) Withdrawal or Maturity Date		Expect to Renew (Yes or No)	
	4600		4601		4602		4603		4604		4605
	4610		4611		4612		4613		4614		4615
	4620		4621		4622		4623		4624		4625
	4630		4631		4632		4633		4634		4635
	4640		4641		4642		4643		4644		4645
	4650		4651		4652		4653		4654		4655
	4660		4661		4662		4663		4664		4665
	4670		4671		4672		4673		4674		4675
	4680		4681		4682		4683		4684		4685
	4690		4691		4692		4693		4694		4695

TOTAL $ _____ 4699

OMIT PENNIES

Instructions: Detail listing must include the total of items maturing during the six month period following the report date, regardless of whether or not the capital contribution is expected to be renewed. The schedule must also include proposed capital withdrawals scheduled within the six month period following the report date including the proposed redemption of stock and payments of liabilities secured by fixed assets (which are considered allowable assets in the capital computation pursuant to Rule 15c3-1(c) (2) (iv)), which could be required by the lender on demand or in less than six months.

WITHDRAWAL CODE: DESCRIPTION

1. Equity Capital
2. Subordinated Liabilities
3. Accruals
4. 15c3-1(c) (2) (iv) Liabilities

APPENDIX

D. Executed Documents

City of Austin, Texas
Section 0800
EQUAL EMPLOYMENT/FAIR HOUSING OFFICE
NON-DISCRIMINATION CERTIFICATION

City of Austin, Texas
Human Rights Commission

To: City of Austin, Texas, ("OWNER")

I hereby certify that our firm conforms to the Code of the City of Austin, Section 5-4-2 as reiterated below:

Chapter 5-4. Discrimination in Employment by City Contractors.

Sec. 4-2 Discriminatory Employment Practices Prohibited. As an Equal Employment Opportunity (EEO) employer, the Contractor will conduct its personnel activities in accordance with established federal, state and local EEO laws and regulations and agrees:

(B) (1) Not to engage in any discriminatory employment practice defined in this chapter.

(2) To take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without discrimination being practiced against them as defined in this chapter. Such affirmative action shall include, but not be limited to: all aspects of employment, including hiring, placement, upgrading, transfer, demotion, recruitment, recruitment advertising; selection for training and apprenticeship, rates of pay or other form of compensation, and layoff or termination.

(3) To post in conspicuous places, available to employees and applicants for employment, notices to be provided by OWNER setting forth the provisions of this chapter.

(4) To state in all solicitations or advertisements for employees placed by or on behalf of the Contractor, that all qualified applicants will receive consideration for employment without regard to race, creed, color, religion, national origin, sexual orientation, gender identity, disability, veteran status, sex or age.

(5) To obtain a written statement from any labor union or labor organization furnishing labor or service to Contractors in which said union or organization has agreed not to engage in any discriminatory employment practices as defined in this chapter and to take affirmative action to implement policies and provisions of this chapter.

(6) To cooperate fully with OWNER's Human Rights Commission in connection with any investigation or conciliation effort of said Human Rights Commission to ensure that the purpose of the provisions against discriminatory employment practices are being carried out.

(7) To require compliance with provisions of this chapter by all subcontractors having fifteen or more employees who hold any subcontract providing for the expenditure of $2,000 or more in connection with any contract with OWNER subject to the terms of this chapter.

For the purposes of this Offer and any resulting Contract, Contractor adopts the provisions of the City's Minimum Standard Nondiscrimination Policy set forth below.

City of Austin
Minimum Standard Non-Discrimination in Employment Policy:

As an Equal Employment Opportunity (EEO) employer, the Contractor will conduct its personnel activities in accordance with established federal, state and local EEO laws and regulations.

The Contractor will not discriminate against any applicant or employee based on race, creed, color, national origin, sex, age, religion, veteran status, gender identity, disability, or sexual orientation. This policy covers all aspects of employment, including hiring, placement, upgrading, transfer, demotion,

recruitment, recruitment advertising, selection for training and apprenticeship, rates of pay or other forms of compensation, and layoff or termination.

Further, employees who experience discrimination, sexual harassment, or another form of harassment should immediately report it to their supervisor. If this is not a suitable avenue for addressing their complaint, employees are advised to contact another member of management or their human resources representative. No employee shall be discriminated against, harassed, intimidated, nor suffer any reprisal as a result of reporting a violation of this policy. Furthermore, any employee, supervisor, or manager who becomes aware of any such discrimination or harassment should immediately report it to executive management or the human resources office to ensure that such conduct does not continue.

Contractor agrees that to the extent of any inconsistency, omission, or conflict with its current non-discrimination employment policy, the Contractor has expressly adopted the provisions of the City's Minimum Non-Discrimination Policy contained in Section 5-4-2 of the City Code and set forth above, as the Contractor's Non-Discrimination Policy or as an amendment to such Policy and such provisions are intended to not only supplement the Contractor's policy, but will also supersede the Contractor's policy to the extent of any conflict.

UPON CONTRACT AWARD, THE CONTRACTOR SHALL PROVIDE A COPY TO THE CITY OF THE CONTRACTOR'S NON-DISCRIMINATION POLICY ON COMPANY LETTERHEAD, WHICH CONFORMS IN FORM, SCOPE, AND CONTENT TO THE CITY'S MINIMUM NON-DISCRIMINATION POLICY, AS SET FORTH HEREIN, **OR** THIS NON-DISCRIMINATION POLICY, WHICH HAS BEEN ADOPTED BY THE CONTRACTOR FOR ALL PURPOSES (THE FORM OF WHICH HAS BEEN APPROVED BY THE CITY'S EQUAL EMPLOYMENT/FAIR HOUSING OFFICE), WILL BE CONSIDERED THE CONTRACTOR'S NON-DISCRIMINATION POLICY WITHOUT THE REQUIREMENT OF A SEPARATE SUBMITTAL.

Sanctions:

Our firm understands that non-compliance with Chapter 5-4 may result in sanctions, including termination of the contract and suspension or debarment from participation in future City contracts until deemed compliant with the requirements of Chapter 5-4.

Term:
The Contractor agrees that this Section 0800 Non-Discrimination Certificate or the Contractor's separate conforming policy, which the Contractor has executed and filed with the Owner, will remain in force and effect for one year from the date of filing. The Contractor further agrees that, in consideration of the receipt of continued Contract payments, the Contractor's Non-Discrimination Policy will automatically renew from year-to-year for the term of the underlying Contract.

Celeste Wright Harris, VP Human Resources
March 3, 2016

CITY OF AUSTIN, TEXAS
SECTION 0810
NON-COLLUSION,
NON-CONFLICT OF INTEREST, AND ANTI-LOBBYING CERTIFICATION

The term **"Offeror"**, as used in this document, includes the individual or business entity submitting the Offer. For the purpose of this Affidavit, an Offeror includes the directors, officers, partners, managers, members, principals, owners, agents, representatives, employees, other parties in interest of the Offeror, and any person or any entity acting for or on behalf of the Offeror, including a subcontractor in connection with this Offer.

1. **Anti-Collusion Statement.** The Offeror has not in any way directly or indirectly:

   a. colluded, conspired, or agreed with any other person, firm, corporation, Offeror or potential Offeror to the amount of this Offer or the terms or conditions of this Offer.

   b. paid or agreed to pay any other person, firm, corporation Offeror or potential Offeror any money or anything of value in return for assistance in procuring or attempting to procure a contract or in return for establishing the prices in the attached Offer or the Offer of any other Offeror.

2. **Preparation of Solicitation and Contract Documents.** The Offeror has not received any compensation or a promise of compensation for participating in the preparation or development of the underlying Solicitation or Contract documents. In addition, the Offeror has not otherwise participated in the preparation or development of the underlying Solicitation or Contract documents, except to the extent of any comments or questions and responses in the solicitation process, which are available to all Offerors, so as to have an unfair advantage over other Offerors, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

3. **Participation in Decision Making Process.** The Offeror has not participated in the evaluation of Offers or other decision making process for this Solicitation, and, if Offeror is awarded a Contract no individual, agent, representative, consultant, subcontractor, or sub-consultant associated with Offeror, who may have been involved in the evaluation or other decision making process for this Solicitation, will have any direct or indirect financial interest in the Contract, provided that the Offeror may have provided relevant product or process information to a consultant in the normal course of its business.

4, **Present Knowledge.** Offeror is not presently aware of any potential or actual conflicts of interest regarding this Solicitation, which either enabled Offeror to obtain an advantage over other Offerors or would prevent Offeror from advancing the best interests of the City in the course of the performance of the Contract.

5. **City Code.** As provided in Sections 2-7-61 through 2-7-65 of the City Code, no individual with a substantial interest in Offeror is a City official or employee or is related to any City official or employee within the first or second degree of consanguinity or affinity.

6. **Chapter 176 Conflict of Interest Disclosure.** In accordance with Chapter 176 of the Texas Local Government Code, the Offeror:

   a. does not have an employment or other business relationship with any local government officer of the City or a family member of that officer that results in the officer or family member receiving taxable income;

b. has not given a local government officer of the City one or more gifts, other than gifts of food, lodging, transportation, or entertainment accepted as a guest, that have an aggregate value of more than $100 in the twelve month period preceding the date the officer becomes aware of the execution of the Contract or that City is considering doing business with the Offeror. and

c. does not have a family relationship with a local government officer of the City in the third degree of consanguinity or the second degree of affinity.

7. As required by Chapter 176 of the Texas Local Government Code, Offeror must file a Conflict of Interest Questionnaire with the Office of the City Clerk no later than 5:00 P.M. on the seventh (7th) business day after the commencement of contract discussions or negotiations with the City or the submission of an Offer, or other writing related to a potential Contract with the City. The questionnaire is available on line at the following website for the City Clerk:

   http://www.austintexas.gov/department/conflict-interest-questionnaire

   There are statutory penalties for failure to comply with Chapter 176.

   If the Offeror cannot affirmatively swear and subscribe to the forgoing statements, the Offeror shall provide a detailed written explanation with any solicitation responses on separate pages to be annexed hereto.

8. **Anti-Lobbying Ordinance.** As set forth in the Solicitation Instructions, Section 0200, paragraph 7N, between the date that the Solicitation was issued and the date of full execution of the Contract, Offeror has not made and will not make a representation to a City official or to a City employee, other than the Authorized Contact Person for the Solicitation, except as permitted by the Ordinance.

Signature: _____
Name: Curtis V. Flowers
Title: Managing Director
Date: 02/29/2016

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	X	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes		**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Loop Capital Markets LLC

Company Name

Celeste Wright-Harris, Vice President, Human Resources

Name and Title of Authorized Representative (Print or Type)

Celeste Wright Harris — March 2, 2016

Signature — **Date**

Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Utilization Plan
(Please duplicate as needed)

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

PRIME CONTRACTOR / CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant	Loop Capital Markets LLC		
Address	111 West Jackson Blvd. Suite 1901		
City, State Zip	Chicago, IL 60604		
Phone Number	312-356-5839	Fax Number	312-896-9037
Name of Contact Person	Celeste Wright-Harris		
Is Company City certified?	Yes ☒ No ☐ MBE ☒ WBE ☐ MBE/WBE Joint Venture ☐		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

Celeste Wright-Harris, Vice President, Human Resources
Name and Title of Authorized Representative (Print or Type)

Celeste Wright Harris
Signature

March 2, 2016
Date

Provide a list of all proposed subcontractors / sub-consultants / suppliers that will be used in the performance of this Contract. **Attach Good Faith Effort documentation if non MBE/WBE firms will be used.**

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor _____ **Date** _____ **Director/Deputy Director** _____ **Date** _____

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-102524

Date Filed:
08/22/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Loop Capital Markets LLC
Chicago, IL United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

City of Austin
Underwriter/Investment Banking Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Grace, Jr., Albert	Chicago, IL United States	X	
Reynolds, Jr., James	Chicago, IL United States	X	
Loop Capital Holdings, LLC	Chicago, IL United States	X	
Loop Capital, LLC	Chicago, IL United States	X	

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

"OFFICIAL SEAL"
Kathy J McGahee
Notary Public, State of Illinois
My Commission Expires 7/26/2019

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Stephen Berkeley, this the 22nd day of August, 2016, to certify which, witness my hand and seal of office.

Signature of officer administering oath	Printed name of officer administering oath	Title of officer administering oath
Kathy J. McGahee	Kathy J. McGahee	Admin Asst.

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Ramirez & Co., Inc. ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Ramirez & Co., Inc. having offices at 100 Congress Avenue, Suite 2000, Austin, TX 78701 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents:**

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Ramirez & Co., Inc. Offer, dated 3/4/2016, including subsequent clarifications

1.2 **Order of Precedence:** Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work:** There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract:** The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement:** The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

RAMIREZ & CO., INC.	**CITY OF AUSTIN**
ROBIN REDFORD	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
MANAGING DIRECTOR	Senior Buyer Supervisor
Title:	Title:
JUNE 22, 2016	7/8/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: Ramirez & Co., Inc.

Company Address: 100 Congress Avenue, Suite 2000

City, State, Zip: Austin, Texas 78701

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: Robin Redford

Title: Managing Director

Signature of Officer or Authorized Representative:

Date: March 4, 2016

Email Address: robin.redford@ramirezco.com

Phone Number: 512-469-3504

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

ADDENDUM
CITY OF AUSTIN, TEXAS

Solicitation: RFQS TVN0103 **Addendum No: 1** **Date of Addendum: February 26, 2016**

This addendum is to incorporate the following changes to the above referenced solicitation:

I. **Questions:**

Q1: Please clarify the requirements of the no-contact rule. In particular, what if any contact is allowable for existing business?

A1: The City understands that potential respondents to this solicitation may already have existing business with the City. In this specific case, the No-Contact rule expressly prohibits contact between potential Contractor's and City personnel for the purpose of this solicitation only.

Q2: Within the total of 15 vendors selected, how many will be from each category?

A2: There is no set standard and the mix will be determined based on the quality of the proposals.

Q3: In the Proposal Preparation document, Section 1, paragraph D (Personnel) requires an estimated percentage of time each person will devote to this work.

A3: The City want to know the amount of time that all assigned personnel will spend dedicated to City transactions as opposed to working non City transactions. For instance if someone is assigned to more than just City transactions, what will be the percentage split.

Q4: Can you elaborate on the Company vs Personnel experience?

A4: Company experience (Section 1, paragraph C) should include only the work that has been completed by the firm. Personnel experience should be specific to those to be assigned to the City's contract.

Q5: Can you elaborate on the 10 page response requirement?

A5: 3 page Executive Summary, 10 page response, plus the all required documents (audit report required forms etc.).

Q6: Regarding the Background and Prior Experience requirement, are we required to supply a deal list identifying every project title, year, reference name, title, etc. for all projects since 2000?

A6: No. A representative sample will be sufficient.

Q7: **Section A, Part 1 of the Proposal Preparation Instructions and Evaluation Factors requires respondents to "confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response, but there is no such document provided. Please clarify this requirement.**

A7: This requirement is hereby removed from the solicitation. The Non-Discrimination Certification is included in the solicitation by reference and respondents are confirming their adherence to this requirement by signing the Offer Sheet on Page 3.

Q8: **If applying to serve only as co-manager, do firms need to meet the minimum insurance requirement for professional liability?**

A8: Professional Liability Insurance is a minimum requirement for this contract. There are no exceptions.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

APPROVED BY: _____ 2/26/16

Terry V. Nicholson, Sr. Buyer Specialist
Purchasing Office, 512-974-2995

Date

ACKNOWLEDGED BY:

Ramirez & Co., Inc.	Robin Redford	March 4, 2016
Name	Authorized Signature	Date

<u>RETURN ONE COPY OF THIS ADDENDUM</u> TO THE PURCHASING OFFICE, CITY OF AUSTIN, WITH YOUR RESPONSE OR PRIOR TO THE SOLICIATION CLOSING DATE. FAILURE TO DO SO MAY CONSTITUTE GROUNDS FOR REJECTION.

MARCH 8, 2016

CITY OF AUSTIN, TEXAS

Solicitation No. RFQS TVN0103REBID for

Underwriter/Investment Banking Services

to the

City of Austin, Texas

RAMIREZ & CO., INC.

100 CONGRESS AVENUE, SUITE 2000
AUSTIN, TEXAS 78701
TEL: 512-469-3504
FAX: 800-915-6901

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APPENDIX

A. Required City Documents

1. RFQS Offer Sheet
2. Addendum #1 Acknowledgment
3. MWBE No Goals Forms

B. Financials dated as of September 30, 2015 and
Most Recent FOCUS report dated December 31, 2015

Mr. Terry V. Nicholson
City of Austin Purchasing Office
Municipal Building
124 West 8th Street, Room 310
Austin, Texas 78701

March 8, 2016

Dear Mr. Nicholson:

Ramirez & Co., Inc. ("Ramirez" or the "Firm") is pleased to present to the City of Austin, Texas (the "City" or "Austin") our response to its Request for Qualification Statements ("RFQS") for Underwriter/Investment Banking Services Solicitation Number TVN0103REBID. Ramirez is a boutique municipal firm serving the investment needs of individuals, business owners, institutional investors and government agencies with a second-to-none approach, as the City has witnessed in its highly successful prior bond transactions. Our team is excited to present our qualifications and innovative financing ideas and we are ideally suited to continue to partner with the City for the following reasons:

- ✓ **RFQS REQUIRED STATEMENTS.** Ramirez is submitting our response under the firm category of "Other – minority owned". Incorporated in 1971, our Firm is one of the oldest and most successful minority-owned investment banks in the country and we take pride in our longevity and standing in the industry. Ramirez is certified by both the North Central and South Central Texas Regional Certification Agencies. Our dedicated senior banking team for the City is itself made up of 100% women and 33% minorities, reflecting our hiring practices and dedication to diversity. Our Firm is compliant with the listed insurance requirement coverage levels and will provide a certificate of evidence prior to contract execution and within 14 calendar days after written request[1]. Ramirez certifies as part of the City's *Non-Collusion, Non-Conflict of Interest, and Anti-Lobbying* ordinance that our Firm and its personnel have not directly or indirectly made representations to anyone other than the Authorized Contact Person during the No-Contact Period. Ramirez adheres to the City's *Non-Discrimination Policy* as confirmed by our signature on the Offer Sheet. Lastly, we have read and understand the Contractor Requirements listed in *Section C of the RFQS* and upon appointment will comply with all the responsibilities listed as an underwriter.
- ✓ **COMPREHENSIVE UNDERSTANDING OF AUSTIN CREDITS.** The Ramirez team has historical knowledge of the City's credits – general obligation, utility system (water and wastewater, Austin Energy) and airport. As Austin residents, our dedicated bankers are keenly focused on understanding the immediate and long-term goals established by City Council, Treasurer's office and the City's other business units. We will continue to focus our analyses on how to balance these goals with outstanding and proposed debt issuances. We have studied and understand the City's program and debt structuring goals for each credit. Our response to question *1.E. Part V – Innovative Financing Techniques* presents relevant strategies for the City's proposed 2016 transactions and beyond.
- ✓ **"OUT-OF-THE –BOX" INNOVATIONS.** Today we ask you to expect even more of us: we hope that the City of Austin will continue to include Ramirez in its bond underwriting pool and continue to appoint us to serve as senior manager, co-senior and co-manager for its various programs. We hope you will agree that our outstanding service and innovative ideas over the past years, as well as the new ideas we present here, such as OREs and RPIs for its programs, prove that we are worthy of such an expansive role. In our detailed response to *1.E. Part V – Innovative Financing Techniques* we provide an **innovative redemption provision that is complementary to a standard 10-year (or less) par call, creating what is essentially a double barreled redemption provision, and our pricing experience proves that there is no additional cost to the City to incorporate Optional Redemption Enhancement ("OREs") in a transaction.** Specifically, by using OREs on the City's proposed Water & Wastewater System Revenue Refunding Bonds, Series 2016, all the bonds after the 10-year par call date can be refunded on a current basis prior to 10 years with the provision, and this can be done at <u>no cost to the City at the time of pricing.</u> Ramirez's team of senior underwriters and quantitative bankers *pioneered* this unique idea aimed to bring significant value to our clientele, and we are the *first* to execute this unique redemption in the municipal marketplace.

[1] Note: COA's Item ii) commercial general liability insurance (1)(a) requires "contractual liability coverage for liability assumed under the Contract and all other Contracts related to the project." For bond underwriting services, there is one contract which is the Bond Purchase Agreement for each transaction. Our commercial general liability coverage does include contractual liability for the BPA for bond underwriting services. Coverage for any other Contract services can be added, if identified contracts should arise.

- ✓ **DEMONSTRATED MARKET LEADERSHIP.** We proudly served as Senior Manager on the $71 million City of Austin, Public Improvement Refunding Bonds ("PIBs") Series 2011A and Taxable Series 2011B. Ramirez executed seamless pricing coordination between the syndicate and financial advisor, while communicating early with investors to receive tremendous investor reception with 3.0x subscription from a diverse buyer base. Ramirez has recently been appointed and is currently engaged as **Senior Managing Book-Runner for the City Water & Wastewater System Revenue Refunding Bonds, Series 2016 expected to be priced in April 2016.**

- ✓ **AUSTIN UNDERWRITING EXPERIENCE.** Our Firm has been an underwriter to the City of Austin since 2003. We were honored to represent the City as book-running senior manager on the PIBs Series 2011A and Taxable Series 2011B, and we are excited to serve as book-running senior manager on the Water & Wastewater Series 2016 transaction in April 2016. Since 2011, Ramirez has served as an underwriter on nearly $1.7 billion of the City's bonds and our Firm provided average orders of 1.5x our liabilities, comprised of retail, institutional and member orders to support these transactions. Ramirez's competitive underwriting desk has also participated in the City's prior general obligation competitive transactions. In the summer of 2014, Ramirez completed a thorough review of the County's prior disclosure filings as it related to the SEC's industry-wide Municipalities Continuing Disclosure Cooperation ("MCDC") Initiative. We collaborated with the City's staff and financial advisor to achieve a positive outcome on the MCDC initiative.

- ✓ **LOCAL AUSTIN PRESENCE.** Ramirez proudly opened its third Texas banking office in Austin in early 2011 to complement our Houston and San Antonio offices. It is staffed by our experienced Texas bankers, Robin Redford and Lorraine Palacios, both dedicated to ensure the full resources of our Firm are available for the success of our clients' transactions. Our Firm's commitment is demonstrated in our underwriting involvement with area issuers: *Austin, Austin ISD, Central Texas Regional Mobility Authority, Williamson County and various State Agencies headquartered in Austin.*

- ✓ **TEXAS HISTORY OF COMMITMENT.** Ramirez has been an underwriter in the State of Texas since the late 1970s and has had an in-State dedicated investment banking presence for more than 15 years. Over the last ten years, Ramirez has participated in more than $50 billion of issues for Texas clients illustrating both our expertise and success in selling Texas bonds. Robin Redford, an Austinite, and Lorry Palacios, an El Pasoan, are Texas natives themselves and both women are founding members of the Texas Chapter of Women in Public Finance, which focuses on advancing leadership and business opportunities for women.

- ✓ **PUBLIC FINANCE INDUSTRY COMMITMENT – 45TH ANNIVERSARY.** We have continued to grow since our founding in 1971 and are dedicated to providing the absolute best banking services to our municipal clients which is the vast majority of our business. In 2015, our commitment to the municipal industry was further demonstrated by our extended our lease through 2027 and significantly expanded office space at our NYC Headquarters.

- ✓ **ONE OF THE INDUSTRY'S LARGEST INSTITUTIONAL SALES TEAMS.** Ramirez has 17-person municipal institutional salesforce, larger than almost every other Wall Street firm, cultivating a wide range of institutional investors in all three investor tiers, and a deep penetration into the "professional retail" investor segment. This large and highly experienced sales force is why Ramirez can deliver a wide distribution of institutional investors at the lowest interest cost achievable in any given market condition. Ramirez actively puts its capital to work in the secondary market trading of municipal bonds and routinely carries inventories of $100 million or more. **Our sales and trading personnel are continually active in the secondary market by trading $137 million (319 trades) Austin bonds since 2011 on all of its credits.**

- ✓ **INTEGRITY AND PRICING TRANSPARENCY.** Ramirez is not involved in any SEC, IRS, MSRB or state law enforcement litigation or investigation of any kind. Ramirez has never had to "settle" any charges or accusation with the Department of Justice, Federal Energy Regulatory Commission or any other Federal or State agency with regard to derivatives, mortgages, or market manipulation. Ramirez has never had employees or management – in any area of the Firm – under investigation for questionable activities.

- ✓ **TRUST AND COMMITMENT TO MUNICIPAL CLIENTS.** We hope that the City selects Ramirez because it trusts that the lead bankers and underwriters have the i) experience/expertise to perform exceptionally well, ii) standing within their firm to harness all the resources necessary to manage and execute the transactions successfully, and iii) are focused, prepared, experienced and dedicated to successfully executing the marketing and pricing of the transaction with the highest level of commitment to the industry on Wall Street.

Thank you for the opportunity to respond and if you have any questions please contact Robin at (512) 469-3504 or Lorry at (512) 469-3503.

Sincerely,

Robin Redford
Managing Director

Lorraine Palacios
Senior Vice President

1. QUALIFICATION STATEMENT

1.A. Part I – Business Organization: State full name and address of your organization and identify parent company if you are a subsidiary. Specify the branch office or other subordinate element which will perform, or assist in performing, work herein. Indicate whether you operate as a partnership, corporation, or individual. Include the State in which incorporated or licensed to operate. This section should include at a minimum the following:

i. Management/Ownership: Provide any recent or proposed changes in the firm's management or ownership.
ii. Confirm that the firm shall complete the City's non-discrimination certificate and submit it with their response.
iii. Confirm an understanding that the firm's officers, employees, or agents will not attempt to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council.
iv. Municipal sales offices in the United States.
v. Account Executives employed selling municipal bonds in the United States.
vi. Texas offices and locations, if any, along with the number of Account Executives selling municipal bonds in each Texas office identified.

i. Ramirez & Co., Inc., founded in 1971, has operated as a municipal underwriting broker-dealer for 45 years, with no mergers, acquisitions or diminution in service to municipal clients over this history. The Firm has no recent or proposed changes to management structure or ownership.

ii. Our Firm read and understands the City of Austin's non-discrimination certification. Per the clarification in Addendum No. 1, Ramirez adheres to the City's Non-Discrimination Policy as confirmed by our signature on the Offer Sheet.

iii. Our Firm's officers, employees and agents have not and will not attempt to lobby or influence a vote or recommendation related this proposal.

iv. Ramirez has 3 sales offices in the United States and Puerto Rico.

v. Ramirez has 30 sales professionals (17 institutional and 13 retail) selling municipal bonds in the U.S.

vi. We have three Texas banking offices: Texas HQ is in Austin, with part-time offices maintained in San Antonio and Houston. Two full time public finance bankers in Texas cover all three offices; no sales people are located in Texas--all sales professionals are located in New York City.

Forty-Five (45) Year History as a Municipal Boutique. Ramirez & Co., Inc. ("Ramirez" or the "Firm") is a registered broker-dealer incorporated in the State of New York and is a wholly owned subsidiary of SAR Holdings, Inc. The Firm's headquarters office and underwriting desk are located in New York City - and we maintain three offices in Texas (see table below for addresses). Ramirez is a privately held company and its majority shareholder, President and Chief Executive Officer is **Samuel A. Ramirez Sr.**, is a first-generation Hispanic American who founded the company 45 years ago. Mr. Ramirez owns 77.7% of SAR Holdings, Inc., Ramirez's parent corporation. All remaining shares of SAR Holdings, Inc. are held by the Firm's current employees. As a certified minority business enterprise ("MBE") firm, Ramirez's ownership structure demonstrates our commitment to its minority roots. There are no anticipated changes in ownership, management or staffing which would affect Ramirez's ability to serve the City as an underwriter.

Enduring Viability, Stability and Demonstrated Commitment to Public Finance. As the nation's oldest and largest Hispanic-owned full-service broker/dealer, Ramirez has remained focused on retail distribution since our founding in 1971 by Samuel A. Ramirez, Sr. As the Firm served retail sales clientele, municipal bond underwriting grew organically out of that focus on tax-exempt paper. Ramirez has maintained this focus for 45 years, slowly and naturally growing its underlying capital; perhaps this singular focus is the key to our long-term organizational and financial stability.

As further evidence of our measured growth and continued commitment to public finance, the Firm has recently recommitted to our headquarters in New York City with the signing of a new 10-year lease and the expansion and renovation of our underwriting desk, trading desk and offices which are adjacent to the World Trade Center site.

As reported in our response to the City's RFQ in 2012, while we have not had any major changes in the last four years, Ramirez's staffing and presence in municipal finance have been greatly enhanced following the market disruptions of 2008. Noteworthy additions to our markets platform over the last seven years include John Young as a senior underwriter, Alan Greco as head trader, McKim de Guzman as high yield trader, and James Cortese as competitive underwriter. We have also internally promoted Patricia McGrorry as an underwriter on our long-term desk. Our 17-member national institutional sales force, the second largest on Wall Street, affords access to all investor classes and, true to our original mission, Ramirez maintains a 13-member in-house retail salesforce. Our Public Finance department includes industry-recognized bankers, quantitative specialists and credit professionals.

The allocation of capital at Ramirez is managed by Sam Ramirez, Sr. and Vincent Mazzaro, Chief Operating Officer. Our capital is 100% available to support the trading and underwriting of municipal bonds, and the effective use of our capital is a driver of our success.

OFFICE LOCATIONS AND MUNICIPAL BOND SALES FORCE.

SUMMARY OF RAMIREZ'S TEXAS OFFICES AND MUNICIPAL BOND SALES FORCE.	
Corporate/Underwriting Headquarters	61 Broadway, 29th Floor, New York, NY 10006
Municipal sales offices in the U.S.	3
Account Executives employed selling municipal bonds in the U.S.	30 (17 institutional and 13 retail)
Texas offices and locations.	1) Texas HQ: 100 Congress Avenue, Suite 2000, Austin, Texas 78701 2) 1200 Smith Street, Suite 1600, Houston, Texas 77002 3) 300 Convent Street, Suite 1330, San Antonio, Texas 78205
Account executives selling municipal bonds in each Texas office identified.	None

1.B. Part II – Authorized Negotiator: Include name, address, and telephone number of the person in your organization authorized to negotiate Contract terms and render binding decisions on Contract matters.

Both Robin Redford and Lorraine Palacios in our Austin office are so authorized:

NAME:	Robin Redford	Lorraine Palacios
TITLE:	Managing Director	Senior Vice President
EMAIL ADDRESS:	robin.redford@ramirezco.com	lorraine.palacios@ramirezco.com
ADDRESS:	100 Congress Avenue, Suite 2000	100 Congress Avenue, Suite 2000
CITY/STATE/ZIPCODE:	Austin, Texas 78701	Austin, Texas 78701
TELEPHONE:	(512) 469-3504	(512) 469-3503

1.C. Part III – Background and Prior Experience: Describe only relevant corporate experience and individual experience for personnel who will be actively engaged in the contract. Do not include corporate experience unless personnel assigned to this project actively participated. Do not include experience prior to 2000. Supply the project title, year, and reference name, title, present address, and phone number of principal person for whom prior projects were accomplished. This section should include at a minimum:

i. Provide the year the firm was founded.
ii. Provide a brief history of the firm.
iii. Provide the location of the firm's headquarters and municipal trading desk(s).

- ✓ **Ramirez was founded in 1971**
- ✓ **One of the most successful minority-owned firm in the industry with proven commitment to public finance**
- ✓ **We are constantly involved with transactions similar in nature to Austin's various credits and the expertise is detailed in this response.**
- ✓ **Capital 100% dedicated to municipal business**
- ✓ **HQ and trading desk located at 61 Broadway, 29th Floor, NY, NY, 10006**

RAMIREZ'S EXPERIENCE RELEVANT TO THE CITY OF AUSTIN

Ramirez has participated in 25% of all negotiated municipal issuance since 2010 and this experience includes transactions in every sector of municipal finance. Of particular importance to the City of Austin is our expertise nationally and in Texas with General Obligation debt, Airport financings, and the Utility sector, including both energy and water and wastewater credits. **We believe the breadth and depth of our experience provides Austin with timely and relevant information in these important sectors that ultimately reduce the City's financing costs and increases financial flexibility. Ramirez is frequently in the market as senior book-running manager and financial advisor, as highlighted below, and we are in the market as a co-senior manager and co-manager on an almost daily basis as well.**

General Obligation ("GO") Debt Expertise. Since 2000 Ramirez has participated in nearly $284 billion (23%) of negotiated GO issuance and is the only minority firm ranked in the top 10 nationally for this category and time frame. The table below presents a small sample of our Texas and national GO client issuers. **We were honored to serve as senior book-running manager for the City's $71.3 million Public Improvement Refunding Bonds, Series 2011A and Taxable Series 2011B.** Since then, Ramirez's Austin-dedicated finance team has served as senior book-running manager on new money and refunding, both tax-exempt and taxable, GO debt for:

Sample of Ramirez's General Obligation Clients					
Texas Cities & Counties		**National Cities**		**States**	
City of Austin	✓	**Atlanta**	✓	**California**	✓
City of Dallas	✓	**Chicago**	✓	**Connecticut**	✓
City of Houston	✓	**Los Angeles**	✓	**Illinois**	✓
City of San Antonio	✓	**New York**	✓	**New York**	✓
El Paso County	✓	**Philadelphia**	✓	**Texas**	✓
Harris County	✓	**Phoenix**	✓	**Wisconsin**	✓

- nearly $213 million of El Paso County GO bonds in 5 transactions, including their $48.8 million Series 2016A refunding that **priced March 7, 2016** and included Ramirez's innovative optional redemption enhancement (as more fully discussed in our response to Question 1.E. Part V) and the pending $40 million Taxable Series 2016B refunding issue **expected to price March 14, 2016** (Contact: Wally Hardgrove, (915) 546-2262);
- $237.1 million City of Dallas GO Refunding and Improvement Bonds, Series 2013A and Taxable Series 2013B (Contact: Corrine Steeger, (214) 670-3676);
- $79.1 million Texas Public Finance Authority's Series 2015A-E Refunding (Contact: Lee Deviney, (512) 463-9433); and
- $92.9 million Series 2015E-G and $42.5 million Series 2013A State of Texas GO Water Financial Assistance Bonds (Contact: Amanda Landry, (512) 936-0809).

We believe our Texas GO success is directly linked to the City's decision to select Ramirez as senior book-running manager in 2011, and for this we are grateful to the City of Austin. Thank you!

Water and Wastewater Specialty. Ted Sobel, an integral member of our Austin-dedicated finance team and the Head of Ramirez's Public Finance Group, previously led the Utility and Energy Group at UBS and Infrastructure Group at Banc of America Securities. Since 2000 Ramirez has participated in over $68 billion (nearly 20%) of negotiated water and wastewater issuance. The table below presents a small sample of our Texas and national water and wastewater client issuers. **We are honored to serve as senior book-running manager for the City's upcoming Water and Wastewater System Revenue Refunding Bonds, Series 2016 bonds that are expected to price in April 2016.** Members of Ramirez's Austin-dedicated finance team have served as senior book-running manager for similar issues including:

Sample of Ramirez's Water and Wastewater Clients			
Texas		**National**	
City of Austin Water	✓	**NYWater**	✓
City of Dallas	✓	**City of Chicago**	✓
City of Houston CUS	✓	**OWDA**	✓
San Antonio Water System	✓	**So. CA Met. Water Dist.**	✓
City of El Paso PSB	✓	**City of Philadelphia**	✓
Texas Water Dev. Board	✓	**DC Water & Sewer Auth.**	✓

- $48.6 million City of El Paso Water & Sewer Revenue Refunding Bonds, Series 2015 that **priced November 2015** (Contact: Marcela Navarrete, (915) 594-5614);
- $166.3 million Ohio Water Development Authority ("OWDA") Revenue Bonds, Fresh Water Series 2016A **expected to price March 9, 2016** (Contact: Scott Campbell, (614) 466-0170);
- $2.8 billion in 6 transactions for New York City Municipal Water Finance Authority's ("NYWater") Water and Sewer System Revenue Bond portfolio, most recently for its $350 million 2016 Series BB that **priced in November 2015** (Contact: Tom Paolicelli, (212) 788-4969); and
- $695.8 million in 2 issues for the City of Chicago 2nd Lien Wastewater Transmission Revenue Bonds, most recently for their $419 million Series 2015 and 2008C remarketing issues that **priced in October 2015** (Contact: Carole Brown, (312) 744-7159).

Public Power Expertise. As mentioned above Ted Sobel previously led the Utility and Energy Group at UBS and Infrastructure Group at Banc of America Securities and has had a public power focus since he began in municipal finance. Since 2000 Ramirez has participated in nearly $54 billion (over

Sample of Ramirez's Public Power Clients			
Texas		**National**	
City of Austin Energy	✓	**Nebraska PPD**	✓
CPS Energy	✓	**Missouri Jt. Muni. Electric**	✓
City of Houston CUS	✓	**NYS Power Authority**	✓
Lower CO River Auth.	✓	**Long Island Power Auth.**	✓
Sam Rayburn Muni Power	✓	**American Muni. Power**	✓

21%) of public power negotiated issuance and is the only minority firm ranked in the top 10 nationally for this sector and time frame. The table above presents a small sample of our Texas and national public power issuers. **As co-manager for the City's $408.9 million Electric Utility System Revenue Refunding Bonds, Series 2015A&B, we submitted $46.5 million in total orders of which over $34 million were priority orders, demonstrating that our Firm strives to support our clients regardless of our syndicate position.** In addition to the priority and member orders we provided for the City's 2015A&B issue, when **serving as co-senior manager for CPS Energy's $320.5 million Revenue Refunding Bonds New Series 2015, we provided a total of $100.9 million in total orders (31.5% of the deal) of which $71 million were going-away institutional orders, thereby significantly supporting CPS Energy's transaction as well.**

Members of Ramirez's Austin-dedicated finance team have served as senior book-running manager or financial advisor for national public power issues including:

- $252.7 million Missouri Joint Municipal Electric Utility Commission Power Project Revenue Refunding Bonds, Series 2016A that **priced February 9, 2016** and for which Ramirez served as financial advisor (Contact: Mike Loethen, (573) 777-8004). Ramirez also served as financial advisor for 5 issues in 2014 and 2015 totaling $685 million;
- $139.2 million Nebraska Public Power District General Revenue Bonds, 2016 Series A&B that **priced January 26, 2016** and for which Ramirez served as financial advisor (Contact: Traci Bender, (402) 563-5459). Ramirez also served as financial advisor for 3 issues in 2014 and 2015 totaling $605 million; and
- $108.4 million Power Authority of the State of New York Series 2011 A Revenue Bonds for which Ramirez served as senior book-running manager (Contact: Brian McElroy, (914) 287-3956); and
- Nearly $1.2 billion American Municipal Power in 2 issues in 2012 and 2014 for which Ramirez served as financial advisor (Contact: Bob Trippe, (614) 540-0990).

Airport Experience. Since 2000 Ramirez has participated in over $34 billion (22.2%) of negotiated airport issuance and is the only minority firm ranked in the top 10 nationally for this sector and time frame. The table to the right presents a small sample of our Texas and national airport issuers. Ramirez's Austin-dedicated finance team has served as senior book-running manager for a wide variety of Texas airport credits with an assortment of tax status including:

Sample of Ramirez's Airport Clients

Texas		National	
City of Austin	✓	LAX	✓
DFW International Airport	✓	Metro. Wash. Airports	✓
Houston Airport System	✓	City of Chicago Airports	✓
Love Field Airport	✓	Greater Orlando Aviation	✓
San Antonio Airport Sys.	✓	Port Auth. Of NY/NJ	✓
City of El Paso	✓	City of Atlanta	✓

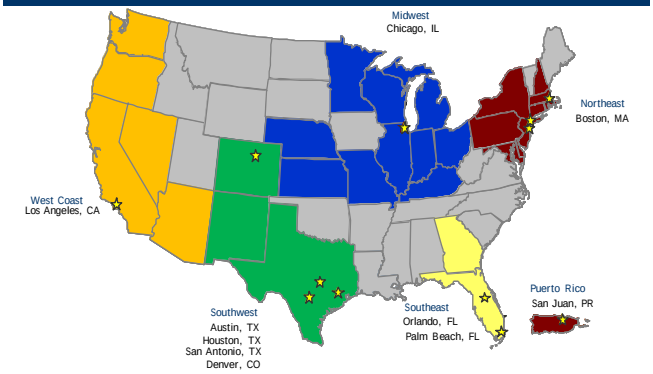
- GARB AMT Bonds: $300.5 million DFW Int'l Airport Joint Revenue Refunding Bonds, Series 2012E (Contact: Mike Phemister, (972) 973-5447);
- GARB Non-AMT Bonds: $252 million DFW Int'l Airport Joint Revenue Refunding Bonds, Series 2013F (Contact: Mike Phemister, (972) 973-5447);
- CONRAC Credit/Taxable Bonds: $38.2 million Houston Airport System Revenue Refunding Bonds, Series 2014 (Contact: Kelly Dowe, (713) 221-0935); and
- PFC Credit/AMT Bonds: $28 million City of San Antonio PFC and Subordinate Lien Airport System Revenue Refunding Bonds, Series 2016 **expected to price Spring 2016** (Contact: Margaret Villegas, (210) 207-8632).

FIRM OVERVIEW. As noted above in *Question A. Part I.*, Ramirez is a full service municipal bond specialist investment bank whose primary business is the structuring, pricing, underwriting, marketing, and trading of municipal bonds. Incorporated in 1971, the Firm is one of the oldest and most successful minority-owned investment banks in the country and we take pride in our longevity and standing in the industry. **Since 2010 Ramirez has served as senior book-running manager for over $10 billion of negotiated transactions and has participated in over 25% of all negotiated municipal issuance during that time.**

MINORITY OWNERSHIP. Ramirez is a privately held corporation and its majority shareholder, President and Chief Executive Officer is Samuel A. Ramirez, Sr., a first-generation Hispanic American who founded the company over 40 years ago. The Ramirez family owns 77% of SAR Holdings, Inc., Ramirez's parent company. All remaining shares of SAR Holdings, Inc. are held by the Firm's current employees. **As a certified minority business enterprise ("MBE") firm, Ramirez's ownership structure demonstrates our commitment to its minority roots.** Our dedicated banking team for the City of Austin is itself made up of 100% women and 33% minority and is reflective of our hiring practices and dedication.

STRATEGIC GROWTH. Ramirez participates in approximately 25% of all negotiated financings in the municipal industry. During the market turmoil that began in 2008, Ramirez identified a unique opportunity to enhance the staffing of the Firm and greatly expand our presence in municipal finance. While many of Wall Street's largest firms have experienced extensive staff changes over the last seven years, Ramirez has taken advantage of the industry disruption to develop a "best in class" platform. The Firm viewed the market turmoil as an opportunity to hire some of the industry's most accomplished municipal professionals. Since 2008, Sam Ramirez and his senior managers have hired exceptional, experienced bankers, underwriters, traders and salespeople from virtually every major firm. **As an example of this growth, we proudly priced our Firm's largest transaction to date: $1.4 billion City of Los Angeles Tax and Revenue Anticipation Notes in 2014.**

RAMIREZ'S NATIONAL PRESENCE



Ramirez currently has 128 employees (more than double since 2008) located in its headquarters in New York City and in its 10 regional offices, as shown in the graphic above. The Firm operates regional public finance offices in Austin, Boston, Chicago, Denver, Houston, Los Angeles, Orlando, Palm Beach, San Antonio and San Juan, Puerto Rico. Ramirez is strategically located throughout the nation to ensure maximum support and distribution of our clients' transactions.

As demonstrated in this section, we believe the breadth and depth of our experience provides Austin with timely and relevant information in these important sectors that ultimately reduce the City's financing costs and increases financial flexibility. Ramirez is frequently in the market as senior book-running manager and financial advisor, as highlighted below, and we are in the market as a co-senior manager and co-manager on an almost daily basis as well.

1.D. Part IV – Personnel: Include names, titles, and qualifications of key professional personnel who will be assigned to this contract. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

- ✓ **Robin Redford, Lorry Palacios and Karen Price provide primary banking coverage and are located in Austin, Texas (Robin & Lorry) and Denver, Colorado (Karen) and have a long history of partnership with, and service to, the City.**
- ✓ **All female primary banking team.**
- ✓ **John Young and Patty McGrorry are our underwriters who will market the City's bonds along with our salesforce. John, Patty and all other personnel assigned to Austin are located in NYC.**
- ✓ **Ramirez supports the City of Austin with quantitative depth and underwriting/trading expertise.**
- ✓ **As was demonstrated during our book-running for the City's Public Improvement Refunding Bonds, Series 2011AB, the City of Austin can count on leadership support from all parts of our Firm including President and CEO, Sam Ramirez Sr., and Ted Sobel, Head of Public Finance.**
- ✓ **Time dedication: As clarified in the Addendum, our key personnel dedicated to the City's transactions each spend from 75% to 100% of their time on the City's transaction during an appointment.** ***This ability to focus is one of the hallmarks of Ramirez's success on behalf of our municipal issuers and the key to our multiple repeat appointments.***

PARTNERSHIP WITH THE CITY. Ramirez is fully prepared to dedicate all of its resources towards executing a successful financing on behalf of the City and stands ready to commit its capital in order to deliver both a well-priced and broadly placed financing. The Ramirez team serving the City combines highly experienced bankers, a syndicate desk with a proven track record of achieving aggressive pricings nationwide, and a strong sales force, all of which will ensure the highest level of service and lowest financing cost to the City.

DEDICATED FINANCE TEAM – INVESTMENT BANKING. **Robin Redford**, *Managing Director* and *Texas Group Manager*, will serve as the local, primary, day-to-day banker for the City; she is a native Austinite with a BA from Rice University and an MPAff from University of Texas at Austin. **Lorraine Palacios**, *Senior Vice President*, will provide dual coverage on the account and, with Ms. Redford, is based in the Firm's Austin office; Lorry is a native of El Paso with a BA from Stanford University. Robin and Lorry provide a high-level of quantitative and transaction-oriented banking services to Texas issuers and will both be responsible for ensuring availability of our Firm's resources to the City. **Karen Price,** *Vice President* and *Quantitative Specialist*, will provide customized quantitative

analyses. **Robin, Lorry and Karen, working seamlessly with our underwriting professionals in New York, provided transactional leadership and quantitative expertise in Ramirez's role as senior book-running underwriter for the City of Austin's Public Improvement Refunding Bonds, Series 2011AB, and our Firm's other appointments as co-senior and co-manager for the City.**

SALES, TRADING AND UNDERWRITING. **John Young**, *Managing Director*, and **Patty McGrorry,** *Managing Director*, will serve as lead underwriters for the City. Mr. Young joined Ramirez from Bear Stearns where he served as senior underwriter for 17 years with a total of more than 30 years of experience in underwriting, trading and marketing municipal bonds. Ms. McGrorry joined our underwriting desk in 2012 from our banking division and has over 16 years public finance experience. Both John and Patty have provided underwriting services to the State of Texas, the Cities of Austin, Dallas, El Paso, Houston and San Antonio, El Paso, Harris and Williamson Counties, CPS Energy, SAWS, DFW Airport, Houston Airport System, and San Antonio Airport System.

They will be assisted by **Jamie Cortese**, *Managing Director*, who manages Ramirez's competitive underwriting and has extensive experience underwriting Texas debt throughout his career. The underwriting desk is overseen by **Al Greco**, *Managing Director*, our Head of Sales, Trading and Underwriting. Additionally, Al and our underwriters will be aided by **Kaitlin Briscoe**, *Vice President*, who manages the Firm's taxable municipal trading, **Ron Banaszek**, *Managing Director*, serving as Institutional Sales Manager, and **Peter Block**, *Managing Director*, who coordinates credit research and assists in the Firm's marketing efforts.

SENIOR LEADERSHIP AND MANAGEMENT. Austin can be assured that it will receive the full and dedicated attention of the entire team presented above, as well as that of Ramirez's *President* and *CEO*, **Samuel Ramirez Sr.**, its *Chief Operating Officer*, **Vincent Mazzaro**, and **Ted Sobel**, *Head of Public Finance*. Our senior management team will ensure that the Firm's resources are dedicated to the City to ensure the quality of execution and service necessary for successful financings.

PROFESSIONAL RESUMES. Our Austin-dedicated team will work closely with the City and its working group to ensure that all tasks are completed thoroughly and in a timely manner, all members of the working group are apprised of evolving market conditions and that the City's objectives are achieved. The working group will have open access to Ramirez's underwriters, traders, capital markets experts, research team and sales force. Provided below are summary resumes of Ramirez's key team member resumes for the City.

Time dedication: As clarified in the Addendum, our key personnel dedicated to the City's transactions each spend from 75% to 100% of their time on the City's transaction during an appointment. ***This ability to focus and give our full and undivided attention to our municipal clientele is one of the hallmarks of Ramirez's success on behalf of our municipal issuers – and is the key to our multiple repeat appointments.***

Name / Title / Role	Background / Relevant Experience
Robin Redford ***Managing Director*** ***Texas Group Manager*** ***Austin, TX*** ***Time dedicated: 75-100%***	▪ Leads the Firm's efforts in the State of Texas, native Austinite ▪ Extensive experience structuring and analyzing bond and swap transactions, having senior managed more than $15 billion of fixed rate and variable rate bonds; 16 years in the industry ▪ **Senior banker/transactional support to the City of Austin's, Public Improvement Refunding Bonds, Series 2011AB** ▪ **Provides investment banking services for various Texas cities (Austin, Dallas, Houston, San Antonio), State agencies (TDHCA, TPFA, TWDB, TXDOT), and other large issuers (DFW Airports, DART, Houston METRO, NTTA, Rice University, UT System, Texas A&M and Univ. of Houston)** ▪ Member of the Women in Public Finance professional organization and a past recipient of Women's Bond Club of New York's "Rising Star" award ▪ MA in public policy from University of Texas, Austin and BA in economics and history from Rice University
Lorry Palacios ***Senior Vice President*** ***Texas Group*** ***Austin, TX*** ***Time dedicated: 75-100%***	▪ Provides day-to-day banking services to the Firm's Texas clients ▪ Extensive banking experience with approximately $10 billion of fixed and variable rate debt and over $250 million in derivative transactions; 16 years in the industry ▪ **Senior banker/transactional support to the City of Austin's, Public Improvement Refunding Bonds, Series 2011AB** ▪ **Provides investment banking services for various Texas cities (Austin, Dallas, Houston, San Antonio), State agencies (TDHCA, TPFA, TWDB, TXDOT), and other large issuers (DFW Airport, DART, Houston METRO, NTTA, UT System, Texas A&M and Univ. of Houston)** ▪ BA in public policy and Chicano studies from Stanford University

Karen Price ***Vice President*** ***Texas Group and Quantitative Services*** ***Superior, CO*** ***Time dedicated: 75-100%***	▪ 18 years of public finance experience with expertise in GO, transportation, tobacco, housing, higher education, and pension bonds. ▪ **Quantitative/transactional support to the City of Austin's, Public Improvement Refunding Bonds, Series 2011AB** ▪ **Senior managed state clients include the Commonwealth of Massachusetts and the States of Connecticut, Maine and New York** ▪ **Provides quantitative strategy and support for all of Ramirez's Texas clients** ▪ BS, *cum laude*, from the Univ. of MA/Amherst and MBA from Boston College
John Young ***Managing Director*** ***Long-Term Underwriting*** ***New York, NY*** ***Time dedicated: 75-100%***	▪ Over 30 years experience underwriting, trading, and marketing municipals ▪ Head of Ramirez's Underwriting Desk; Past MSRB Vice-Chairman ▪ **Served as senior or co-managing underwriter on over $2.1 billion of the City of Austin's transactions while at Bear Stearns and Ramirez** ▪ **Lead underwriter for the City of Austin and ran the books for the City of Austin's Public Improvement Refunding Bonds, Series 2011AB** ▪ Senior managed transactions for numerous state level issuers including the States of Texas, California, Connecticut, Massachusetts, New York and Wisconsin ▪ Graduate of Hamilton College
Patty McGrorry ***Managing Director*** ***Long-Term & Short Term Underwriting*** ***Time dedicated: 75-100%***	▪ 13+ years in public finance and oversees Ramirez's short-term underwriting ▪ **Underwriter for many State of Texas clients and is key part of underwriting team, adding focus and additional underwriting coverage for the City of Austin** ▪ She manages our Firm's commercial paper program national and in Texas for clients including City of Houston, Houston Metro, SAWS and Rice University ▪ BA from Villanova University
Ted Sobel ***Managing Director and Head of Public Finance*** ***Time dedicated: 50-75%***	▪ Head of Ramirez's Public Finance Group ▪ Experience: $50+ billion during 27 years ▪ Previously led the Utility and Energy Group at UBS and Infrastructure Group at Banc of America Securities ▪ BA from Colgate University and MBA from Univ. of Pennsylvania, Wharton

1.E. Part V - Innovative Financing Techniques: Provide two innovative financing techniques, suggestions or ideas which would be relevant, or of interest, to the City of Austin. This can also include derivatives, debt restructuring, and self-liquidity ideas. If the idea(s) was(were) used in actual transactions(s), this section should include the following:

i. Indicate the individuals referenced in Part IV above who were involved in the transaction.
ii. Provide the name, title, organization, address and telephone number of the issuer.

- ✓ **Incorporate Ramirez's Optional Redemption Enhancement ("OREs") for the City's Water and Wastewater Series 2016 Advance Refunding Component** – On March 7, 2016 Ramirez sold its first Texas transaction with OREs for El Paso County's $48.8 million General Obligation Refunding Bonds, Series 2016. As Ramirez first shared with the City in July 29, 2015, the OREs product is a "make-whole" redemption feature that is included with the traditional 10-year (or less) par call at no additional cost to the City. The utilization of the make-whole call in the future would be considered a current refunding and effectively provide the City with the economic equivalent of additional advanced refundings.
- ✓ **Sell Refundable Principal Installments ("RPIs") in the City's Utility Portfolios to Achieve Flexibility** – The City may wish to consider selling RPIs in its utility portfolios to provide product diversification, optionality, and access to the short part of the yield curve without counterparty risk, the need for bank support, or adverse rate impact.

Ramirez strives to provide customized financing ideas to meet each issuer's unique needs and below we provide two examples of unique financing techniques designed to resolve challenges other issuer clients faced.

INNOVATION #1 - INCREASE OPTIONALITY WITH RAMIREZ'S OPTIONAL REDEMPTION ENHANCEMENT ("ORE")

Overview. Ramirez recommends the City incorporate our ORE in its Water and Wastewater System Revenue Refunding Bonds, Series 2016, for which we are honored to serve as senior book-running manager. The ORE adds a very significant element of flexibility into the City's capital structure by providing the ability to take advantage of multiple refunding opportunities for all bonds over their outstanding term. The essence of OREs is an enhancement of the traditional ten-year (or less) par call provision by the including language in the bond documents that permits the immediate redemption of bonds at any time, at a "make-whole" price equal to the PV of cash flows to the bonds' 10-year par call date using a discount rate of MMD flat, and thus synthetically creating a successful tender. **This ORE redemption provision is complementary to a standard 10-year (or less) par call, creating what is essentially a double barreled redemption provision, and our pricing experience proves that there is no additional cost to the City to incorporate OREs in a transaction.**

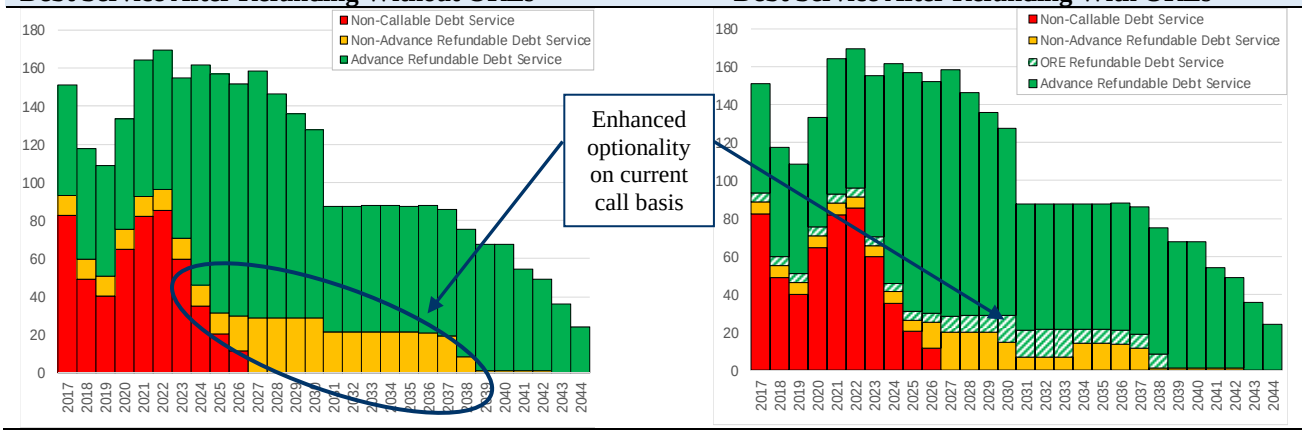
The make-whole in OREs is priced to the par call date at the comparable MMD interest rate *whereas* make-whole calls in Build America Bonds and traditional taxable bonds are priced to maturity and rarely provide economic savings. With the OREs, Austin would likely be paying approximately the same price to defease the bonds as it would if it were to purchase an escrow of US Treasury bonds. Historically, short MMD yields and US Treasury rates have traded very close to one another and the refunding math works very much the same.

The key benefit of ORE is the tax treatment, whereby exercise of the ORE call is a current refunding rather than an advance refunding of the redeemed bonds. When the City undertakes advance refundings, most of the refunding bonds are themselves non-advance refundable and only accessible via a current refunding once the 10-year (or less) par call is reached. Advance refundings which incorporate ORE become refundable on a current basis at any time and are immediately available to the City as structuring bonds and/or savings bonds. Refunding opportunities will certainly be enhanced by a larger supply of refunding candidates for structuring or savings purposes.

Benefits for the City of Austin. If OREs are included in the advance refunding component of the City's Water and Wastewater Series 2016 issue, the City will have the opportunity in the future to realize the economics of another advance refunding (if a refunding makes economic sense at the time). Without OREs, Austin either would have to wait for the 10-year par call date to currently call the bonds, or advance refund them with taxable debt. At this time, McCall, Parkhurst & Horton and Andrews Kurth LLP have approved OREs on refunding transactions, but have yet to be able to overcome obstacles in the tax code that would result in a benefit on a new money transaction. The graphs in Exhibit 1.E.a present the difference in the City's Water and Wastewater portfolio between adding OREs to the advance refunding portion of Series 2016 and using only the standard 10-year par call.

Exhibit 1.E.a. Austin Water and Wastewater Aggregate Debt Service Comparison *($ in millions)*

Debt Service After Refunding Without OREs | **Debt Service After Refunding With OREs**



Experience. We first presented OREs to the City in a meeting on July 29, 2015 and since then we have served as senior book-running manager for three transactions: $272.8 million Nassau County (NY) General Improvement Bonds, 2016 Refunding Series A which priced on January 27, 2016; $782.5 million NY Metropolitan Transportation Authority Transportation Revenue and Refunding Green Bonds, Series 2016A; and $48.8 million El Paso County, Texas General Obligation Refunding Bonds, Series 2016A. Our Firm pioneered this unique idea and are the first to execute it in the market place.

On March 7, 2016 Ramirez senior managed the first Texas OREs transaction, the $48.8 million advance refunding for El Paso County mentioned above that structured $18.3 million of callable bonds maturing from 2027 through 2032. The OREs language from the transaction's wire is presented in Exhibit 1.E.b below. Ramirez's entire City of Austin dedicated team was involved in the El Paso County OREs transaction. McCall, Parkhurst & Horton served as Bond Counsel to El Paso County. Public Finance Management served as Financial Advisor for both New York issues that have priced with OREs. Please contact Mr. Wallace Hardgrove, Executive Director of Budget and Fiscal Policy for El Paso County, for further information on the County's decision to include OREs as well as for a review of the service Ramirez has provided the County while serving as senior book-running manager for 5 issues since 2012, both tax-exempt and taxable, totaling $212.5 million[2]. He can be reached at (915) 546-2262 or whardgrove@epcounty.com.

Exhibit 1.E.b. El Paso County GO Refunding Bonds, Series 2016A Wire Language

CALL FEATURES: Optional call in 02/15/2026 @ 100.00

The Series 2016A Bonds stated to mature on or after February 15, 2027 may be redeemed, in whole or in any part thereof, in the principal amounts of $5,000 or any integral multiple thereof on February 15, 2026 ("the Par Call Date") or any date thereafter, at the par value thereof plus accrued interest to the date fixed for redemption.

The Bonds maturing on and after February 15, 2027, may also be redeemed, in whole or in part, at the option of the County at any time prior to the Par Call Date at the "Make Whole Redemption Price" equal to the greater of:

(1) one hundred and two percent (102%) of the Amortized Value (as defined below) of the Series 2016A Bonds to be redeemed; or

(2) an amount equal to the sum of the present values of the remaining scheduled payments of principal and interest on the Series 2016A Bonds to be redeemed, from and including the date of redemption to the Par Call Date, discounted to the date of redemption on a semiannual basis at a discount rate equal to the Interpolated MMD AAA Bond Rate of the Par Call Date.

The "Amortized Value" will equal the principal amount of the Series 2016A Bonds to be redeemed multiplied by the price of such Series 2016A Bonds expressed as a percentage, calculated based on the industry standard method of calculating bond prices, with a delivery date equal to the date of redemption, a maturity date equal to the Par Call Date of such Series 2016A Bonds and a yield equal to such Series 2016A Bonds' original offering yields.

INNOVATION #2 - REFUNDABLE PRINCIPAL INSTALLMENTS ("RPIS")

Overview. In January 2012 Ramirez served as senior book-running manager for New York City Municipal Water Finance Authority's ("NYW") $400 million new money transaction. NYW wanted to access the short end of the market, but it wanted to do so without the headaches and risks of bank support and remarketing. Given the structure of its outstanding debt, NYW was unable to sell traditional notes with short maturities as it would negatively impact rate

[2] Includes the pending $40 million GO Refunding Bonds, Taxable Series 2016B expected to price March 14, 2016.

setting, and it did not want to sell bond anticipation notes. Ramirez worked with NYW and its FA to structure and sell short maturity "Refundable Principal Installments" - bonds callable 18 months prior to maturity at par as permitted by NYW's documents, to allow the sale of short maturities without rate impact. Ramirez secured $110 million of retail orders for the $50 million offered of these innovative RPIs, and re-priced to the lowest spreads to MMD achieved by NYW in ten years, despite the unusual call option.

Benefits for the City of Austin. **RPIs can become a cost effective method for the City to take advantage of the short end of the yield curve, avoid the need for bank liquidity, and defer principal amortization for the foreseeable future while avoiding rate impact.** We believe that RPIs have application for the City's Water and Wastewater System and Electric Utility System portfolios. While we generally propose RPIs for maturities preceding the 10-year par call date, all callable maturities can be scheduled for accelerated retirement prior to nominal maturity from funds on hand to achieve savings throughout a bond issue's life. RPIs can be either variable or fixed rate bonds. Although the projected benefit in today's market is greater from fixed rate RPIs, variable rate RPIs can provide more flexibility as interest rate relationships (borrowing versus investing) change in the future. Note, however, that higher short-term investment rates will reduce the strategy's benefit.

Experience. Since implementing the highly successful inaugural sale of RPIs for NYW in January 2012 Ramirez has continued to refine the pricing rationale as well as the applications for this important and versatile product. With the favorable benchmarks established by Ramirez for NYW's inaugural RPI sale in 2012, spreads for 3-year to 5-year maturities with 5% coupon RPIs have tightened upon each subsequent issuance, reflecting growing market acceptance of the product's structurally driven, non-standard call features.

As senior book-running manager to NYW for its $349.8 million Fiscal Series 2016-BB Bonds, Ramirez determined the optimal maturity for the first-ever tranche of refunding RPIs, taking into consideration the maturity, call dates and anticipated roll strategy of the three outstanding RPI series. We assessed demand for 2021 versus 2022 RPI maturities by offering both during the retail order period. Solid demand on the part of retail proxies enabled Ramirez to price 5% coupon RPIs due June 2021 at a spread of only 10 bps above MMD to yield 1.20% to the 2019 call date. This was at or through where a NYW 2019 maturity would price. As we noted during the pricing, investor acceptance of the RPI structure is now such that, should the need arise, RPIs can be used as a relief value in the event of insufficient demand for longer maturities.

Additionally, to assist NYW in determining how much flexibility exists to call RPIs after their stated redemption date, Ramirez analyzed the yield kick impact of calling 4% and 5% RPIs (with five and six year maturities) one to three months after their December calls. We illustrated that the increased RPI yield associated with waiting (the kick effect) becomes less pronounced with longer call dates.

Members of Ramirez's Austin-dedicated finance team worked directly with NYW on these transactions, in particular Ted Sobel, John Young and Patty McGrorry. Please contact Mr. Tom Paolicelli, Executive Director at NYW, for further information on NYW's decision to incorporate RPIs on its 2012 and 2016 issues for which Ramirez served as senior book-running manager, as well as its decision to include RPIs programmatically on a portion of all NYW issuances. He can be reached at (212) 788-4969 or paolicellit@omb.nyc.gov.

1.F. Part VI – Financial Viability: Provide the recent audited annual Audit Report and most recent interim financial report as an attachment or appendix item. Hard copies must be included in the original submittal.

i. Provide the current equity capital positions (total equity capital, net equity capital and excess net equity capital) in accordance with GAAP, or corresponding equity information if a bank. **Do not refer to the annual audit as a response to this question.**

- ✓ **In the Firm's 45-year history, we have not waivered in our commitment to our municipal clientele and have demonstrated viability and longevity both organizationally and financially. Very few firms can show this commitment and performance standard.**
- ✓ **Audited Financials and FOCUS report are provided in Appendix B.**
- ✓ **Capital alone should not be the measure of qualifications or the potential future performance of any underwriting firm; Capital position is meaningless unless it is actually available and dedicated. Unlike larger firms with dozens of business lines where municipal clients represent less than 1% of their business (and therefore**

Ramirez Capital Position *as of December 31, 2015*	
Total Capital (100% Equity)	$23,920,150
Excess Net Capital	$8,318,957
Haircut for Inventory	$5,762,632
Capital Available for Municipal Bonds	$14,081,589
TSL	$50,000,000
Total Available for Municipal Bond Underwriting and Inventory	**$64,081,589**
Underwriting Capacity Based on 7% Haircut	**$915,451,271**

do not actually have access to the stated capital), <u>our capital is 100% available to trade and underwrite municipal finance transactions and our municipal clientele represent a large majority of our business.</u>

- ✓ **As of December 31, 2015, total capital and total equity capital is $23.9 million, net capital is $8.6 million, and excess net capital is $8.3 million, in accordance with GAAP.**
- ✓ **Ramirez deploys its capital to support its issuer clients' bonds in both the primary and secondary markets to achieve the lowest yields possible for a new issue and to provide liquidity to investors, thereby increasing our issuers' investor audience.**

CAPITAL STRUCTURE AND LEVERAGING PRACTICES. As Ramirez is a Municipal Bond specialist firm, **100% of our capital is available to the trading and underwriting of municipal bonds** and the effective use of our capital is a driver of our success. As of December 31, 2015, the Firm's total capital was $23.9 million, comprised 100% in equity capital, with uncommitted excess net capital of $8.3 million, as shown in the adjacent table. Ramirez employs limited leverage, and in addition to our own capital, we have access to a $45 million Temporary Subordinated Loan ("TSL") and an additional $5 million line of credit to increase our underwriting capacity. Our ability to underwrite municipal bonds is summarized above. **The Firm's capital resources allow us to take approximately $900 million of bonds into inventory, assuming a 7% haircut.**

Conservative Management Has Led to Continual Growth in Equity Capital. While expanding significantly over the last several years, Ramirez has steadily added to its capital base, with total capital (all equity) increasing each year since 2008. Unlike many of our competitors, Ramirez employs conservative financial management practices and its current ratio of total assets to equity capital stands at 3.2 times. In every year since the financial crisis, Ramirez has remained profitable, has not reduced headcount (in fact, we have grown significantly), and has not written down assets. Ramirez has had no involvement in the derivatives litigation, LIBOR investigations, or mortgage-backed securities settlements that have afflicted many others on Wall Street.

<u>1.G. Part VII - Austin Bond Experience:</u> In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

- ✓ **Pursuant to the discussion at the Pre-Response Conference, our Firm understands that the City and its financial advisor will independently gather and evaluate data internally for this question.**

Competitive Bond Experience. Please note that the following information may not be reported correctly by industry reports: In August 2011, Ramirez submitted a joint bid with Bank of America Merrill Lynch on the City of Austin's competitive transactions for the Certificates of Obligation Series 2011 and the Public Improvement Bonds Series 2011A. Although our joint bid did not win the transactions, we provided a competitive dollar bid and TIC. Our Firm will monitor the City's future competitive transactions and support the issuances as a sole or joint bidder in the future. Lastly, since the City's last competitive general obligation offering in 2013, Ramirez has expanded our underwriting by adding a competitive underwriter. In 2014, Ramirez hired **Jamie Cortese**, *Managing Director*, to manage Ramirez's competitive underwriting desk and he has extensive experience underwriting Texas throughout his career.

1.H. Part VIII – References: Provide exactly three (3) government client references, at least two of which are covered by individuals listed in Part IV above. For each reference, provide a name, title, and organization, address and telephone number. In addition to the list provided, the City may independently solicit other references.

References. Ramirez is extremely proud of the work we have performed for our clients, including the City of Austin. Below are listed three references who can speak to the work of the Firm and the bankers/underwriters who will be working with the City. We urge you to contact the people below, and in our response to *Question 1.E. Part V – Innovative Financing Techniques*, and additional references are available.

Texas Public Finance Authority	Dallas/Fort Worth Int'l Airport	El Paso Water Utilities
Mr. Lee Deviney *Executive Director* 300 W. 15th Street, Suite 411 Austin, Texas 78701 (512) 463-9433 Lee.deviney@tpfa.state.tx.us *Firm Coverage Personnel*: Redford/Palacios/Price/ Desk	**Mr. Mike Phemister** *Vice President* 2400 Aviation Drive DFW Airport, TX 75261 (972) 973-5447 mphemister@dfwairport.com *Firm Coverage Personnel*: Redford/Palacios/Price/Desk	**Ms. Marcela Navarrete** *Vice President of Strategic, Financial and Management Services* 1154 Hawkins Blvd El Paso, Texas 79925 (915) 594-5614 mnavarrete@EPWU.org *Firm Coverage Personnel*: Palacios/Redford/Price/ Desk

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Ramirez is not acting as a Municipal Advisor. Ramirez is not acting as your financial advisor or Municipal Advisor (as defined in Section 15B of the Exchange Act of 1934, as amended), and shall not have a fiduciary duty to you, in connection with the matters contemplated by these materials. You should consult your own financial advisors to the extent you deem it appropriate. Any information and/or analysis contemplated by these materials is provided by Ramirez in our capacity as either an underwriter or potential underwriter of securities.

The responsibilities of Ramirez as an Underwriter. As an underwriter, Ramirez is required to deal fairly at all times with both municipal issuers and investors. Ramirez must purchase securities with a view to distribute securities in an arm's length transaction with the issuer and has financial and other interests that differ from those of the issuer. Ramirez has a duty to purchase securities from issuers at a fair and reasonable price, but must balance that duty with its duty to sell municipal securities to investors at prices that are fair and reasonable. Ramirez will review the official statement for the issuer's securities in accordance with, and as part of its responsibilities to investors under federal securities laws, as applied to facts and circumstances of a transaction.

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	X	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes		**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

Ramirez & Co., Inc.

Company Name

Robin Redford, Managing Director

Name and Title of Authorized Representative (Print or Type)

March 4, 2016

Signature **Date**

Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Utilization Plan
(Please duplicate as needed)

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

PRIME CONTRACTOR / CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant	Ramirez & Co., Inc.		
Address	100 Congress Avenue, Suite 2000		
City, State Zip	Austin, Texas 78701		
Phone Number	512-469-3504	Fax Number	800-915-6901
Name of Contact Person	Robin Redford		
Is Company City certified?	Yes ☐ No ☐ MBE ☒ WBE ☐ MBE/WBE Joint Venture ☐		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

Robin Redford, Managing Director
Name and Title of Authorized Representative (Print or Type)

Signature

3-4-2016
Date

Provide a list of all proposed subcontractors / sub-consultants / suppliers that will be used in the performance of this Contract.
Attach Good Faith Effort documentation if non MBE/WBE firms will be used. not applicable for project

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor _____ **Date** _____ **Director/Deputy Director** _____ **Date** _____

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-100789

Date Filed:
08/17/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Ramirez & Co., Inc.
Austin, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin, Texas

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

RFQ TVN0103Rebid
Underwriters/Investment Banking Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Ramirez, Samuel A. (Sr)	New York, NY United States	X	
Ramirez, Samuel A. (Jr)	New York, NY United States	X	

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

MARLA FLORES
MY COMMISSION EXPIRES
November 20, 2019

Lorraine Palacios-Gemain
Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Lorraine Palacios, this the 17 day of August 2016, to certify which, witness my hand and seal of office.

Marla Flores | Marla Flores | Signature of officer administering oath | Printed name of officer administering oath | Title of officer administering oath

CONTRACT BETWEEN THE CITY OF AUSTIN ("City")
AND
Siebert Branford Shank, LLC ("Contractor")
for
Underwriters/Investment Banking Services
MA 7400 PA160000048

The City accepts the Contractor's Offer (as referenced in Section 1.1.3 below) for the above requirement and enters into the following Contract.

This Contract is between Siebert Branford Shank, LLC having offices at 440 Louisiana, #712, Houston, TX 77002 and the City, a home-rule municipality incorporated by the State of Texas, and is effective as of the date executed by the City ("Effective Date").

Capitalized terms used but not defined herein have the meanings given them in Solicitation Number RFQS TVN0103Rebid.

1.1 **This Contract is composed of the following documents**:

1.1.1 This Contract

1.1.2 The City's Solicitation, Invitation for Bid (IFB), TVN0103Rebid including all documents incorporated by reference

1.1.3 Siebert Branford Shank, LLC Offer, dated 3/4/2016, including subsequent clarifications

1.2 **Order of Precedence**: Any inconsistency or conflict in the Contract documents shall be resolved by giving precedence in the following order:

1.2.1 This Contract

1.2.2 The City's Solicitation as referenced in Section 1.1.2, including all documents incorporated by reference

1.2.3 The Contractor's Offer as referenced in Section 1.1.3, including subsequent clarifications

1.3 **Quantity of Work**: There is no guaranteed quantity of work for the period of the Contract and there are no minimum order quantities. Work will be on an as needed basis as specified by the City for each Delivery Order.

1.4 **Term of Contract**: The Contract will be in effect for an initial term of thirty-six (36) months from June 1, 2016 to May 31, 2019 and may be extended thereafter for up to two (2) twelve (12) month extension option(s), subject to the approval of the Contractor and the City Purchasing Officer or his designee. See the Term of Contract provision in Section 0400 for additional Contract requirements.

1.5 **Clarifications and Additional Agreement**: The following are incorporated into the Contract.

1.5.1 Individual Bond Purchase Agreements will be executed on a per transaction basis as they are assigned to the Contractor by the City.

This Contract (including any Exhibits) constitutes the entire agreement of the parties regarding the subject matter of this Contract and supersedes all prior and contemporaneous agreements and understandings, whether written or oral, relating to such subject matter. This Contract may be altered, amended, or modified only by a written instrument signed by the duly authorized representatives of both parties.

In witness whereof, the City has caused a duly authorized representative to execute this Contract on the date set forth below.

SIEBERT BRANFORD SHANK, LLC	CITY OF AUSTIN
Keith Richard	Terry V. Nicholson
Printed Name of Authorized Person	Printed Name of Authorized Person
Signature	Signature
Managing Director	Senior Buyer Supervisor
Title:	Title:
June 27, 2016	6/28/16
Date:	Date:

The undersigned, by his/her signature, represents that he/she is submitting a binding offer and is authorized to bind the respondent to fully comply with the solicitation document contained herein. The Respondent, by submitting and signing below, acknowledges that he/she has received and read the entire document packet sections defined above including all documents incorporated by reference, and agrees to be bound by the terms therein.

Company Name: SIEBERT BRANFORD SHANK, LLC

Company Address: 440 LOUISIANA # 712

City, State, Zip: HOUSTON, TX 77002

Federal Tax ID No. [redacted]

Printed Name of Officer or Authorized Representative: SHAWNELL HOLMAN

Title: MANAGING DIRECTOR

Signature of Officer or Authorized Representative:

Date: 03/04/[illegible]

Email Address: SHOLMAN@SBJCO.COM

Phone Number: 832.689.9522

*** Qualifications Statement must be submitted with this Offer sheet to be considered for award**

Siebert Brandford Shank & Co., L.L.C.

440 Louisiana Street, Suite 712
Houston, Texas 77002
Office: (713) 222-1585
Fax: (713) 222-1584

Siebert Brandford Shank & Co., L.L.C. Response to

Request for Qualification Statements (RFQs)

SOLICITATION NO: RFQs TVN0103REBID

CITY OF AUSTIN, TEXAS

Deadline for Submittal of Qualifications:

2:00 P.M. - March 8. 2016

Siebert Brandford Shank & Co., L.L.C.

440 Louisiana Street, Suite 712
Houston, Texas 77002
Office: (713) 222-1585
Fax: (713) 222-1584

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Appendix B: Most Recent SBS Audit
Appendix C: DART Letter of Commendation

Siebert Brandford Shank & Co., L.L.C.

440 Louisiana Street, Suite 712
Houston, Texas 77002
Office: (713) 222-1585
Fax: (713) 222-1584

March 8, 2016

City of Austin
Terry V. Nicholson
Senior Buyer Specialist
Marian Moore
Buyer II
Purchasing Office
124 W. 8th Str., RM 335.5
Austin, TX 78701

Dear Mr. Nicholson:

Siebert Brandford Shank & Co., L.L.C. ("Siebert Brandford Shank" and "SBS") is pleased to submit our response to the City of Austin's (the "City") Request for Proposals for Underwriting Services. We believe that our long history of municipal underwriting in the State of Texas, our expertise in marketing and structuring bonds for various credits in Texas and nationally, and our ability to secure the lowest possible borrowing costs for our **clients make Siebert Brandford Shank the ideal firm to serve as a managing underwriter for the City.** With a new ownership structure in place that includes former San Antonio Mayor and HUD Secretary, Henry Cisneros, Siebert Brandford Shank is now Wall Street's **preeminent Black, Hispanic, and Women owned firm** and is poised to further expand its national and Texas client base. Our proposal highlights many of our key strengths:

LEADING MUNICIPAL UNDERWRITER. SBS has firmly established itself as a top national firm, ranking 8th nationally as senior manager for negotiated new issuance in 2010, 10th in 2011, 12th in 2012, 13th in 2013, 12th in 2014, and 12th in 2015. Our experience includes many large and innovative transactions that have contributed to our position as the #3 ranked senior manager for average deal size in 2015, with an average deal size of over $158 million. In addition, SBS has been the #1 MWBE senior managing underwriter in the country for 20 years running now.

2015 National Negotiated Average Deal Size Rankings

Average Deal Size	Average Par Amt ($MM)	Rank
Goldman Sachs & Co	185.830	1
Loop Capital Markets	180.374	2
Siebert Brandford Shank	158.489	3
Barclays	155.718	4
J P Morgan Securities LLC	155.314	5
BofA Merrill Lynch	142.620	6
Citi	134.364	7
Morgan Stanley	131.085	8
Ramirez & Co Inc	118.380	9
Wells Fargo & Co	105.276	10

Source: SDC

LONG-STANDING COMMITMENT TO THE STATE OF TEXAS.
Siebert Brandford Shank has a long-standing commitment to the State of Texas and its municipal issuers. Since 1996, the firm has served as a managing underwriter for more than 100 different issuers for over $114 billion in par, including over $10 billion as senior manager. The firm has senior managed transactions for a myriad of Texas issuers, including a $692 million 2014 issuance for the City of Houston Combined Utility System; a $296 million deal for the City of Dallas Waterworks & Sewer System; a $344 million issuance for the Texas Public Finance Authority in 2011; and a $1 billion taxable and tax-exempt deal for the Dallas Area Transit Authority (DART) in 2009. Notably, DART was so impressed with the firm's execution of its billion dollar 2009 transaction that the CFO penned a note of commendation that we have included in the Appendices.

Highlighted Siebert Brandford Shank Texas Experience

TOP RANKED SENIOR MANAGER OF AIRPORT BONDS. The firm is a leader in underwriting airport bonds having senior managed $5.6 billion of transactions from 2009 through 2015. Many of our senior managed transactions are for repeat clients, including Dallas-Fort Worth International Airport, Atlanta Airport, Los Angeles World Airports, the Metropolitan Washington Airports Authority, and the San Diego Airport Authority, serving as a testament to both our firm's banking and marketing capabilities. In 2015, the firm achieved the tightest long-term AMT spreads for any uninsured negotiated publicly offered airport at the time of pricing.

Firm as Senior Manager 2009-2015	Par Amt ($MM)	Rank	Mkt. Share	Issues (#)
Citi	$ 17,457.6	1	23.7	109
J P Morgan Securities LLC	11,187.2	2	15.2	73
Bank of America Merrill Lynch	9,174.3	3	12.5	72
Barclays	7,125.7	4	9.7	44
Siebert Brandford Shank & Co	**5,573.2**	**5**	**7.6**	**35**
Morgan Stanley	5,004.4	6	6.8	47
RBC Capital Markets	3,132.4	7	4.3	48
Raymond James	2,896.5	8	3.9	56
Goldman Sachs & Co	2,574.2	9	3.5	25
Wells Fargo & Co	2,415.7	10	3.3	19
Industry Total	**$ 73,652.5**	**-**	**100.0**	**715**

LEADING WATER & SEWER UNDERWRITER. Our portfolio of Water & Sewer clients include the City of Houston Combined Utility System, the City of Dallas Waterworks and Sewer System, the Los Angeles Department of Water & Power, the East Bay Municipal Utility District, the City of Oakland, the Broward County Water and Sewer Utility, DC Water, the City of Chicago, and the Metropolitan St. Louis Sewer District, to name just a few. Since 2010, SBS has participated as a bond underwriter on over 200 water revenue bond financings totaling more than $49 billion of par, of which SBS senior managed 38 financings totaling over $7.0 billion of par. As a result, SBS's City of Austin team has significant experience with water issuers that includes establishing new indentures, creating innovative financing structures, developing credit strategies to achieve rating upgrades, and interacting with the EPA and other environmental professionals in connection with client financings. SBS has led large and complex transactions for water systems and combined water and sewer systems nationwide that

UNDERWRITING APTITUDE AND SALES STRENGTH. Siebert Brandford Shank offers a national institutional and retail sales network with proven success in maximizing investor demand and aggressively pricing our clients' bonds. For 2015, our firm ranked 12th as senior manager for negotiated municipal issues nationwide. Our two lead underwriters, Sherman Swanson and Andrew Gurley, have 58 years of combined experience, and our Sales Manager is a 33-year veteran. Our team operates from two full service sales, trading and underwriting desks, located in New York, NY and Oakland, CA. We believe our dual coast locations allow the firm to maintain deeper and broader investor coverage. SBS's sales force covers a broad range of institutional market participants including Tier 3 and Tier 4 accounts which are often overlooked by bulge bracket firms. As our firm's main business focuses on municipal finance, we have demonstrated a unique ability to combine extraordinary focus on transactions with excellent market intelligence

and deliver superior pricing as a result. Our distribution channels combined with a thorough pre-marketing plan allows SBS to achieve aggressive pricing for our clients.

SBS Adds Value By Clarifying Deal Information in the Secondary Market. Having served as underwriter for the City, SBS' sales professionals are very knowledgeable about the City's various credits. As a testament to our commitment to the City, our secondary market traders have found and clarified 179 data points in the Bloomberg database for the City's various credits. Bloomberg's database serves as the primary source of information for investors in the secondary market as it can be easily accessed. The corrections to Bloomberg pertained to adding CUSIPs to bonds that were refunded and specifying in the purpose of the bonds that a refunding was current or that the refunded bonds were in fact notes. By correcting the information in Bloomberg, SBS's secondary market traders provided investors with a more accurate representation of the City's debt and liquidity enhancements. Though the corrected information may not solely determine an investor's decision to buy the City's bonds in the secondary market, it certainly assures them that the information is factual and correct. The following table summarizes the corrections made by SBS' sales and trading team to the Bloomberg database for the City's bonds.

Credit	Series	Maturities	Prior Deal Info	Corrected Deal Info
Electric	2003	2013-35	Was Refunding	Now Refunding Notes
Electric	2006	2014-35	Was Refunding	Now Refunding Notes
Electric	2008	2014-29	Was Refunding	Now Refunding Notes
Water	2009	2014-29	Was Refunding	Now Refunding Notes
Water	2014	2019-43	Was Refunding	Now Refunding notes, Current ref. & Ref. with CUSIPs
Water	2007	2014-37	Was Refunding	Now Refunding Notes
Water	2011	2014-41	Was New $ and Ref.	Now New $ & Current ref. with CUSIPs attached
Water	2004A	2014-29	Was Refunding	Now Refunding Notes
Water	2005A	2015	Was Refunding	Now Refunding notes & Current ref. with CUSIPs attached
Water	2006A	2014-36	Was Refunding	Now Refunding Notes

Willingness to Commit Capital. Siebert Brandford Shank's capital base is available and dedicated to underwriting municipal bonds, as has been the case since the firm's inception. We are able to underwrite very large bond issues, under the Securities and Exchange Commission's net Capital Rule 15c3-1 for "when as and if issued" transactions. **As a result, we have successfully marketed several senior managed transactions in excess of a $1 billion par amount**, effectively demonstrating our ability to handle the 40-50% liability typically assumed by the senior manager on a large transaction. In addition, Siebert Brandford Shank is committed to using our capital for the benefit of our issuer clients. We have substantial resources to support the City's transaction and would welcome the opportunity to leverage our capital strength for this purpose.

Thank you for this opportunity to respond. Please do not hesitate to contact any member of the SBS team with any questions that you may have.

Keith Richard

Keith Richard
Managing Director (Head Of Texas)

Shawnell Holman
Managing Director

PART I - BUSINESS ORGANIZATION

State full name and address of your organization and identify parent company if you are a subsidiary. Specify the branch office or other subordinate element which will perform, or assist in performing, work herein. Indicate whether you operate as a partnership, corporation, or individual. Include the State in which incorporated or licensed to operate.

Firm's Full Name: Siebert Brandford Shank & Co., L.L.C.
Address: 100 Wall Street, 18th Floor, New York, NY 10005
Branch Office: Houston-440 Louisiana Suite 712, Houston, TX 77002
Firm Type: Limited Liability Corporation
State of Incorporation: Delaware

The table to the right summarizes the organizational structure of Siebert Brandford Shank's public finance investment banking, underwriting, sales and trading.

Since 2009, Siebert Brandford Shank's roster of core investment banking and underwriting professionals has remained intact, with the firm making strategic talent acquisitions over the last few years, including the addition of Keith Richard to head up the firm's Texas efforts and the hiring of Wei-Li Pai to spearhead the firm's Quantitative Banking efforts. Further, in 2013, SBS hired Gary Hall, former Executive Director at J.P. Morgan, to serve as the National Head of Investment Banking and welcomed back Bill Thompson, former New York City Comptroller and mayoral candidate, to serve as CAO and now one of the Firm's Partners. Today, **SBS employs 58 public finance investment banking, underwriting and sales and trading personnel** throughout its 18 public finance offices.

SBS has completed the City's non-discrimination certificate and attached this certificate to this response. We also attest that the we understand that firm's officers, employees, or agents are expressly prohibited from attempting to lobby or influence a vote or recommendation related to the firm's proposal response; directly or indirectly, through any contact with City Council Members or other City officials between the proposal submission date and award by the City Council and will not engage in any form of the aforementioned behavior.

Public Finance Department

- 18 offices strategically located across the country to provide "on the ground" local banking coverage within the context of a national municipal securities underwriting platform.
- **Texas Offices:**
  - Houston (Staffed by 2 Managing Directors)
  - Dallas (Staffed by 2 Houston based Directors)
  - San Antonio Office (Staffed by Partner Henry Cisneros)
  - Comprised of 40 professionals with a variety of professional backgrounds
- Provides in-house debt structuring and financial analysis capabilities that include both proprietary and industry standard bond sizing and refunding applications.

Sales, Trading and Underwriting

- Sales, trading and underwriting group is comprised of 18 employees located in New York and Oakland.
- Actively markets to over 450 of the top tier institutional buyers across the country, including mutual funds, insurance companies, corporations, trust departments, commercial bank trust departments, and investment advisors.
- Head underwriters have over 50 years of combined experience in the public finance industry.

PART II – AUTHORIZED NEGOTIATOR

Include name, address, and telephone number of person in your organization authorized to negotiate Contract terms and render binding decisions on Contract matters.

Authorized Negotiator
Keith Richard
440 Louisiana Suite 712
Houston, TX 77002
713.222.1585 (ph)

PART III – BACKGROUND AND PRIOR EXPERIENCE

Describe only relevant corporate experience and individual experience for personnel who will be actively engaged in the contract. Do not include corporate experience unless personnel assigned to this project actively participated. Do not include experience prior to 2000. Supply the project title, year, and reference name, title, present address, and phone number of principal person for whom prior projects were accomplished.

FIRM BACKGROUND. Headquartered in New York City with dual municipal trading desks in both New York and Oakland**,** Siebert Brandford Shank was founded in 1996 through a partnership between the late Muriel Siebert – the first woman to own a seat on the New York Stock Exchange – and seasoned public finance professionals Napoleon Brandford III and Suzanne Shank.

SBS has earned national recognition for its extensive senior managed municipal bond underwriting experience and expertise. The firm has ranked in the top 15 nationwide as senior managing underwriter over the last several years: we recently ranked 12th in 2015 for senior-managed negotiated deals in the country. SBS has also continued to be the number one ranked minority owned (MBE) public finance firm in the country every year since 1998, and in 2010 our firm became the first MBE to rank in the top 10 senior managers for municipal transactions.

In November 2014, SBS acquired the Siebert Capital Markets division of Siebert Financial Corp. (NASDAQ: SIEB), which will now allow the firm to underwrite corporate debt and equity offerings, in addition to our public finance line of business. The most notable additions that we'd like to announce occurred on November 8, 2015 when SBS announced a realignment of its ownership structure and welcomed four new partners:

- The **Hon. Henry Cisneros**, the first Latino mayor of San Antonio (1981-1989), former Secretary of Housing and Urban Development under President Clinton (1993-1997), former President and COO of Univision (1997-2000), and founder and Chairman of CityView
- The **Hon. William C. Thompson**, Chief Administrative Officer and Managing Director of SBS, former New York City Comptroller(2002-2009), and former President of the New York City Board of Education (1996-2001)
- **Sean Duffy**, Managing Director and Head of Institutional Sales and Trading for SBS
- **Victor Miramontes**, former CEO of North American Development Bank and co-founder of CityView

Co-founder Suzanne Shank has become the firm's majority owner and now holds the titles of Chairwoman and CEO. The transaction includes the acquisition of Siebert Financial Corporation's and retiring Chairman Napoleon Brandford III's ownership interests in SBS. With the new ownership structure, SBS is now Wall Street's preeminent Black, Hispanic, and Women owned firm (93% minority-owned and 58% woman-owned.) SBS is certified as a minority-owned business enterprise (MBE).

FIRM EXPERIENCE			
Par Amt (Millions)	**Transaction Description**	**Highlights**	**SBS Key Personnel**
$120.000	City of Shreveport, Water & Sewer Revenue and Refunding Bonds, Series 2015	SBS' desk generated over $388 million of orders placed with over 33 different investors, which amounted to a 200% increase in the System's investor base	Shawnell Holman Lou Lasaath Sherm Swanson
$692.892	City of Houston, Combined Utility System Revenue Refunding Bonds, Series 2014C	Transaction involved complex tax issues and generated over $2.7 billion in priority orders with 99% put in by SBS; Attracted over 40 new investors who placed orders for a total of $455 million. Resulted in savings of over $207 million in conjunction with the City's 2014C taxable deal.	Shawnell Holman Sherm Swanson
$79.350	San Antonio Water System (SAWS), Water System Jr. Lien Revenue and Refunding Bonds, Series 2013E	SBS marketing strategy resulted in strong demand which presented the opportunity to decrease spreads by as much as 10 basis points and achieve some of the System's tightest spreads to date. SBS sales force generated over $186 million in priority orders, which accounted for 93% of total priority orders.	Lou Lasaath Sherm Swanson
$83.955	Combination Tax & Revenue Certificates of Obligation, Series 2013	SBS' sales force generated over 95% of total priority orders and stepped up to underwrite the unsold balance of $8.8 million of bonds	Lou Lasaath Sherm Swanson
$503.72	Subordinate Lien Rev & Refunding Bonds, Series 2012 A (AMT) and Series 2012B (Non-AMT)	While at another firm, Richard spearheaded the banking effort on this transaction, which generated over $55 million in npv savings. His recommendation that the System leave 10% of its bonds outstanding to preserve the surety policy saved the System millions of dollars by preventing any cash reserve funding requirements.	Keith Richard
$294.080	Dallas/Fort Worth International Airport Joint Revenue Refunding Bonds, Series 2012G (Non-AMT)	SBS recommended structuring the transaction with all principal in the 2025-2028 range to take advantage of investor demand and reduce the interest cost. $1 billion of orders were generated, over three times the amount of bonds offered, allowing our desk to reprice the bonds up to 5 basis points lower in yield. Spreads to MMD were the tightest of any "A" category non-AMT airport revenue bond financing since the credit crisis and 14 basis points tighter than DFW non-AMT bonds priced five months earlier. Moreover, there was no penalty for the 8-year par call with the deal attracting 44 different institutional investors and generating more than $38 million of npv savings.	Lou Lasaath Sherm Swanson
$95.925	Airport System Revenue Refunding Bonds, Series 2012 (AMT) and PF Subordinate Lien Airport System Revenue Refunding Bonds, Series 2012 (AMT)	With significant investor demand for every maturity of GARBs, SBS recommended lowering interest rates by 1 to 8 basis points. Though this recommendation went against the mid-morning rising tide of Treasurys, SBS held at these suggested levels. As a result, the City generated over $11.3 million of npv savings.	Lou Lasaath Sherm Swanson
$123.445	Public Improvement Refunding Bonds, Series 2001	Though the City was frequently in the market, the 2001 deal presented SBS with several challenges due to the City's budgetary constraints requiring a front-loaded structure with the bulk of principal maturing within the first 10 years. Recognizing there would be a lack of retail demand, SBS recommended that we term up the smaller long end maturities and offer them as retention. Secondly, with an abundance of Texas paper already in the market, SBS was challenged to offer an aggressive consensus scale and achieve favorable rates for the City. Ultimately, the firm stepped up to underwrite bonds holding rates at the original offering levels for the City. The SBS sales force generated more than $171 million in total orders and $95,640,000 in priority orders.	Keith Richard Sherm Swanson

Addresses for SBS Personnel Included in the Table Above

- Keith Richard, Managing Director, Head of Texas, 440 Louisiana, Houston, TX 77002…713.222.1585
- Shawnell Holman, Managing Director, 440 Louisiana, Suite 712, Houston, TX 77002…713.222.1585
- Lou Lasaath, Quantitative Specialist, 523 W. 6th Street, Suite 703, Los Angeles, CA 90014…213.587.7404
- Sherm Swanson, Lead Underwriter, 1999 Harrison Street, Suite 2720, Oakland, CA 94612…512.645.2277

PART IV – PERSONNEL

Include names, titles, and qualifications of key professional personnel who will be assigned to this contract. State the primary work assigned to each person and the estimated percentage of time each person will devote to this work. Provide resumes for each.

Siebert Brandford Shank & Co., L.L.C.
Henry Cisneros, Equity Partner
454 Soledad, Suite 300
San Antonio, TX 78205
210.228.9574
hcisneros@sbsco.com

Transaction Role: Capital And Resource Allocation
Years of Public Finance Experience: 30+
% of Time Allocated to Project: 5%

Mr. Cisneros is an Equity Partner of Siebert Brandford Shank and Chairmen of the CityView companies which work with urban homebuilders to create homes priced within the range of average families. CityView is a partner in building more than 60 communities in 13 states, incorporating more than 7,000 homes with a home value of over $2 billion. Mr. Cisneros' community-building career began at the local level.

After serving three terms as a City Councilmember, in 1981, Mr. Cisneros became the first Hispanic-American mayor of a major U.S. city, San Antonio, Texas. During his four terms as Mayor, he helped rebuild the city's economic base and spurred the creation of jobs through massive infrastructure and downtown improvements. In 1984, In 1986 Mr. Cisneros was selected as the "Outstanding Mayor" in the nation by City and State Magazine.

In 1992, President Clinton appointed Mr. Cisneros to be Secretary of the U.S. Department of Housing and Urban Development. Mr. Cisneros has served as President of the National League of Cities, as Deputy Chair of the Federal Reserve Bank of Dallas and is currently an officer of Habitat for Humanity International. Mr. Cisneros remains active in San Antonio's leadership where he is Chairman of the San Antonio Economic Development Foundation. He is currently on Univision's Board of Directors, is Chairman for the San Antonio Chamber of Commerce and a member of the advisory board of the Bill and Melinda Gates Foundation.

Siebert Brandford Shank & Co., L.L.C.
Keith Richard
Managing Director, Head of Texas
440 Louisiana, Suite 712
Houston, TX 77002
713.222.1585
krichard@sbsco.com

Transaction Role: Team Lead
Years of Public Finance Experience: 20+
% of Time Allocated to Project: 35%

Mr. Richard has over 20 years of public finance experience. His experience includes serving as lead or co-lead banker on over $11 billion of municipal infrastructure financings. This experience includes senior managed transactions for the City of Houston, Harris County, Port of Houston, the City of Dallas, City of Austin, the Texas Public Finance Authority, and the Texas Water Development Board, among others. Mr. Richard has served as lead banker on over $1.1 billion of senior managed airport financings including senior managed transactions for the Houston Airport System and Dallas-Fort Worth International Airport. Mr. Richard also has significant water and sewer experience having served as lead banker on financing for the City of Houston Combined Utility System and Dallas Waterworks and Sewer System, among others. Mr. Richard has also been a senior banker at Morgan Stanley, Lehman Brothers and Bank of America Merrill Lynch. Mr. Richard is a graduate of Southern Methodist University with a BA in Economics.

Siebert Brandford Shank & Co., L.L.C.
Shawnell Holman
Managing Director
440 Louisiana, Suite 712
Houston, TX 77002
713.222.1585
sholman@sbsco.com

Transaction Role: Support Banker
Years of Public Finance Experience: 13
% of Time Allocated to Project: 25%

Ms. Holman has over a decade of public finance experience, including serving as Siebert Brandford Shank's lead banker on numerous financings totaling more than $7 billion for a variety of issuers, including Harris County, Fort Bend County, the City of Houston, Harris County Metropolitan Authority (Metro), Rice University, the Texas Public Finance Authority, the Texas Water Development Board, Houston Independent School District, the University of Texas System, Texas A&M University and the Midtown Redevelopment Authority. Prior to joining Siebert Brandford Shank in September 2012, Ms. Holman managed the City of Houston's $13 billion debt and $2 billion investment portfolios for nearly a decade. As the Deputy City Controller for the City of Houston, Ms. Holman was involved in a myriad of financings, including the $3 billion restructuring of the City's water system debt, oversight of the City's multi-billion variable rate debt program, and refundings totaling over $10 billion that generated in excess of $200 million in savings.

A native Houstonian, Ms. Holman earned a BA in Economics and English from Rice University and an MBA from the University of Houston at Victoria. In addition to serving as the President of the Texas chapter of the National Association of Securities Professionals (NASP), Ms. Holman currently chairs the mentoring committee for Women in Public Finance (Texas Chapter). An active community participant, she serves on the board of Project Row Houses, an arts and life enrichment outreach effort, and as Board President of Row House Community Development Corporation, an organization focused on providing affordable housing.

Siebert Brandford Shank & Co., L.L.C.
Lou Lasaath, Vice President
523 West Sixth Street, Ste 703
Los Angeles, CA 90014
213.587-7404
llasaath@sbsco.com

Transaction Role: Support Banker
Years of Public Finance Experience: 10+
% of Time Allocated to Project: 15%

Mr. Lasaath's primary responsibilities are to provide quantitative and banking support for the firm's western and southwestern regional bankers. His quantitative support entails structuring new money bond issues, identifying refunding opportunities, modeling clients' debt structures, and analyzing derivative structures. Some of the types of bond financings he has worked on include utilities, airports, seaports, transportation, education, and redevelopment. Since joining the firm in February 2004, Mr. Lasaath has worked on over $74 billion in negotiated bond transactions. This includes 25 senior managed transactions with an aggregate par amount of $1.8 billion.

Mr. Lasaath is a graduate of UCLA with a BS in Mathematics/Economics. NASD securities licenses held are Series 7, 52, and 63.

Siebert Brandford Shank & Co., L.L.C.
Sherm Swanson, Lead Underwriter
1999 Harrison Street, Suite 2720
Oakland, CA 94612
512.645.2277
sswanson@sbsco.com

Transaction Role: Lead Underwriter
Years of Public Finance Experience:30+
% of Time Allocated to Project: 20%

A 31-year veteran of the municipal finance industry and the firm's Head Underwriter since its inception, ***Mr. Swanson*** has a wide range of experience as senior managing underwriter of municipal securities. Mr. Swanson has coordinated the marketing efforts and pricing strategies as senior book-running manager for over $38 billion of long-term municipal securities since 1996 for transactions ranging in size from $3 million to $1.75 billion in par amount. These transactions include over $51 billion in K-12 education bond transactions. He has managed the pricing of senior managed K-12 educational bond transactions for the Dallas ISD, Laredo ISD, North Forest ISD, Round Rock ISD, Detroit School District, Chicago School District, Philadelphia School District, Inglewood USD, and Columbus School District. Mr. Swanson is a graduate of Brown University with a Bachelor of Arts in Economics. Mr. Swanson holds FINRA security licenses Series 7, 53, and 63.

PART V – INNOVATIVE FINANCING TECHNIQUES

Provide two innovative financing techniques, suggestions or ideas which would be relevant, or of interest to, the City of Austin. This can also include derivatives, debt restructuring, and self-liquidity ideas.

REFUNDING THE SERIES 2005 BONDS AND TERMINATING THE INTEREST RATE SWAP. The City currently has $519 million in oustanding bonds secured by the Airport System revenues. Of this amount, approximately 35% is in synthetic fixed rate mode and the remaning in conventional fixed bonds (with $93 million through a direct private placement). The Series 2005 Bonds constitute the entire synthetic fixed rate mode of the Airport System's debt portfolio. In the past the City has looked for stragic opportunities to reduce or eliminate derivative exposure. Similar to 2012 when the City terminated a synthetic fixed payer swap associated with its Water and Wastewater System, the current interest rate environment provides the City with an opportunity to eliminate the counterparty and basis risk associated with its Airport System swap. SBS has analyzed the impacts of a swap termination associated with the Series 2005 Bonds and because tigh credit spreads and the short duration of the outstanding bonds the City maybe able to achieve breakeven meaning the City would be able to replace the existing debt structure with fixed rate bonds and pay the same all-in cost currently paid when factoring in the fixed payer rate, letter of credit cost and remarketing fees. Siebert estimates the full termination of the existing swap to be between $30 million and $32 million as of March 1, 2016. In analyzing the swap termination, there are several important factors to consider that underly the transaction.

Issues to Resolve	Potential Solution
1) Swap termination premium	SBS' newly formed FIST team has modeled the interest rate swap and is providing updates on the swap termination premium
2) Direction on underlying Series 2005 Bonds	Refund the underlying variable rate Series 2005 Bonds with AMT bonds while interest rates remain near historical lows. A portion of the 2005 would be refunded with fixed rate bonds while a small portion would be mode converted to a fixed rate under the existing documents and privately placed with a bank
3) DSRF Surety Bond	Since refunding the entire Series 2005 Bonds would eliminate the DSRF surety bond, SBS recommends the City not refund 10% of the original par amount of the 2005 bonds to keep the DSRF surety bond in place. The lead banker for Siebert has successfully employed a similar strategy for a large Texas airport system and a nationally recognized bond counsel firm approved this approach

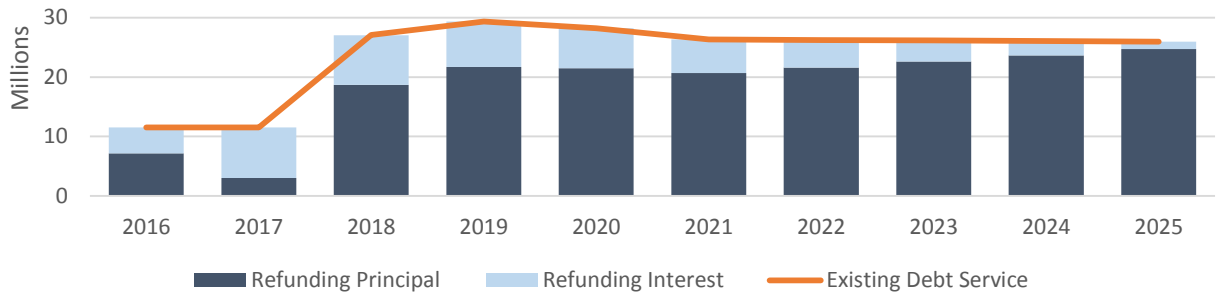
The following table summarizes the statistics of the swap termination, refinancing of the Series 2005 Bonds, fixed rate conversion of the remaining unrefunded bonds.

Summary of Swap Termination

	Refunding Bonds (1)	Private Placement	Total
Par Amount ($)	167,470,000	18,315,000	185,785,000
Premium ($)	27,362,039	--	27,362,039
Swap Termination ($)	32,056,868	--	32,056,868
Refunding Escrow ($)	163,740,000 (2)	18,185,000	181,925,000
All-In TIC	2.041	2.346 (3)	--
Total Debt Service ($)	216,290,906	20,571,427	236,862,333

(1) Assumes cost of issuance of $2 per $1,000 and UW discount of $5 per $1,000
(2) Sizing of escrow takes into account a swap rate of 4.051%, liquidity fee of 0.62%, and remarketing of 0.10%
(3) Assumes a direct private placement rate of 2.21%; Indicative rate as quoted by a regional banking institution.

Comparison of Debt Service



NEW MONEY FINANCING ANALYSIS. Based on SBS' review of the Airport System's future borrowing needs, there is a planned $150 million new money issuance in 2016 and approximately $75 million in 2017. With interest rates near historical lows but slowly inching higher, SBS has analyzed the additional cost and breakeven interest rate increase of accelerating the two-year bond issuance of $225 million in 2016. An accelerated bond issuance would generate a net present value ("NPV") debt service is $237.06 million. When compared to keeping the planned bond issuance schedule, interest rates would need to increase by 33 basis points throughout the yield curve in 2017 for the City to be indifferent to accelerating the bond issuance or keeping with the planned schedule. If the City expects interest rates to increase beyond 33 basis points in 2017, the accelerated $225 million issuance in 2016 would be the lowest cost.

Summary of New Money Financing Analysis

	2016	2017 + 33 bps	Total	2016
Par Amount ($)	140,255,000	70,290,000	210,545,000	210,375,000
Premium ($)	19,849,284	10,030,069	29,879,353	29,773,680
Project Fund Deposit ($)	150,000,000	75,000,000	225,000,000	225,000,000
All-In TIC (%)	3.945	4.246	--	3.945
Total Debt Service ($)	276,897,992	141,764,627	418,662,619	415,337,852
NPV of Debt Service @ 4%	158,042,295	79,048,348	237,090,643	237,055,984

LIQUIDITY ALTERNATIVE (EXTENDIBLE COMMERCIAL PAPER)

Implemented by: The City of Houston For CUS B-2 Notes
Lead Banker: Keith Richard
Reference: Asha Patnaik, City of Houston, Debt Manager, 901 Bagby, 10th Floor, Houston, TX 77002/832.393.3495

The City of Austin can reduce the costs associated with its Combined Utility System by considering the implementation of an Extendible Commercial Paper ("ECP") program to augment its existing Series A tax-exempt

notes. In 2014, the City entered into a letter of credit agreement with Bank of Tokyo Mitsubishi to provide liquidity and credit enhancement for the Series A Combined Utility System tax-exempt commercial paper program which provides interim funding and appropriation capacity for both Austin Energy and Austin Water Utility. An ECP program eliminates the need for a bank facility and consequently when utilized as an appropriation mechanism, substantially reduces cost. The City is currently paying 41 basis points in bank fees for its Combined Utility System tax-exempt commercial paper program. For example, assuming $100 million of the existing program is used for appropriation capacity, an ECP program would save the City $410,000 in annual liquidity fee expenses. The ECP Program implemented for the City of Houston is the first and as of the date of this RFQ the only ECP program established in Texas for the purpose of providing cost savings as an alternative appropriation vehicle.

PART VI – FINANCIAL VIABILITY

Provide the most recent audited annual Audit Report and most recent interim financial report as an attachment or appendix item. Hard copies must be included in the original submittal.

As of	Total Capital		Equity Capital		Net Equity Capital	Excess Net Capital
12/31/2015	$22,550,936		$18,932,057		$18,742,208	$18,492,208

PART VII – AUSTIN BOND EXPERIENCE

In its evaluation process, the City will utilize historical bidding reports to determine participation in competitively bid bond issues, along with other official data concerning participation in City bond sales. Therefore, nothing is required to be submitted to the City for this section.

PART VIII – REFERENCES

Provide exactly three (3) government client references, at least two of which are covered by individuals listed in Part IV above. For each reference, provide a name, title, and organization, address and telephone number. In addition to the list provided, the City may independently solicit other references.

City of Houston	Harris County	DFW – International Airport
Asha Patnaik	**Mike Austin**	**Chris Poinsatte**
Debt Manager	*Director*	*Chief Financial Officer*
901 Bagby, 10th Floor	1001 Preston, Suite 630	P.O. Box 619428
Houston, TX 77002	Houston, Texas 77002	Dallas, TX 75261-9428
832.393.3495	713.755.8171	972.973.5211
asha.patnaik@houstontx.gov	mike.austin@bmd.hctx.net	capoinsatte@dfwairport.com

APPENDIX A: REQUIRED FORMS

Section 0900: Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Form

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

The City of Austin has determined that no goals are appropriate for this project. Even though goals were not assigned for this solicitation, the Bidder/Proposer is required to comply with the City's MBE/WBE Procurement Program, if areas of subcontracting are identified.

If any service is needed to perform the Contract and the Bidder/Proposer does not perform the service with its own workforce or if supplies or materials are required and the Bidder/Proposer does not have the supplies or materials in its inventory, the Bidder/Proposer shall contact the Small and Minority Business Resources Department (SMBR) at (512) 974-7600 to obtain a list of MBE and WBE firms available to perform the service or provide the supplies or materials. The Bidder/Proposer must also make a Good Faith Effort to use available MBE and WBE firms. Good Faith Efforts include but are not limited to contacting the listed MBE and WBE firms to solicit their interest in performing on the Contract, using MBE and WBE firms that have shown an interest, meet qualifications, and are competitive in the market; and documenting the results of the contacts.

Will subcontractors or sub-consultants or suppliers be used to perform portions of this Contract?

No	✓	**If no, please sign the No Goals Form and submit it with your Bid/Proposal in a sealed envelope**
Yes	____	**If yes, please contact SMBR to obtain further instructions and an availability list and perform Good Faith Efforts. Complete and submit the No Goals Form and the No Goals Utilization Plan with your Bid/Proposal in a sealed envelope.**

After Contract award, if your firm subcontracts any portion of the Contract, it is a requirement to complete Good Faith Efforts and the No Goals Utilization Plan, listing any subcontractor, sub-consultant, or supplier. Return the completed Plan to the Project Manager or the Contract Manager.

I understand that even though goals were not assigned, I must comply with the City's MBE/WBE Procurement Program if subcontracting areas are identified. I agree that this No Goals Form and No Goals Utilization Plan shall become a part of my Contract with the City of Austin.

SIEBERT BRANFORD SHANK + CO, LLC

Company Name

SHAWNELL HOLMAN, MANAGING DIRECTOR

Name and Title of Authorized Representative (Print or Type)

Signature | 03/04/16 **Date**

Minority- and Women-Owned Business Enterprise (MBE/WBE) Procurement Program No Goals Utilization Plan
(Please duplicate as needed)

SOLICITATION NUMBER:	RFQS TVN0103REBID
PROJECT NAME:	Underwriter/Investment Banking Services

PRIME CONTRACTOR / CONSULTANT COMPANY INFORMATION

Name of Contractor/Consultant	SIEBERT BRANDFORD SHANK + CO		
Address	440 LOUISIANA # 712		
City, State Zip	HOUSTON, TX 77002		
Phone Number	832. 689. 9522	Fax Number	
Name of Contact Person	SHAWNELL HOLMAN		
Is Company City certified?	Yes ☐ No ☐ MBE ☑ WBE ☑ MBE/WBE Joint Venture ☐		

I certify that the information included in this No Goals Utilization Plan is true and complete to the best of my knowledge and belief. I further understand and agree that the information in this document shall become part of my Contract with the City of Austin.

SHAWNELL HOLMAN, MANAGING DIRECTOR
Name and Title of Authorized Representative (Print or Type)

Signature

03/04/16
Date

Provide a list of all proposed subcontractors / sub-consultants / suppliers that will be used in the performance of this Contract. **Attach Good Faith Effort documentation if non MBE/WBE firms will be used.**

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

Sub-Contractor / Sub-Consultant			
City of Austin Certified	MBE ☐ WBE ☐ Ethics / Gender Code: ☐ Non-Certified		
Vendor ID Code			
Contact Person		Phone Number	
Amount of Subcontract	$		
List commodity codes & description of services			

FOR SMALL AND MINORITY BUSINESS RESOURCES DEPARTMENT USE ONLY:

Having reviewed this plan, I acknowledge that the proposer (HAS) or (HAS NOT) complied with City Code Chapter 2-9A/B/C/D, as amended.

Reviewing Counselor _____ **Date** _____ **Director/Deputy Director** _____ **Date** _____

APPENDIX B: SBS AUDIT

SIEBERT, BRANDFORD, SHANK & CO., L.L.C.

FINANCIAL STATEMENTS

DECEMBER 31, 2014
(with supplementary information)

EisnerAmper
ACCOUNTANTS & ADVISORS

EisnerAmper LLP
750 Third Avenue
New York, NY 10017-2703
T 212.949.8700
F 212.891.4100

www.eisneramper.com

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Managers
Siebert, Brandford, Shank & Co., L.L.C.
New York, New York

We have audited the accompanying statement of financial condition of Siebert, Brandford, Shank & Co., L.L.C. (the "Company") as of December 31, 2014, and the related statements of operations, changes in members' equity, changes in subordinated borrowings, and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Siebert, Brandford, Shank & Co., L.L.C. as of December 31, 2014 and the results of its operations and its cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

The information contained in the Schedule of Computation of Net Capital under the SEC Uniform Net Capital Rule 15c3-1 (the "supplemental information") has been subjected to audit procedures performed in conjunction with the audit of the Company's financial statements. The supplemental information is the responsibility of the Company's management. Our audit procedures included determining whether the supplemental information reconciles to the financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information, we evaluated whether the supplemental information, including its form and content, is presented in conformity with 17 C.F.R. §240.17a-5. In our opinion, the information contained in the Schedule of Computation of Net Capital is fairly stated, in all material respects, in relation to the financial statements as a whole.

EisnerAmper LLP

New York, New York
February 26, 2015

SIEBERT, BRANDFORD, SHANK & CO., L.L.C.

Statement of Financial Condition
December 31, 2014

ASSETS	
Cash and cash equivalents	**$ 20,065,062**
Accounts receivable	**1,593,614**
Receivable from clearing broker	**2,522,557**
Secured demand note	**1,200,000**
Goodwill – Note B	**1,001,000**
Issuer relationships, net of amortization of $41,212 – Note B	**777,788**
Furniture, equipment and leasehold improvements, net	**684,736**
Receivable from parent	**25,000**
Other assets	**673,276**
	$ 28,543,033
LIABILITIES AND MEMBERS' CAPITAL	
Liabilities:	
Payable to affiliate	**$ 104,320**
Accounts payable and accrued expenses	**4,747,648**
Deferred rent	**549,287**
	5,401,255
Subordinated debt	**5,200,000**
Total liabilities	**10,601,255**
Commitments – Note G	
MEMBER'S CAPITAL	**17,941,778**
	$28,543,033

See notes to financial statements

SIEBERT, BRANDFORD, SHANK & CO., L.L.C.

Statement of Operations
Year Ended December 31, 2014

Revenues:	
Investment banking	$ 20,949,508
Trading profits	3,670,726
Commissions	182,771
Interest and other	3,395
	24,806,400
Expenses:	
Employee compensation and benefits	17,819,595
Clearing fees	383,538
Communications	929,496
Occupancy	1,186,967
Professional fees	870,951
Interest - to related party	100,295
State and local income tax	31,901
General and administrative - including $100,000 to related party	3,251,269
	24,574,012
Net income	$ 232,388

See notes to financial statements

SIEBERT, BRANDFORD, SHANK & CO., L.L.C.

Statement of Changes in Member's Capital

Balance - January 1, 2014	**$ 15,915,862**
Acquired assets of capital markets business transferred by parent	**1,820,000**
Distributions to members	**(26,472)**
Net income	**232,388**
Balance - December 31, 2014	**$ 17,941,778**

See notes to financial statements

SIEBERT, BRANDFORD, SHANK & CO., L.L.C.

Statement of Changes in Subordinated Borrowings

Balance - January 1, 2014	$ 1,200,000
Borrowings	9,000,000
Repayments	(5,000,000)
Balance - December 31, 2014	$ 5,200,000

SIEBERT, BRANDFORD, SHANK & CO., L.L.C.

Statement of Cash Flows
Year Ended December 31, 2014

Cash flows from operating activities:	
Net income	$ 232,388
Adjustments to reconcile net income to net cash used in operating activities:	
Depreciation and amortization	267,973
Changes in:	
Accounts receivable	(1,031,467)
Receivable from clearing broker	(2,514,399)
Other assets	(54,533)
Receivable from parent	(25,000)
Payable to affiliate	76,056
Accounts payable and accrued expenses	741,040
Bank overdraft	(1,225,779)
Deferred rent	(72,788)
Net cash used in operating activities	(3,606,509)
Cash flows from investing activities:	
Purchase of leasehold improvements and equipment	(89,364)
Cash flows from financing activities:	
Distributions to members	(26,472)
Subordinated borrowings	9,000,000
Repayment of subordinated borrowing	(5,000,000)
Net cash provided by financing activities	3,973,528
Net Increase in cash and cash equivalents	277,655
Cash equivalents - beginning of year	19,787,407
Cash and cash equivalents - end of year	$ 20,065,062
Supplemental disclosures of cash flow information:	
Interest paid	$ 100,295
Taxes paid	$ 24,323
Non-cash investing and financing activities:	
Intangible assets of capital markets business contributed to capital by parent	$ 1,820,000

See notes to financial statements

NOTE A – BUSINESS ORGANIZATION

Siebert, Brandford, Shank & Co., L.L.C. ("SBS" or the "Company") engages in the business of tax-exempt underwriting and related trading activities and, commencing on November 4, 2014, the capital markets business (see Note B). The Company qualifies as a Minority and Women Owned Business Enterprise in certain municipalities.

NOTE B – BUSINESS ACQUISITION

On November 4, 2014, the members of SBS contributed their membership interest into a newly formed Delaware limited liability company, Siebert Brandford Shank Financial, L.L.C. ("SBSF"), in exchange for the same percentage interests in SBSF. On the same day Muriel Siebert & Co., Inc., ("Siebert") entered an Asset Purchase Agreement (the "Purchase Agreement") with SBS and SBSF, pursuant to which Siebert sold substantially all of the assets relating to Siebert's capital markets business to SBSF. Pursuant to the Purchase Agreement, SBSF assumed post-closing liabilities relating to the transferred business. An individual having a 25.5% membership interest in SBS prior to the contribution of membership interests to SBSF, is Siebert's chief executive officer.

The Purchase Agreement provides for an aggregate purchase price for the disposition of $3,000,000, payable by SBSF after closing in annual installments commencing on March 1, 2016 and continuing on each of March 1, 2017, 2018, 2019 and 2020. The transferred business was contributed by SBSF to, and operated by SBS. The amount payable on each annual payment date will equal 50% of the net income attributable to the transferred business recognized by SBS in accordance with generally accepted accounting principles during the fiscal year ending immediately preceding the applicable payment date; provided that, if net income attributable to the transferred business generated prior to the fifth annual payment date is insufficient to pay the remaining balance of the purchase price in full on the fifth annual payment date, then the unpaid amount of the purchase price will be paid in full on March 1, 2021.

Transferred assets of Siebert's capital markets business, consisting of issuer relationships and goodwill, were recorded by SBS at SBSF's cost of the acquired assets, which amounted to $819,000 for issuer relationships, representing their fair value at the date of acquisition determined based on a discounted cash flow analysis (Level 3). Goodwill, which includes employees of Siebert who transferred to SBS was recorded at $1,001,000, representing the excess of the fair value ($1,820,000) of SBSF's purchase obligation to Siebert over the fair value of the issuer relationships. The recorded value of the transferred intangible assets was accounted for as a capital contribution by SBSF, resulting in an increase of $1,820,000 to member's capital.

Since the date of acquisition, revenue of $199,000 and net loss of $129,000 attributable to the capital markets business is included in the accompanying statement of operations.

The following represents the unaudited pro forma amounts of revenue and net income of the Company for the year ended December 31, 2014, assuming the capital markets business had been acquired as of January 1, 2014:

Revenue	$ 27,729,000
Net Income	$ 904,000

The above net income reflects the additional amortization that would have been charged assuming the fair value adjustment to customer accounts had been applied as of January 1, 2014.

NOTE C – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

[1] Revenues:

Investment banking revenues include gains and fees, net of syndicate expenses, arising primarily from municipal bond offerings in which the Company acts as an underwriter or agent. Investment banking management fees are recorded on the offering date, sales concessions on the settlement date, and underwriting fees at the time the underwriting is completed and the income is reasonably determinable

NOTE C – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

[1] Revenues (Continued):

Security transactions are recorded on a trade-date basis. Securities owned are valued at fair value. The resulting realized and unrealized gains and losses are reflected as trading profits on the Statement of Operations.

Commission revenue, which relates to the capital markets business, are recorded on a trade-date basis.

Dividends are recorded on the ex-dividend date, and interest income is recognized on an accrual basis.

[2] Fair value:

Authoritative accounting guidance defines fair value, establishes a framework for measuring fair value and establishes a fair value hierarchy. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements are not adjusted for transaction costs. The fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value into three levels:

Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs other than quoted market prices that are observable, either directly or indirectly, and reasonably available.

Level 3 - Unobservable inputs which reflect the assumptions that the managing members develop based on available information about the assumptions market participants would use in valuing the asset or liability.

See Note C[3] for financial instruments measured at fair value.

[3] Cash equivalents:

Cash equivalents represent short term, highly liquid investments which are readily convertible to cash and have a maturity of three months or less at time of purchase. Cash equivalents, which are valued at fair value, consist of money market funds which amounted to $15,965,885 at December 31, 2014 (Level 1). The Company maintains its assets with financial institutions, which may at times exceed federally insured limits. In the event of a financial institution's insolvency, recovery of assets may be limited.

[4] Furniture, equipment and leasehold improvements, net:

Furniture, equipment and leasehold improvements are stated at cost, net of accumulated depreciation and amortization. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets, generally five years. Leasehold improvements are amortized over the period of the lease.

[5] Intangible Assets

Issuer Relationships, which were recorded in connection with the acquisition of the capital markets business (see Note B), are being amortized by the straight-line method over 2.9 years.

NOTE C – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

[5] Intangible Assets (CONTINUED):

Intangible assets with finite lives are tested for recoverability whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The Company assesses the recoverability of its intangible assets by determining whether the unamortized balance can be recovered over the assets' remaining useful life through undiscounted estimated future cash flows. If undiscounted estimated future cash flows indicate that the unamortized amounts will not be recovered, an adjustment will be made to reduce such amounts to fair value based on estimated future cash flows discounted at a rate commensurate with the risk associated with achieving such cash flows.

[6] Goodwill

Goodwill, which was recorded in connection with the acquisition of the capital markets business (see Note B), is not subject to amortization and is tested for impairment annually, or more frequently if events or changes in circumstances indicate that the asset may be impaired. The impairment test consists of a comparison of the fair value of the reporting unit with the carrying amount of its net assets, including goodwill. Fair value is typically based upon estimated future cash flows discounted at a rate commensurate with the risk involved or market-based comparables. If the carrying amount of the Company's net assets exceeds the fair value of the reporting unit, then an analysis will be performed to compare the implied fair value of goodwill with the carrying amount of goodwill. An impairment loss will be recognized in an amount equal to the excess of the carrying amount over its implied fair value.

[7] Use of estimates:

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

[8] Income taxes:

The Company is not subject to federal income taxes. Instead, the members are required to include in their income tax returns their respective share of the Company's income or loss. The Company is subject to tax in certain state and local jurisdictions. Deferred taxes are not significant.

NOTE D - SUBORDINATED BORROWINGS AND SECURED DEMAND NOTE RECEIVABLE

The subordinated debt at December 31, 2014 consists of the following:

Payable to an indirect member (a)	$1,200,000
Payable to clearing broker(b)	$4,000,000
	$5,200,000

(a) Consists of a Secured Demand Note Collateral Agreement payable to Siebert, an indirect member of the Company, bearing 4% interest and due August 31, 2015, at which time the Company is obligated to repay Siebert any amounts borrowed. Interest expense paid to Siebert in 2014 amounted to $48,000.

The secured demand note receivable of $1,200,000 is collateralized by cash equivalents of Siebert of approximately $1,544,000 at December 31, 2014. Interest earned on the collateral amounted to approximately $1,028 in 2014.

NOTE D - SUBORDINATED BORROWINGS AND SECURED DEMAND NOTE RECEIVABLE (continued)

(b) On December 9, 2014, the Company entered into a temporary subordinated loan agreement with National Financial Services, its clearing broker, in the amount of $4,000,000 bearing interest at the federal funds rate plus 6% and maturing January 22, 2015. The note was repaid on January 22, 2015. Interest expense accrued in 2014 amounted to approximately $16,000.

The subordinated borrowings are available in computing net capital under the Securities and Exchange Commission's ("SEC") Uniform Net Capital Rule. To the extent that such borrowing is required for the Company's continued compliance with minimum net capital requirements, it may not be repaid.

On March 24, 2014, the Company entered into a temporary subordinated loan agreement with National Financial Services, its clearing broker, in the amount of $5,000,000 bearing interest at the federal funds rate plus 6% and maturing May 5, 2014. The note was repaid on May 5, 2014. Interest expense paid was $36,542.

NOTE E - FURNITURE, EQUIPMENT AND LEASEHOLD IMPROVEMENTS, NET

Furniture, equipment and leasehold improvements consist of the following:

Equipment	$ 926,654
Furniture and leasehold improvements	1,718,826
	2,645,480
Less accumulated depreciation and amortization	1,960,744
	$ 684,736

Depreciation and amortization amounted to $226,761 in 2014.

NOTE F - NET CAPITAL

The Company is subject to the SEC's Uniform Net Capital Rule 15c3-1, which requires the maintenance of minimum net capital and that the ratio of aggregate indebtedness to net capital, both as defined, shall not exceed 15 to 1. At December 31, 2014, the Company had net capital of $22,807,796, which was $22,557,796 in excess of its required net capital of $250,000, and its ratio of aggregate indebtedness to net capital was 0.10 to 1. The Company claims exemption from the reserve requirements under Section 15c3-3(k)(2)(ii).

NOTE G - COMMITMENTS

(1) As described in Note B, the Company's parent SBSF is indebted to Siebert for a $3,000,000 purchase obligation incurred in connection with the acquisition of Siebert's capital markets business. Such obligation is payable over annual installments commencing on March 1, 2016 and on each March 1, thereafter through 2020 to the extent of 50% of the net income attributable to such business recognizable by the Company during the fiscal year ending immediately preceding the applicable payment date. Accordingly, although the Company has not guaranteed or pledged its assets as collateral for its parent's debt, the company will be required to use a portion of its future cash flows to service SBSF's debt.

NOTE G - COMMITMENTS (CONTINUED)

(2) The Company rents office space under long-term operating leases expiring through 2020. These leases call for base rent plus escalations for property taxes and other operating expenses. Future minimum base rent under these operating leases are as follows:

Year	Amount
2015	1,043,000
2016	886,000
2017	639,000
2018	627,000
2019	587,000
Thereafter	185,000
	$ 3,967,000

Rent expense, including property taxes and other operating expenses, for the year ended December 31, 2014 amounted to $1,186,967. Rent expense is being charged to operations on a straight-line basis resulting in a deferred rent liability which, including the reimbursement discussed below, amounted to $549,287 at December 31, 2014 on the statement of financial condition.

In prior years, the Company purchased leasehold improvements of approximately $620,000 which were reimbursed by the landlord. The Company recorded such reimbursements as a credit to deferred rent liability, which is being recognized as a reduction of rental expense on a straight-line basis over the term of the lease.

NOTE H - OTHER

During the year ended December 31, 2014, the Company was charged $100,000 by Siebert for general and administrative services.

SUPPLEMENTARY INFORMATION

SIEBERT BRANDFORD SHANK & CO., LLC

Schedule of Computation of Net Capital Under the SEC Uniform Net Capital Rule 15c3-1
December 31, 2014

Total members' capital	$ 17,941,778
Add subordinated borrowings allowable in the computation of net capital	5,200,000
Add discretionary liabilities	3,147,136
Total capital and allowable subordinated borrowings	26,288,914
Nonallowable assets:	
Furniture, equipment and leasehold improvements, net	684,736
Receivable from parent	25,000
Goodwill	1,001,000
Issuer relationships	777,788
Other assets	673,276
	3,161,800
Net capital before haircuts on securities positions	23,127,114
Less haircuts on securities:	
Money market funds	319,318
Net capital	$ 22,807,796
Aggregate indebtedness	$ 2,254,119
Computation of basic net capital requirement:	
Minimum net capital required	$ 250,000
Excess net capital	$ 22,557,796
Ratio of aggregate indebtedness to net capital	0.10 to 1

There are no material differences between the above computation of net capital and the corresponding computation prepared by the Company as of the same date in its unaudited Part IIA FOCUS Report filing, as amended.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

FORM X-17A-5

FOCUS REPORT
(FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT)
PART IIA [12]

(Please read instructions before preparing Form)

This report is being filed pursuant to (Check Applicable Block(s)):

1) Rule 17a-5(a) [16] 2) Rule 17a-5(b) [17] 3) Rule 17a-11 [18]
4) Special request by designated examining authority [19] 5) Other [26]

NAME OF BROKER-DEALER

SIEBERT, BRANDFORD, SHANK & CO., L.L.C. [13]

ADDRESS OF PRINCIPAL PLACE OF BUSINESS (Do not use P.O. Box No.)

1999 HARRISON ST, SUITE 2720 [20]
(No. and Street)

OAKLAND [21] (City) CA [22] (State) 94612 [23] (Zip Code)

SEC. FILE NO.
8-49877 [14]

FIRM ID NO.
42568 [15]

FOR PERIOD BEGINNING (MM/DD/YY)
07/01/15 [24]

AND ENDING (MM/DD/YY)
09/30/15 [25]

NAME AND TELEPHONE NUMBER OF PERSON TO CONTACT IN REGARD TO THIS REPORT(Area code) - Telephone No.

Daniel Diaz [30] (646) 775-4842 [31]

NAME(S) OF SUBSIDIARIES OR AFFILIATES CONSOLIDATED IN THIS REPORT

[32] [33]
[34] [35]
[36] [37]
[38] [39]

OFFICIAL USE

DOES RESPONDENT CARRY ITS OWN CUSTOMER ACCOUNTS ? YES [40] NO [X 41]

CHECK HERE IF RESPONDENT IS FILING AN AUDITED REPORT [42]

EXECUTION:

The registrant/broker or dealer submitting this Form and its attachments and the person(s) by whom it is executed represent hereby that all information contained therein is true, correct and complete. It is understood that all required items, statements, and schedules are considered integral parts of this Form and that the submisson of any amendment represents that all unamended items, statements and schedules remain true, correct and complete as previously submitted.

Dated the 19th day of October 20 15

Manual Signatures of:

1) _____
Principal Executive Officer or Managing Partner

2) _____
Principal Financial Officer or Partner

3) _____
Principal Operations Officer or Partner

ATTENTION - Intentional misstatements or omissions of facts constitute Federal Criminal Violations. (See 18 U.S.C. 1001 and 15 U.S.C. 78:f (a))

FINRA

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER					
SIEBERT, BRANDFORD, SHANK & CO., L.L.C.	N	3			100

STATEMENT OF FINANCIAL CONDITION FOR NONCARRYING, NONCLEARING AND CERTAIN OTHER BROKERS OR DEALERS

as of (MM/DD/YY) 09/30/15 [99]

SEC FILE NO. 8-49877 [98]

Consolidated [ ] [198]

Unconsolidated [X] [199]

ASSETS	Allowable	Non-Allowable	Total
1. Cash	$ 688,838 [200]		$ 688,838 [750]
2. Receivables from brokers or dealers:			
A. Clearance account	2,087,115 [295]		
B. Other	[300]	$ [550]	2,087,115 [810]
3. Receivables from non-customers	[355]	[600]	[830]
4. Securities and spot commodities owned, at market value:			
A. Exempted securities	[418]		
B. Debt securities	740,675 [419]		
C. Options	[420]		
D. Other securities	16,661,209 [424]		
E. Spot commodities	[430]		17,401,884 [850]
5. Securities and/or other investments not readily marketable:			
A. At cost $ [130]			
B. At estimated fair value	[440]	[610]	[860]
6. Securities borrowed under subordination agreements and partners' individual and capital securities accounts, at market value:	[460]	[630]	[880]
A. Exempted securities $ [150]			
B. Other securities $ [160]			
7. Secured demand notes:	[470]	[640]	[890]
Market value of collateral:			
A. Exempted securities $ [170]			
B. Other securities $ [180]			
8. Memberships in exchanges:			
A. Owned, at market $ [190]			
B. Owned, at cost		[650]	
C. Contributed for use of the company, at market value		[660]	[900]
9. Investment in and receivables from affiliates, subsidiaries and associated partnerships	[480]	25,000 [670]	25,000 [910]
10. Property, furniture, equipment, leasehold improvements and rights under lease agreements, at cost-net of accumulated depreciation and amortization.	[490]	589,156 [680]	589,156 [920]
11. Other assets	935,216 [535]	2,930,252 [735]	3,865,468 [930]
12. Total Assets	$ 21,113,053 [540]	$ 3,544,408 [740]	$ 24,657,461 [940]

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

SIEBERT, BRANDFORD, SHANK & CO., L.L.C. as of 09/30/15

STATEMENT OF FINANCIAL CONDITION FOR NONCARRYING, NONCLEARING AND CERTAIN OTHER BROKERS OR DEALERS

LIABILITIES AND OWNERSHIP EQUITY

Liabilities	A.I. Liabilities		Non-A.I. Liabilities		Total	
13. Bank loans payable	$	1045	$	1255	$	1470
14. Payable to brokers or dealers:						
A. Clearance account		1114		1315		1560
B. Other		1115		1305		1540
15. Payable to non-customers		1155		1355		1610
16. Securities sold not yet purchased, at market value				1360		1620
17. Accounts payable, accrued liabilities, expenses and other	2,316,681	1205	2,817,826	1385	5,134,507	1685
18. Notes and mortgages payable:						
A. Unsecured		1210				1690
B. Secured		1211		1390		1700
19. Liabilities subordinated to claims of general creditors:						
A. Cash borrowings:				1400		1710
1. from outsiders $ 970						
2. Includes equity subordination (15c3-1(d)) of ..... $ 980						
B. Securities borrowings, at market value from outsiders $ 990				1410		1720
C. Pursuant to secured demand note collateral agreements				1420		1730
1. from outsiders $ 1000						
2. includes equity subordination (15c3-1(d)) of ..... $ 1010						
D. Exchange memberships contributed for use of company, at market value				1430		1740
E. Accounts and other borrowings not qualified for net capital purposes		1220		1440		1750
20. TOTAL LIABILITIES	$ 2,316,681	1230	$ 2,817,826	1450	$ 5,134,507	1760

Ownership Equity

21. Sole proprietorship		$	1770
22. Partnership (limited partners)	$ 1020		1780
23. Corporation:			
A. Preferred stock			1791
B. Common stock		2,620,000	1792
C. Additional paid-in capital			1793
D. Retained earnings		16,902,954	1794
E. Total		19,522,954	1795
F. Less capital stock in treasury		( )	1796
24. TOTAL OWNERSHIP EQUITY		$ 19,522,954	1800
25. TOTAL LIABILITIES AND OWNERSHIP EQUITY		$ 24,657,461	1810

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

SIEBERT, BRANDFORD, SHANK & CO., L.L.C. as of 09/30/15

COMPUTATION OF NET CAPITAL

1. Total ownership equity from Statement of Financial Condition			$ 19,522,954	3480
2. Deduct ownership equity not allowable for Net Capital			( )	3490
3. Total ownership equity qualified for Net Capital			19,522,954	3500
4. Add:				
A. Liabilities subordinated to claims of general creditors allowable in computation of net capital				3520
B. Other (deductions) or allowable credits (List)			2,817,826	3525
5. Total capital and allowable subordinated liabilities			$ 22,340,780	3530
6. Deductions and/or charges:				
A. Total non-allowable assets from Statement of Financial Condition (Notes B and C)	$ 3,544,408	3540		
B. Secured demand note deficiency		3590		
C. Commodity futures contracts and spot commodities-proprietary capital charges		3600		
D. Other deductions and/or charges		3610	(3,544,408)	3620
7. Other additions and/or allowable credits (List)				3630
8. Net Capital before haircuts on securities positions			$ 18,796,372	3640
9. Haircuts on securities (computed, where applicable, pursuant to 15c3-1(f)) :				
A. Contractual securities commitments	$	3660		
B. Subordinated securities borrowings		3670		
C. Trading and investment securities:				
1. Exempted securities		3735		
2. Debt securities	31,041	3733		
3. Options		3730		
4. Other securities	333,224	3734		
D. Undue concentration		3650		
E. Other (List)		3736	(364,265)	3740
10. Net Capital			$ 18,432,107	3750

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

SIEBERT, BRANDFORD, SHANK & CO., L.L.C. as of 09/30/15

COMPUTATION OF BASIC NET CAPITAL REQUIREMENT

Part A

11. Minimum net capital required (6-2/3% of line 19)		$ 154,445	3756
12. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)		$ 250,000	3758
13. Net capital requirement (greater of line 11 or 12)		$ 250,000	3760
14. Excess net capital (line 10 less 13)		$ 18,182,107	3770
15. Net capital less greater of 10% of line 19 or 120% of line 12		$ 18,132,107	3780

COMPUTATION OF AGGREGATE INDEBTEDNESS

16. Total A.I. liabilities from Statement of Financial Condition			$ 2,316,681	3790
17. Add:				
A. Drafts for immediate credit	$	3800		
B. Market value of securities borrowed for which no equivalent value is paid or credited	$	3810		
C. Other unrecorded amounts (List)	$	3820	$	3830
19. Total aggregate indebtedness			$ 2,316,681	3840
20. Percentage of aggregate indebtedness to net capital (line 19 divided by line 10)			% 12.57	3850
21. Percentage of debt to debt-equity total computed in accordance with Rule 15c-3-1(d)			% 0.00	3860

COMPUTATION OF ALTERNATE NET CAPITAL REQUIREMENT

Part B

22. 2% of combined aggregate debit items as shown in Formula for Reserve Requirements pursuant to Rule 15c3-3 prepared as of the date of net capital computation including both brokers or dealers and consolidated subsidiaries' debits	$	3870
23. Minimum dollar net capital requirement of reporting broker or dealer and minimum net capital requirement of subsidiaries computed in accordance with Note (A)	$	3880
24. Net capital requirement (greater of line 22 or 23)	$	3760
25. Excess net capital (line 10 less 24)	$	3910
26. Net capital in excess of the greater of: 5% of combined aggregate debit items or 120% of minimum net capital requirement	$	3920

NOTES:

(A) The minimum net capital requirement should be computed by adding the minimum dollar net capital requirement of the reporting broker dealer and, for each subsidiary to be consolidated, the greater of:

1. Minimum dollar net capital requirement, or
2. 6-2/3% of aggregate indebtedness or 4% of aggregate debits if alternative method is used.

(B) Do not deduct the value of securities borrowed under subordination agreements or secured demand notes covered by subordination agreements not in satisfactory form and the market values of the memberships in exchanges contributed for use of company (contra to item 1740) and partners' securities which were included in non-allowable assets.

(C) For reports filed pursuant to paragraph (d) of Rule 17a-5, respondent should provide a list of material non-allowable assets.

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

SIEBERT, BRANDFORD, SHANK & CO., L.L.C.

For the period (MMDDYY) from 07/01/15 [3932] to 09/30/15 [3933]

Number of months included in this statement 3 [3931]

REVENUE — STATEMENT OF INCOME (LOSS)

1. Commissions:		
a. Commissions on transactions in exchange listed equity securities executed on an exchange	$ 162,619	3935
b. Commissions on listed option transactions		3938
c. All other securities commissions		3939
d. Total securities commissions	162,619	3940
2. Gains or losses on firm securities trading accounts		
a. From market making in options on a national securities exchange		3945
b. From all other trading	1,163,830	3949
c. Total gain (loss)	1,163,830	3950
3. Gains or losses on firm securities investment accounts		3952
4. Profits (losses) from underwriting and selling groups	8,995,098	3955
5. Revenue from sale of investment company shares		3970
6. Commodities revenue		3990
7. Fees for account supervision, investment advisory and administrative services		3975
8. Other revenue	629	3995
9. Total revenue	$ 10,322,176	4030

EXPENSES

10. Salaries and other employment costs for general partners and voting stockholder officers	134,109	4120
11. Other employee compensation and benefits	7,035,577	4115
12. Commissions paid to other brokers-dealers	148,750	4140
13. Interest expense	8,000	4075
a. Includes interest on accounts subject to subordination agreements 8,000 [4070]		
14. Regulatory fees and expenses	52,027	4195
15. Other expenses	1,772,087	4100
16. Total expenses	$ 9,150,550	4200

NET INCOME

17. Net Income (loss) before Federal income taxes and items below (Item 9 less Item 16)	$ 1,171,626	4210
18. Provision for Federal income taxes (for parent only)		4220
19. Equity in earnings (losses) of unconsolidated subsidiaries not included above		4222
a. After Federal income taxes of [4238]		
20. Extraordinary gains (losses)		4224
a. After Federal income taxes of [4239]		
21. Cumulative effect of changes in accounting principles		4225
22. Net income (loss) after Federal income taxes and extraordinary items	$ 1,171,626	4230

MONTHLY INCOME

23. Income (current month only) before provision for Federal Income taxes and extraordinary items	(490,066)	4211

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

SIEBERT, BRANDFORD, SHANK & CO., L.L.C.

For the period (MMDDYY) from 07/01/15 to 09/30/15

STATEMENT OF CHANGES IN OWNERSHIP EQUITY
(SOLE PROPRIETORSHIP, PARTNERSHIP OR CORPORATION)

1. Balance, beginning of period		$ 18,375,838	4240
A. Net income (loss)		1,171,626	4250
B. Additions (includes non-conforming capital of	$ (4262)		4260
C. Deductions (includes non-conforming capital of	$ (4272)	24,510	4270
2. Balance, end of period (from item 1800)		$ 19,522,954	4290

STATEMENT OF CHANGES IN LIABILITIES SUBORDINATED
TO CLAIMS OF GENERAL CREDITORS

3. Balance, beginning of period	$ 1,200,000	4300
A. Increases		4310
B. Decreases	1,200,000	4320
4. Balance, end of period (from item 3520)	$	4330

OMIT PENNIES

FINANCIAL AND OPERATIONAL COMBINED UNIFORM SINGLE REPORT
PART IIA

BROKER OR DEALER

SIEBERT, BRANDFORD, SHANK & CO., L.L.C. as of 09/30/15

Exemptive Provision Under Rule 15c3-3

25. If an exemption from Rule 15c3-3 is claimed, identify below the section upon which such exemption is based :

A. (k) (1) - Limited business (mutual funds and/or variable annuities only) . . . . . $ _____ 4550

B. (k) (2) (i) - "Special Account for the Exclusive Benefit of customers" maintained . . . . . _____ 4560

C. (k) (2) (ii) - All customer transactions cleared through another broker-dealer on a fully disclosed basis.

Name(s) of Clearing Firm(s) - Please separate multiple names with a semi-colon

National Financial Services (NFS) 4335 X 4570

D. (k) (3) - Exempted by order of the Commission . . . . . _____ 4580

Ownership Equity and Subordinated Liabilities maturing or proposed to be withdrawn within the next six months and accruals, (as defined below), which have not been deducted in the computation of Net Capital.

Type of Proposed Withdrawal or Accrual (See below for code to enter)		Name of Lender or Contributor		Insider or Outsider ? (In or Out)		Amount to be withdrawn (cash amount and/or Net Capital Value of Securities)		(MMDDYY) Withdrawal or Maturity Date		Expect to Renew (Yes or No)	
	4600		4601		4602		4603		4604		4605
	4610		4611		4612		4613		4614		4615
	4620		4621		4622		4623		4624		4625
	4630		4631		4632		4633		4634		4635
	4640		4641		4642		4643		4644		4645
	4650		4651		4652		4653		4654		4655
	4660		4661		4662		4663		4664		4665
	4670		4671		4672		4673		4674		4675
	4680		4681		4682		4683		4684		4685
	4690		4691		4692		4693		4694		4695

TOTAL $ _____ 4699

OMIT PENNIES

Instructions: Detail listing must include the total of items maturing during the six month period following the report date, regardless of whether or not the capital contribution is expected to be renewed. The schedule must also include proposed capital withdrawals scheduled within the six month period following the report date including the proposed redemption of stock and payments of liabilities secured by fixed assets (which are considered allowable assets in the capital computation pursuant to Rule 15c3-1(c) (2) (iv)), which could be required by the lender on demand or in less than six months.

WITHDRAWAL CODE: DESCRIPTION

1. Equity Capital
2. Subordinated Liabilities
3. Accruals
4. 15c3-1(c) (2) (iv) Liabilities

APPENDIX C: DART LETTER OF COMMENDATION

Dallas Area Rapid Transit
P.O. Box 660163
Dallas, Texas 75266-0163
214/749-3278

July 7, 2009

Mr. Napoleon Brandford
Siebert Brandford Shank
1999 Harrison Street, Suite 2720
Oakland, CA 94612

Dear Napoleon:

I would like to take this opportunity to express my appreciation for the efforts put forth by Siebert Brandford Shank (SBS) on DART's recent $1 billion bond issuance. Your team was creative, adaptive, and achieved a truly extraordinary result for DART.

The flexibility and depth of your team was further demonstrated when, over the course of the four months, the entire issue was resized and almost totally restructured to address the emergence of Build America Bonds (BABs) as an attractive component of our contemplated issue. The original funding calendar was maintained even with our stipulation that our exposure to "Make Whole" bonds be limited and that callable BABs be incorporated into the overall structure.

Several key items stood out with our bond issuance:

- SBS secured over 90% of the priority orders for the DART Build America Bonds – even though the underwriting syndicate included major Wall Street firms such as Goldman Sachs and J.P. Morgan.
- The market response to the callable BABs series demonstrated Seibert's efforts to educate prospective buyers of the attractiveness of this variant of the basic BAB bond.
- Final pricing levels on DART's BABs were only 150 basis points over the 30-year treasury in 2044. I believe this is the first major BABs issue to go beyond 30 years and more importantly the first to NOT trade up in value in the days and weeks after pricing, which shows that SBS priced the BABs very aggressively, thereby giving DART the full value at the initial pricing.

Siebert Brandford Shank's strong banking and sales performance on DART's $1 billion offering clearly demonstrates your ability to structure and market large transactions in the $1 billion or larger range; and, in particular, large transactions that involve Build America Bonds (BABs) of several variations.

Thank you again for your excellent performance. We are obviously pleased with the results. You confirmed the wisdom of the DART Board of Directors in our selection of your firm to serve as senior manager and sole bookrunner on this transaction. You also validated the commitment of DART to the maximum utilization of MWBE firms to assist in meeting Agency objectives.

Sincerely,

David Leininger

David Leininger
Senior Vice President
Chief Financial Officer

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2016-105431

Date Filed:
08/29/2016

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

Siebert Cisneros Shank & Co., L.L.C.
Houston, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

City of Austin

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

MA 7400 PA160000048
Municipal Underwriting Services

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
CM Holdings	San Antonio, TX United States	X	
Shank, Suzanne	Detroit, MI United States	X	

5 Check only if there is NO Interested Party. ☐

6 AFFIDAVIT

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said Keith Richard, this the 29 day of August, 20 16, to certify which, witness my hand and seal of office.

NIKKI DOBY
Notary Public, State of Texas
My Commission Expires
February 07, 2018

Signature of officer administering oath | Nikki Doby: Printed name of officer administering oath | Title of officer administering oath

TAB 2 – N/A

TAB 3